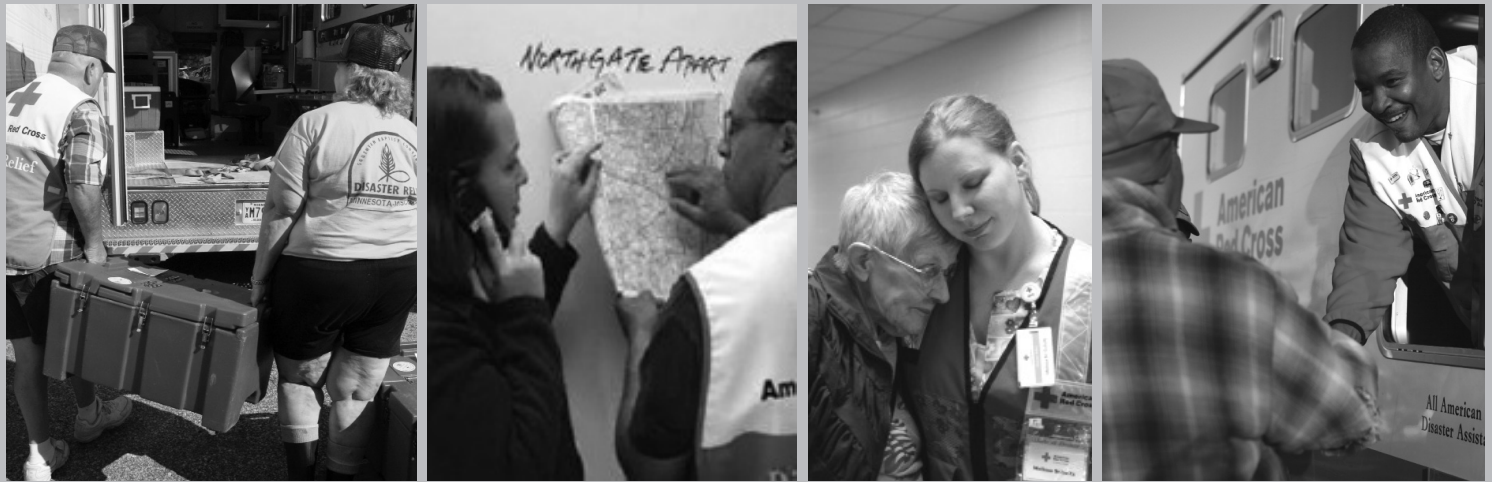


Disaster Health Services Protocols



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I. Service Delivery Model: Scope of Practice

Replacement of Disaster Health Services Protocols

As of April 20, 2011 and the release of [Disaster Services Connection 2011-006](#), the *Disaster Health Services Protocols* are to be used only as a reference tool to assist in client care. Disaster Health Services workers may now provide care according to the 2011 enhanced service delivery model, based on individual licensure, nursing scope of practice, and a nurse-led model of care. See the *Connection* for more information.

Description of Disaster Health Services

Disaster Health Services (HS) workers provide health services to:

- Clients affected by a disaster.
- Volunteers and employees on a disaster relief operation when Staff Wellness workers are not present or available.

HS workers provide health services during:

- Initial chapter responses
- Disaster relief operations, including all service delivery sites.

In a disaster situation, HS workers provide care that includes health assessments, treatment, and referrals. HS workers also:

- assist clients with the procurement and/or replacement of essential medications and medical equipment when lost or damaged due to a disaster
- collect and document health surveillance data on clients
 - to identify illness and injury anomalies
 - to reduce the transmission of disease
 - to provide evidence-based research for continuous improvement of the delivery of our services

Disaster Health Services Protocols

Disaster Health Services Protocols have been researched and reviewed by a panel of healthcare professionals and serve as reference materials for HS workers as they perform their duties according to the Disaster Health Services Handbook and affiliated guidance..

Expectations of Health Services Workers

HS workers are expected to demonstrate sound clinical judgment when providing care to clients. HS workers will comply with the following:

- Medical orders by local physicians for their patients, which must be documented by HS workers appropriately and clearly
- When over-the-counter medication (OTC) is available and requested by a client, HS workers may provide OTC medications
 - according to the manufacturer's dosage guidelines and
 - after checking with the client regarding allergies, current medications, and any possible contraindications
 - HS workers should provide education to the client about OTC medication use. See the OTC Drug Information Appendix at the end of the *Protocols*.
- All clients should be referred to his or her health care provider or usual source for medical care as soon as possible after an illness or injury.

Symptom-Based Protocols

The *Disaster Health Services Protocols* are symptom-based to guide the treatment of the symptom rather than a particular disease or illness. The symptoms were chosen from the illnesses and injuries previously covered in *Disaster Health Services Protocols* (rev. 1997) and evidence-based analyses of illnesses and injuries documented on recent disaster relief operations.

NOTE: The *Protocols* sections “Special Considerations”, “Communicable Diseases”, and “Procedures” are *not* based on symptoms of the clients. These sections identify specific medical situations and diagnoses, including related procedures (e.g. assisting with an auto-injector).

Using the Protocols:

When providing care, Disaster Health Services workers:

- find the client’s symptom in the table of contents and
- follow the corresponding treatment guideline

Treatment guidelines include:

- possible causes that represent a range of possible diagnoses – from minor illness to medical emergencies- that are not intended to be all-inclusive
- symptom-based medical history questions
- physical assessment guidelines to help identify situations that require a referral to a medical facility or the activation of local EMS
- treatment

When a symptom can be treated in the disaster environment by HS workers, the symptom will appear in the *Protocols* with treatment guidelines.

Annual Chapter Protocol Review

Chapters should designate a health professional to conduct a periodic review of the *Protocols* to assure evidence based integrity. Reviewers may provide feedback and comments about the *Protocols* to Disaster Health Services at National Headquarters for possible inclusion in future versions. Ongoing efforts in Disaster Health Services may lead to the replacement of the *Protocols* in future years, and the publication of new guidance in the Disaster Health Services Handbook.

Documentation

Workers must document all client health information including assessments, interventions, and outcomes on the confidential *Client Health Record* and record additional narrative on the *Client Health Record Narrative Addendum*.

Clients must sign the *Release of Confidential Information Form* before a HS worker may discuss the client’s health information with external health professionals and/or vendors for continuity of care.

The HS activity on the operation is responsible for these confidential medical documents at all times.

HS workers provide care to volunteers and employees on a disaster relief operation when Staff Wellness workers are not available, and should record all care on a *Staff Illness/Injury Report* following established Staff Health procedures. All care provided to relief operation staff should be reported to the Staff Health Manager on the operation as quickly as possible.

Management of Exposures

Health care workers may have accidental exposure to blood or other bodily fluids through:

- parenteral (needle stick) contact
- splash to the mucous membranes of the eye, nose or mouth.
- skin that is chapped, cut, has abrasions, acne, dermatitis or other conditions which disrupt skin integrity.

Health care workers must use appropriate levels of Personal Protective Equipment (PPE) as outlined in [CDC guidance](#).

When an accidental exposure to blood or other bodily fluids does occur:

- 1) Wash the affected area and the surrounding skin or tissue immediately.
- 2) Flush eyes with saline or water rinse when eye splash occurs.
- 3) Thoroughly clean open scratch or wound and apply appropriate topical antiseptic.
- 4) Refer to health care professional:
 - a. Immediately provide the opportunity to any exposed worker to be seen by a health care professional for possible prophylaxis against Hepatitis B and HIV.
 - b. Document the event and the offer on a *Staff Health Illness/Injury Record*, regardless of the worker's decision to accept the offer.
 - c. Encourage the worker to follow up with health care professional seen after the exposure and his or her regular physician.
- 5) When the source of the exposure is known, refer that person to the local health care facility for blood testing. The health care facility is responsible for obtaining consent and reporting results, as appropriate.
- 6) Document the incident on the *Staff Health Illness/Injury Record*.
- 7) Report the staff exposure to Staff Wellness leadership (or Disaster Health Services leadership if Staff Wellness is not available) on the operation as soon as possible.
- 8) The Staff Wellness Manager on the operation
 - a. assists with additional paperwork
 - b. notifies the Staff Wellness Activity Lead at National Headquarters for follow-up

Acknowledgements

Thanks to everyone who played a role in this revision of the *Disaster Health Services Protocols*. Many HS volunteers and chapters from around the country provided feedback. Special thanks to the Disaster Health Services Program Guidance Team for providing countless hours of editing and recommendations– this document could not have been completed without your assistance.

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II. Symptoms and Care

Abdominal Pain

Treatment Goal:

- Prevent Injury to Client
- Reduce Discomfort
- Assess for more serious health conditions

Possible Causes:

There are many causes of abdominal pain which may be related to conditions of the heart, stomach, bowels, kidneys, gallbladder, pancreas and uterus. Severe or sudden onset pain may be due to menstrual cramps, miscarriage of pregnancy, ectopic pregnancy, ovarian cyst, kidney stones, gall stones, irritable bowel syndrome, appendicitis or an acute cardiac event. Mild or recurrent pain could be due to spicy and/or fatty foods, gas or menstrual cramping.

History:

- Onset and duration of pain
- Location (generalized discomfort vs. localized pain)
- Quality (dull, sharp, cramping, burning, etc) and amount of pain (0-10 scale)
- Presence and amount of vomiting and/or diarrhea and if blood is present in stool or vomit
- Possibility of pregnancy or pelvic inflammatory disease
- Pain also in back, neck, jaw or left shoulder/arm (cardiac pain)
- Sweating and/or shortness of breath (cardiac pain)

Assessment:

- Obtain vital signs and document level of pain on a scale of 0-10
- Inquire about accompanying symptoms- bloating, gas, abnormal bowel movements, nausea/vomiting
- Listen for presence or absence of bowel sounds
- Gently palpate abdomen for tenderness, rigidity or distention
- Assess for rebound pain and/or guarding

Call Local EMS/911 for:

- Severe pain based on a scale of 0-10
- Tachycardia
- Hypotension
- Blood present in vomit or stool.
- Vaginal bleeding in a pregnant woman
- Vaginal bleeding in a non-pregnant woman unrelated to menstrual Bleeding
- Any tenderness or rigidity noted on palpation.
- Absence of bowel sounds
- Rebound pain or guarding present.
- Client has pain in the back, neck, jaw or left arm/shoulder or is showing signs of sweating or shortness of breath
- Fever with severe or persistent nausea/vomiting and/or diarrhea
- Any pediatric client with the following symptoms: forceful vomiting after eating, red/purple jelly-like stools, green-brown vomit, or hard lump in the scrotum, lower abdomen or groin

Refer to Local Healthcare System:

- Pain has not resolved or diminished in 4 to 6 hours
- Pain occurs during pregnancy

Treatment:

- Discourage eating, drinking, or medication until cause of pain is determined
- Recommend rest in a comfortable position
- If pain is thought to be related to menstrual cramping and client is requesting a pain reliever, Ibuprofen (Motrin) is appropriate, unless contraindicated. Follow manufacturer's recommended dosage and see Cramps protocol

Additional Considerations:

- Blood in stool often appears black or tar-like
- A common cause of abdominal pain in children is stress and anxiety, although severe pain should be referred to a physician immediately
- Infants who experience abdominal pain cry loudly and draw their knees toward their chest. This may also be a sign of colic.

See also: Bites – Insect, Chest pain/pressure, Cramps – Abdominal, Indigestion, Nausea/Vomiting, Childbirth, Miscarriage, Poisoning, and Pregnancy

Anxiety

Treatment Goal:

- Protect Client and others from injury
- Appropriate referral to trained mental health professional
- Assess for more serious health condition
- Reduce stress

Possible Causes:

Anxiety may be caused by a stressful situation which results in acute symptoms (panic attack) or chronically in a panic disorder – where feelings of anxiety affect the client without warning and are not related to situational stress. Anxiety and “panic attacks” may be due to a physical condition – difficulty breathing, pain, etc.

History:

- Uncontrollable worry or distress about various issues
- Restlessness and/or irritability
- Fatigue or trouble sleeping
- Difficulty concentrating
- History of anxiety disorder.

Assessment:

- Obtain vital signs and document
- Assess for any potential physical condition which may have triggered the client's anxiety; these include pain, hypoxia (low oxygen, trouble breathing), low blood pressure and other causes
- Consult with Disaster Mental Health for mental health assessment

Refer to Local Healthcare System:

- Disaster Mental Health will make this determination based on their professional assessment.

Treatment:

- Consult with a Disaster Mental Health worker immediately. Disaster Mental Health will make the final determination as to management.
- Try to calm and reassure the client.
- Provide privacy

Additional Considerations:

- A panic attack usually presents as four or more of the following symptoms that appear suddenly: chest pain or discomfort, choking, dizziness/faintness, fear of dying, flushing/chills, fear of “going crazy,” nausea/diarrhea, a tingling sensation, fast heart rate or palpitations, shortness of breath, sweating, and/or trembling/shaking.
- It can be difficult to differentiate a “panic attack” from a serious medical illness such as myocardial infarction or pulmonary embolism. When there is any doubt, have the client transported to the hospital immediately.
- Panic and anxiety may be related to a physical condition – difficulty breathing, pain, etc. All clients with symptoms of anxiety should be assessed for an underlying physical condition which may have caused their symptoms of anxiety.

See also: Breathing Problems, Hyperventilation

Arm/Hand Injury and Pain

Treatment Goal:

- Determine extent of injury
- Prevent further injury from occurring
- Reduce discomfort

Possible Causes:

Muscle strain, dislocation, sprain, fracture, tendonitis. Shoulder and arm pain (particularly left arm) can be a sign of a myocardial infarction (heart attack), especially if there has been no injury. Other symptoms can be shortness of breath, sweating, nausea and chest pain.

History:

- Type of activity client was engaged in when injury occurred
- If the client felt/heard a bone snap
- Past medical history related to musculoskeletal injury/surgery
- Risk factors for coronary artery disease

Assessment:

- Obtain vital signs and level of pain (scale of 0-10)
- Assess all injuries for presence of a pulse distal to the injury, skin color/temperature, and range of motion – do not force movement
- Point tenderness over a specific area is often a sign of a fracture
- Strain: dull pain in the affected muscle that worsens with movement, swelling
- Tendonitis (e.g. tennis elbow): pain at the joint not associated with any trauma/injury. If the area is warm, swollen or red, an infection of the tendon could be present.
- Dislocation: swelling, deformity, severe pain, discoloration, tenderness, and/or numbness of an affected joint
- Sprain: pain and/or swelling at joint, bruising around area of injury

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- Fracture: pain/tenderness at site when touched or moved, client has difficulty moving the injured part, client may feel grating sensation, the injured part may move unnaturally, bruising may be present.

Call local EMS/911 for:

- All cases of severe pain – regardless of suspected cause
- If skin is broken over possible fracture site
- Any evidence of compound fracture (bone protruding through open wound)
- If numbness is noted in hand
- If an infection is suspected, have the client transported to the hospital immediately.
- Any extremity that is cool, pale or blue, or if a pulse cannot be detected distal to the injury.
- Any arm pain with shortness of breath, sweating, nausea and/or chest pain/pressure.

Refer to Local Healthcare System:

All suspected dislocations, sprains and fractures.

Treatment

- Strain: Rest the affected area, apply cool packs (chemical or ice/water mixed) intermittently (less than 20 minutes) for the first 24-48 hours then switch to warm compresses. Elevate the extremity as much as possible. Muscle strains respond well to non-steroidal anti-inflammatory medications (NSAIDs), such as Ibuprofen, if client is requesting pain relief and does not have any contraindications. Follow manufacturer dosage instructions. Assess for allergy to aspirin or NSAIDs.
- Tendonitis: Rest the affected area and apply cool packs intermittently for the first 24-48 hours. If the client requests pain relief medication, non-steroidal anti-inflammatory medications (NSAIDs, such as Ibuprofen) work best at relieving pain and reducing inflammation, unless contraindicated. Assess for allergy to aspirin or NSAIDs.
- Dislocation: Do not move or try to put a dislocated bone back into place. Immobilize the joint as much as possible. Have client transported to a medical facility via EMS if necessary.
- Sprain: Rest the affected area; apply ice packs intermittently for the first 24-48 hours. (Do not apply heat for the first 24 hours). Apply a supportive bandage (ACE wrap) and elevate extremity. Loosen bandage if swelling increases or extremity becomes cold or mottled. Warm compresses can be used after 24-48 hours. If the pain has not resolved or is severe, have the client transported to a medical facility to rule out fracture.
- Closed Fracture (no break in the skin): Immobilize the affected extremity and have client transported to a medical facility.
- Open Fracture (skin is broken): Call local EMS. Using standard precautions, cut clothing away from the wound, being careful not to touch the exposed bone. Cover area with sterile dressing. If bleeding, apply direct pressure to wound. If EMS is not immediately available, splint the fractured area as it is and gently help the client into a comfortable position until EMS arrives.

Additional Considerations

- When unsure of a diagnosis, treat the injury as a fracture. Definitive diagnosis requires professional assessment and radiologic testing at a medical facility.
- Geriatric clients are more prone to musculoskeletal injury and bone fracture.
- Never give children under the age of 18 aspirin due to risk of Reye's Syndrome.
- Collarbone injuries should have a sling placed on the affected arm and secured to the body to reduce movement as much as possible.
- If client is to be transported to a medical facility for further treatment, do not give anything to eat or drink as surgical repair may be required.

See also: Bites, Bruising, Frostbite, Cramps – Muscular, Cuts and Scrapes.

Back Pain

Treatment Goal:

- Reduce discomfort.
- Assess for more serious health condition.

Possible Causes:

Back pain usually involves the lower back and can be caused by a strain/tear of the muscles/ligaments, injury to the disc or vertebrae, nerve pressure or fatigue. Cardiac pain may present itself as pain between the shoulder blades. Kidney stones or kidney infections are frequently associated with severe flank pain and vomiting. Gall bladder or pancreatitis can cause pain to radiate to the back. A thoracic or abdominal aneurysm may present as back pain. Labor may present itself as back pain as well.

History:

- Location, quality and amount of pain (0-10 scale).
- Activities performed when back pain started
- Any recent trauma to back, fall, heavy lifting or unusual activity
- History of previous episodes of the same type of pain and the effectiveness of treatments in the past
- Change in bowel/bladder function associated with the back pain (especially loss of control of the bladder or bowels)
- Associated numbness, tingling, weakness or paralysis of one or both legs
- Associated abdominal pain or pain related to a myocardial infarction (shortness of breath, sweating, nausea or chest pain).
- Does pain radiate from the back to either/both legs?
- Hypertension or heart disease.
- Pregnancy

Assessment:

- Obtain vital signs and document level of pain (on scale of 0-10)
- If the pain started due to a fall and the client is not able to walk afterward, do not attempt to get them up or move them. Call EMS immediately and treat them for comfort only.
- Visually inspect the spine for signs of bruising, swelling or other signs of trauma.
- Observe gait, posture, range of motion, balance and coordination.
- Check for weakness and/or numbness in extremities.

Call local EMS/911 for:

- Pain caused by significant impact injury or trauma.
- Pain is severe and/or the client is unable to walk.
- Back pain is associated with shortness of breath, chest pain, abdominal pain or tenderness, fever, vomiting, sweating, or pulsating mass in the abdomen.
- There is a new onset of numbness, weakness or paralysis of the lower extremities.
- Presence of blood in the urine or the client is having difficulty urinating or passing stool.
- Incontinence or inability to control bladder and/or bowel function.
- Blood pressure is low for the client and/or they are feeling faint.

Refer to Local Healthcare System:

Pain is not relieved with rest and analgesics.

Treatment:

- Encourage client to avoid activities that exacerbate back pain (lifting).
- Over the counter analgesics are appropriate, if requested by client and not contraindicated. Follow manufacturer's dosage instructions.
- For an acute muscle pull, apply cool packs intermittently for the first 24-48 hours to reduce inflammation and swelling.
- For stiffness or fatigue, place a warm compress on the affected area.

Additional Considerations:

Pregnant women should always check with their physician before taking any medication.

See also: Cramps – Muscular, Neck Pain/Stiffness; Urination, Difficulty with

Bites – Animal, Domestic or Wild animals, Marine animals

Treatment Goal:

- Prevent further injury or infection
- Reduce discomfort associated with bite
- Stop bleeding, if present

Possible Causes:

Animal bites can be caused by any animal – either domesticated pets (dogs, cats) or wild animals (skunks, squirrels, etc.). Examples of marine animals include jellyfish and stingrays.

History:

- Type of animal that bit the client
- Behavior of animal prior and after bite (if noticed)
- If the animal is domesticated, attempt to determine the name and address of the owner and if it has received appropriate rabies vaccines (provide the name and address to the local animal control authorities).
- Date of the client's last tetanus vaccine

Assessment:

- Obtain vital signs
- Check skin to identify bite mark or any break in skin and/or bleeding
- Look for signs of local swelling and discoloration
- Assess for
- Marine animals: Check skin for remaining tentacles or stingers

Call the local EMS/911 for:

- All animal bites with significant or poorly controlled bleeding
- Bites on the face or neck or with major tissue damage
- All stings by a marine animal that cause an outbreak of hives, weakness, and shortness of breath or chest pain.
- Before calling EMS determine: patient's age, weight and condition, name of the marine animal and time stung.

Refer to Local Healthcare System:

- All animal bites that break the skin
- Any client who cannot remember last tetanus vaccine

Treatment

- Stop bleeding immediately. Using standard precautions hold direct pressure to the wound for five minutes or until bleeding stops. Wear gloves or use a barrier whenever possible.
- Mammals: Wash affected area with soap and water or providone-iodine solution. If skin is broken and/or bleeding, apply clean dressing and direct pressure. Apply antibiotic ointment. For pain, it is appropriate to provide the analgesic requested by client. Follow manufacturer's dosage directions.
- Marine animals: Jellyfish: Soak the area in vinegar, alcohol, seawater, or apply thick paste of baking soda to deactivate stinging cells – fresh water can stimulate cells to release more venom. To remove remaining stinging cells, either shave the area with a razor or rub with a sand/mud and seawater mixture. For pain, apply a hydrocortisone cream to the affected area and/or provide the analgesic requested by client.
- Marine animals: Stingray: Submerge the affected area in hot but not scalding water (110-115° F) and call the local EMS. If EMS is not available, keep the affected area submerged in hot water for 90 minutes to deactivate the stingray venom.
- Refer client to local healthcare system
- Notify the local animal control authorities if the treating physician is not required to do so
- Do not attempt to capture and/or contain animal as this may result in harm to you.

Additional Considerations:

- Rabies in domesticated animals is rare in the US but can occur, especially along the US-Mexico border.
- Jellyfish are common in Florida, the Chesapeake Bay and the South Pacific. Do not handle dead jellyfish as their stinging cells are still active.
- Stingrays are commonly found on the floor of shallow tropical waters and use their long tail to pierce the skin and inject venom.

See also: Infection, Shock, Bleeding – External.

Bites – Human

Treatment Goal:

- Prevent infection of the wound
- Reduce discomfort from bite

Possible Causes:

Children will sometimes bite other children as well as some adults. Cutting knuckles on someone's teeth, as in a fist fight, should also be treated as a human bite.

NOTE: A purposeful bite from another adult is reportable to local law enforcement

History:

- Time/location and circumstances surrounding bite
- Date of last tetanus shot of the person who was bitten
- Underlying medical conditions that would predispose client to infection
- Consider age of client as well as other significant medical history (diabetes, chronic alcoholic use)

Assessment:

- Obtain vital signs and document on Incident Report Form
- Document bite site and appearance
- Presence of broken skin, puncture, tear, and bleeding
- Question time frame since bite occurred

Refer to Local Healthcare System:

- **All** bites that break the skin.
- Any old bites that show signs of infection: redness, warmth, swelling or pain with movement.

Treatment:

- Using standard precautions, clean wound with soap and water or a providone-iodine solution (1 percent - 5 percent) for five minutes.
- Educate regarding signs of infection, redness, fever and chills.
- Apply antibiotic ointment to wound to help prevent infection.
- Wrap with clean, sterile dressing. If bleeding, hold direct pressure to wound for five minutes or until bleeding stops, or until client is in the care of advanced medical personnel
- (if shelter resident) Request client to return to HS area 48 hours after treatment for re-evaluation.

Additional Considerations:

- Human bites, especially those on the hands, over joints, face and lip, skull penetration, can lead to serious infection.
- If certain tissue has been bitten off (ear, nose, digit) wrap the tissue in sterile gauze, place in a plastic bag, submerge bag in cool water and send with client to the emergency department.
- Human bites are not considered to be a common route of transmission for HIV.

See also: Infection, Shock

Bites – Insect Bites/Stings (bees, Wasps, ants, spiders, ticks, scorpions)

Treatment Goal:

- Identify and prevent a severe allergic reaction
- Prevent infection/injury
- Reduce discomfort

Possible Causes:

Bites and/or stings of mosquitoes, fleas, bedbugs, flies, spiders, ticks, bees, wasps, scorpions, etc. Most insect bites and/or stings do not cause serious injury, although stings from bees, wasps, fire ants and scorpions can cause serious pain, anaphylaxis or even death.

History:

- Ask client if he or she saw the insect that bit or stung him or her and describe it
- Any known allergies to prior stings (especially bees and wasps)
- Date and location of bite or sting
- Symptoms of an allergic reaction or anaphylaxis: lightheadedness, shortness of breath, wheezing or chest 'tightness,' throat 'tightening,' nausea or vomiting.
- Symptoms associated with bites and/or stings (pain, swelling, itching, burning, and redness).
- Severe abdominal pain or eye symptoms (especially in children) could indicate a bite from a black widow spider.

Assessment:

- Obtain vital signs
- Look for bite mark or blister, Bull's eye, spotted or black and blue rash around bite
- Note signs of difficulty breathing or swallowing, profuse sweating or salivation
- Note any tachycardia (heart rate greater than 90 at rest), irregular heartbeat or hypotension (systolic blood pressure less than 100mmHg, or significantly lower than the client's normal blood pressure). This can be a sign of anaphylaxis.
- Swelling to eyes, lips and tongue, or hives on the skin (indicative of an anaphylactic reaction). See Shock protocol.
- Nausea or vomiting, fever and chills, flu like aches
- Assess affected area for redness or swelling
- Small, itchy bumps which disappear in a couple of days (suspect mosquitoes).
- Tiny red, itchy bumps (suspect bedbugs or possibly fleas if client has had contact with dogs or cats)
- Painful red bite/sting with or without blistering (suspect spiders or fire ants)
- Itchy excoriated skin in the head or pubic area (suspect lice, see Lice protocol)
- If stung by a bee, wasp, yellow jacket or fire ant, assess the area for any remaining stinger left under the skin.

Call Local EMS/911 for:

- All cases of suspected allergic or anaphylactic reaction
- All cases of multiple stings by bees, wasps, yellow jackets or fire ants

Refer to Local Healthcare System:

- Any possible infections due to insect bite/sting
- Any suspected case of venomous spider bite (black widow, brown recluse contain venom which can cause tissue damage). If a venomous spider is suspected, place a cold compress on the bite site, keep the client quiet and **urgently get them into the local health care system**.
- Any suspected tick bite (red "bulls-eye" shaped rash that appears between 3-30 days after potential exposure to ticks).
- Any tick bite (tick attached to the skin) – early diagnosis and treatment with antibiotics can reduce the severity of Lyme's Disease or Rocky Mountain Spotted Fever.
- Any suspected scorpion sting, especially in the elderly and children.

Treatment:

The treatment is dependant on the type of insect.

- Clients with a history of severe allergic reactions (suspected anaphylaxis) may be carrying a treatment kit (Epi-Pen) and may be assisted in its use. (See procedure for auto-injector in procedures section)
- For mosquito, bedbugs and fleas – clean the affected area of the body. These bites generally do not pose a health risk and require no treatment.
- Apply cold pack to reduce swelling, baking soda paste to relieve itching
- Apply topical cream containing Hydrocortisone to skin
- Antihistamines (e.g.: Diphenhydramine) may help to alleviate itching/swelling
- Oral Diphenhydramine may prevent allergic reaction. Follow manufacturer's dosage guidelines.
- Spider bites, although frequently painful, usually do not require treatment.
- Wasps, bees and fire ants may leave a stinger under the skin.
 - Gently remove the stinger without squeezing (this may inject more venom into the tissue).
 - A credit card can be used to scrape along the skin and gently 'flick' the stinger out.
 - Cool packs may be applied to reduce swelling/pain.
 - Corticosteroid and/or antihistamine creams may help to alleviate pain and swelling.

- Frequent washing of the area with soap and water will help to prevent infection – especially for fire ant stings which can cause blisters that rupture and can become infected.
- Instruct the client to not break the blisters caused by fire ants as this could cause an infection.
- Tick bites are most easily recognized when the tick is still attached to the skin
 - Remove the tick with tweezers by firmly grabbing the tick's head as close to the surface of the skin as possible and pulling the tick loose in one piece.
 - Flush the tick down the toilet or place in a container of alcohol.
 - Cleanse the area with an antiseptic (such as rubbing alcohol) to help prevent infection.
 - Refer client to the local health care system for follow-up.
 - If insect habitat is known, treat with an insecticide to kill any remaining insects.

Additional Considerations:

- Symptoms of an anaphylactic reaction include lightheadedness, chest/throat tightness, hives, and shortness of breath, difficulty swallowing, nausea and/or vomiting.
- Clients with a known allergy to bites/stings should be encouraged to carry an allergy kit/syringe containing epinephrine.
- Identifying the type of insect that caused the bite or sting is important in recommending treatment.
- Black widow spiders are identified by their irregularly-shaped web and black, shiny black with a red hourglass marking on their underside. The bite is usually a sharp pinprick sensation, followed by dull pain and then redness and swelling, 2 small fang marks may be noticed.
- Brown recluse spiders are mostly active at night and are identified by their dark brown, violin-shaped marking on the top front portion of their body. The bite is usually not noticed but localized pain develops an hour or more later. A blood filled blister will develop with eventual erosion of skin, leaving a black scar.
- Brown recluse spiders hide in dark secluded areas of homes and other structures. May hide in shoes left outside, as well.
- Scorpions are most common in warm southern climates, and hide under rocks, debris or in sandy area

See also: Infection, Shock.

Bites – Snake

Treatment Goal:

Quick referral to higher level of care (within 30 minutes)

Prevent venomous poisoning

Reduce pain associated with bite

Possible Causes:

- Venomous snakes (rattlesnakes, copperhead, water moccasins, cottonmouth, coral snake.)
- Non-Venomous snakes

History:

- Obtain a description of the snake, if possible. Pit vipers typically have triangular-shaped heads, deep pits between the nostrils and eyes and long fangs. An exception to this is the brightly-colored coral snake with a small head, round eyes and red and black rings separated by a yellow ring. Most non-poisonous snakes have rounded heads and round eyes.

American Red Cross – Disaster Health Services Protocols

- Date of last tetanus vaccine (effective if received within past 10 years)
- Symptoms of adverse reaction to snake venom – severe pain, rapid swelling, discoloration of skin, weakness, nausea/vomiting, numbness of arms or legs, convulsions, and/or blurred vision (all indicators of a poisonous snake).

Assessment:

- Obtain vital signs
- Identify location of bite and appearance of bite site
- Determine time lapse since bite
- Determine extent of tissue damage and presence of bleeding
- Harmless snakebites are usually characterized by four rows of small scratches, separated from two rows of scratches (from upper and lower jaw teeth)
- Venomous snake bites should have one or two puncture wounds produced by fangs, whether other teeth marks are noted. May or may not bleed
- Coral snake bites leave a semicircular mark from the snake's teeth.-usually little or no pain/swelling after bite, but systemic symptoms may arise 1-5 hours after bite.
- Observe client for signs/symptoms of an adverse reaction (see above). If there are no symptoms within four hours, the snake is probably non-poisonous.

Call Local EMS/911 for:

All suspected/known cases of poisonous snake bites. Obtain clients' age, weight and condition, type of snake if known, time of bite before calling EMS.

Refer to Local Healthcare System:

- All snake bites for follow-up.
- Any client who cannot remember last tetanus vaccine or, if known, to be more than 10 years past.

Treatment:

- Use standard precautions:
 - Poisonous and non-poisonous bites: Keep the affected extremity below the level of the heart, remove all watches/jewelry (in case of swelling), clean the area with soap and water, and cover with a clean bandage.
 - Poisonous bites: Contact local EMS immediately, keep the client quiet to slow the circulation of the venom (do not allow the client to move about) Immobilize the affected extremity, remove watches/jewelry (in case of swelling), and cover with a clean bandage.
- Do not apply a tourniquet, cool pack or cut open the wound as these actions could cause more damage. Do not apply suction to the wound as this has not shown clinical benefit.

Additional Considerations:

- Snakebites occur most frequently in the summer months and usually affect the arms and legs.
- Most snake bite deaths are due to allergic reaction, poor health of client or delayed medical intervention
- Do not try to capture the snake. If the snake is thought to be poisonous, contact the local animal control authorities and give the last known location of the snake – most snakes can be found, even hours later, within 20 feet of where the bite occurred.
- Coral snakes are uncommon, but rattlesnakes and other poisonous snakes live throughout the continental US.

See also: Infection, Shock, Bleeding – External.

Bleeding – External

Treatment Goal:

- Control the bleeding.
- Prevent complications from loss of blood.
- Prevent infection.

Possible Causes:

Injuries such as cuts, scrapes, punctures, etc

History:

- Type and extent of injury
- History of anticoagulant therapy or clotting problems
- Symptoms of hypovolemia/shock (rapid heart rate, low blood pressure, pale skin. (See Shock protocol)
- History of tetanus vaccine (must have new booster if last one was not within last 10 years)

Assessment:

- Obtain vital signs
- Determine the severity and speed of the bleeding, estimate the amount of blood loss (describe it concretely – e.g. blood soaked shirt six inches in diameter).
- Reassess for further bleeding and vital signs periodically
- Look for bruising of the injured area
- Palpate soft tissue for tenderness, swelling or rigidity

Call Local EMS/911 for:

- All clients with symptoms of shock or hypovolemia
- Any bleeding that is difficult to control (e.g. pulsating)
- All bleeding from a suspected artery (spurting, bright red blood), or large vein
- Any suspicion of a significant blood loss

Refer to Local Healthcare System:

- All clients requiring a tetanus immunization
- Any laceration that may require sutures or surgical repair-should see a provider within first few hours of injury
- All bleeding caused by a puncture wound (for follow-up and possible tetanus vaccine (if last one was not within the past 10 years or client cannot remember when last one was given)
- Any diabetic client with puncture wound to the feet, regardless of amount of bleeding

Treatment:

- Using standard precautions, stop bleeding immediately, before any other action. With a clean gauze or dressing, apply direct pressure to the wound for five minutes or until bleeding stops.
- Once bleeding has stopped, apply a clean dressing to the wound.
- Instruct client to watch for signs of break through or re-bleeding of the wound. If bleeding continues, do not remove existing gauze but place more gauze on top and continue to apply pressure.
- If bleeding does not stop, apply continuous and very firm pressure until EMS arrives.

Additional considerations:

- Tourniquets are no longer recommended for control of bleeding as they can cause additional

injury, loss of limb and death.

- There is insufficient evidence to recommend for or against the elevation of a bleeding extremity. You should forego attempting to elevate an extremity when the application of direct pressure may be compromised.
- The amount of blood is not a good indicator of the severity of injury. Head wounds tend to bleed heavily, even if the wound is minor. Conversely, deep puncture wounds may not bleed much externally while most of the bleeding occurs internally.
- Long bone fractures can lead to loss of blood, ending in shock, even if the skin has not been broken.

See also: Cuts and Scrapes, Bruising, Nose Bleeds, Miscarriage, Shock.

Bleeding – Internal (symptoms of gastrointestinal, vaginal, urinary tract, organ, vascular damage)

Treatment Goal:

Prevent complications from loss of blood. Refer all suspected cases of internal bleeding to emergency care/hospital.

Possible Causes:

Stomach ulcer, hemorrhoids, early onset or unexpected menstruation, miscarriage of a pregnancy (vaginal bleeding), urinary tract infection, and internal organ vascular damage

History:

- Source of the suspected blood (vomit, rectum, vagina, urine).
- History of anticoagulant therapy or clotting problems.
- History of bleeding in past (ulcers, varices, etc.).
- Recent change in color of stool (frank blood or black/tarry stools indicate the presence of blood).
- Vomit that is coffee-ground colored or dark or bright red.
- Symptoms of hypovolemia/shock (rapid heart rate, low blood pressure, pale skin, changes in mental status). See Shock protocol.

Assessment:

- Obtain vital signs
- Speed of bleeding (continuous, slow to brisk, seeping vs. spurting)
- Estimate the amount of blood lost (describe it concretely – e.g. blood soaked shirt six inches in diameter)
- Abdominal tenderness can indicate other causes of internal bleeding
- Reassess periodically

Call Local EMS/911 for:

- All suspected cases of internal bleeding
- All clients with symptoms of shock or hypovolemia

Treatment:

- Do not give client anything to eat or drink. Refer client to the local healthcare system.
- Always use standard precautions when there is a chance of contact with blood or body fluids

Additional considerations:

Suspected internal bleeding is an emergency and requires immediate evaluation.

See also: Cuts and Scrapes, Bruising, Nose Bleeds, Miscarriage, Shock

Blisters

Treatment Goal:

- Prevent additional injury to client
- Reduce discomfort associated with blister

Possible Causes:

- Usually from persistent or repeated rubbing against the skin. Some illnesses, such as shingles can cause blister like rashes
- Burns, viral infections can also blister the skin

History:

- Exposure to any heat source or chemical which may have caused a burn or blister
- Walking in new or loose fitting shoes
- History of herpes simplex I (oral blisters) or herpes simplex II (genital blisters) or potential exposure to someone who may have these conditions
- Length of time client has had blister

Assessment:

- Obtain vital signs
- Observe size and location of blister(s)
- Herpes blisters may be painful
- Observe for fluid in the blister (absent, clear or bloody)
- Observe for any skin tear in the blister
- Look for signs of infection – redness, pus or red streaks

Refer to Local Healthcare System:

- Any blister that is large and likely to be broken by routine activity
- Any blistering suspected to be caused by either herpes simplex or the client has not received confirmed diagnosis
- Any blister with signs of infection

Treatment:

- Small, unopened blisters do not require intervention. Cover loosely with a gauze pad and let the blister heal naturally.
- For open blisters, wash with soap and water and cover with a gauze dressing using standard precautions. Do not remove the loose skin.
- **Do not puncture or break blisters**

See also: Burns, Rash, Skin Infections, Chickenpox, Shingles, Herpes, and Measles

Blood Pressure, Elevated/High

Treatment Goal:

- Assess for serious health condition
- Identify risk factors and co-morbidity
- Determine need of referral for additional work-up/ treatment for hypertension (HTN)
- Prevent serious complications from undiagnosed/untreated high blood pressure such as cardiovascular disease, kidney disease, eye damage or stroke.

Possible Causes:

- An elevated blood pressure can be due to an established diagnosis of hypertension, or as a response to stress and anxiety. Elevated blood pressure is often a result of unhealthy life-style habits. The client may have a previously undiagnosed history of elevated blood pressure and would need follow up and monitoring for the condition.
- An elevated blood pressure can be the result of certain medications or other diseases.
- It can be hereditary or related to ethnicity.

History:

- Ask the client's age, the incidence of HTN rises in men after age 35, and in women after age 45, and certainly more likely in the elderly
- Determine presence of other concerning symptoms, such as headaches, chest pain, palpitations, shortness of breath, sweating, dizziness, nausea, or changes in vision
- Ask client for any past history of serious illness, especially previously noted situations of elevated blood pressure, a diagnosed history of hypertension, heart disease, diabetes, or kidney disease.
- Ask about risk factors such as:
 - African-American descent
 - Family history of HTN
 - Family history of diabetes
 - Smoking
 - Being overweight
 - Sedentary lifestyle, lack of exercise
 - High stress levels
 - Alcohol consumption
 - Medication use, including steroids, decongestants, and anti-inflammatory drugs on a regular basis
 - Low dietary intake of potassium, calcium or magnesium
 - Excessive use of salt
 - A diet that is high in fat, fast food or processed foods
 - Client is pregnant

Assessment:

- Obtain vital signs and document on the Health Record
- Have client refrain from smoking or ingesting products that contain caffeine for 30 minutes before measurement. (can cause a transient raise in blood pressure)
- Have client sit in a chair with feet flat on the floor or lay supine, arms bared and supported at heart level
- Rest for at least five minutes before beginning blood pressure measurement. This helps eliminate activity-related factors that can cause elevation in blood pressure.
- Make sure to use the appropriate size cuff for the size of the arm (using the wrong size cuff results in inaccurate readings)
- Wrap cuff smoothly and snugly around the upper arm, with the center of the bladder placed

directly over the bend in the elbow and the cuff's lower edge placed about 2 fingers width above the bend. (incorrect placement will yield inaccurate readings)

- Take 2 or more readings, separated by 2 minutes and record. (averaging two or more readings from the same arm improves the reliability of the data)

Classification of Blood Pressure for Adults

Classification	Systolic		Diastolic
Normal*	< 120	and	< 80
Elevated	120 -139	or	80 - 90
Stage 1 HTN	140 -159	or	90 - 99
Stage 2 HTN	≥ 160	or	≥ 100
* 130/80 is considered the <i>upper limit</i> of normal:			
<ul style="list-style-type: none"> • In a <u>pregnant</u> woman (at <u>any time</u> during the pregnancy) • If a client has <u>chronic kidney disease</u> or <u>diabetes</u> 			

Call Local EMS/911 for:

- Chest pain or discomfort or sudden signals of stroke think F.A.S.T.
- Blood pressure is 180/110 or higher
- Swelling of hands, feet and/or face
- Sudden, severe headache
- Sudden, rapid rise in BP
- A pregnant client with a BP >145/85
- If a pregnant client has a history of preeclampsia
- A client with a history of diabetes or kidney disease and a BP >160/95 (or health care system depending on co-morbidity).

Refer to Local Health Care System:

- If client has any of the risk factors stated above
- If client has been monitored daily for 5 days, and the average BP is in the elevated stage
- If client has never been diagnosed or treated for HTN
- If client has been treated, and following prescribed treatment and BP is still elevated
- If the client is pregnant
- If the client has multiple health problems (co-morbidity)

Treatment:

- Confirm elevated blood pressure
- Set up the client with a daily visit to HS and record the BP on the *Health Record* on health services record for 5 days in a row. Average the blood pressure readings.
- Complete initial assessment, evaluate, accurately stage and complete risk assessment
- Is secondary cause suspected?
- Engage client in Lifestyle modification education
- Consider referral

Additional Considerations:

Despite what many people think, high blood pressure usually does not cause any symptoms. It is often called the “silent killer” for this very reason. By the time a person has symptoms such as severe headaches, dizziness or lightheadedness; they may have had untreated hypertension for an extended period of time, and have already developed complications.

Breathing Problems: Shortness of Breath/Dyspnea

Treatment Goal:

- Assess for more serious health condition
- Relieve sensation of difficulty of breathing when possible and return breathing to normal

Possible Causes:

Shortness of breath is often a sign of a serious medical condition such as myocardial infarction, cardiac arrhythmia, pulmonary edema, pulmonary embolism, pneumonia or anaphylactic shock. Transient shortness of breath may occur with exercise or overexertion. It can also be caused by a variety of environments (high altitudes), chronic and acute illnesses (high fever, severe anemia, kidney disease, COPD, asthma, heart disease) or injury (broken rib).

History:

- Determine the presence of other concerning symptoms – chest pain/pressure or tightness, sweating, nausea, lightheadedness.
- Ask client for any past medical history of serious illness – especially lung and heart disease and diabetes.
- Some clients have shortness of breath as their baseline breathing status – determine if this is the case and ask client if he or she is concerned about his or her current breathing status.
- Any medication client is currently taking.
- Any allergies to food, medication or environmental factors.
- Any history of chest pain, high blood pressure, irregular heart rhythm or blood clots in legs or lungs.
- Any trauma or blow to the neck or chest that the client may have experienced.

Assessment:

- Obtain vital signs
- Assess heart rate and rhythm.
- Listen to breath sounds for the presence of wheezes, rales or rhonchi.
- Assess character and intensity of chest pain (if any).
- Observe for use of auxiliary muscles during respiration (sternal retractions in infants).
- Observe for central and/or peripheral cyanosis (mottled skin, bluish tint to nail beds/lips, etc.).

Call Local EMS/911 for:

- Any suspicion of a serious cause for the shortness of breath
- Any client with ANY risk factor for a myocardial infarction, including known heart disease or prior heart attack or cardiac surgery, diabetes, high blood pressure, smoking history and obesity
- Acute onset of shortness of breath at rest or not relieved by rest, use of auxiliary muscles during respiration or shortness of breath associated with chest pain
- Shortness of breath with the inability to lie flat (orthopnea)
- Shortness of breath associated with a resting heart rate greater than 115 beats per minute resting respiratory rate greater than 26 breaths per minute, hypotension and/or central cyanosis

Refer to Local Healthcare System:

- Almost all adults with shortness of breath will require an evaluation by a physician
- Any case in which the client requests more assistance
- Any case associated with trauma or a blow to the chest

Treatment:

Dependant on the cause.

- Asthma: see Breathing Problems- Asthma protocol
- Hyperventilation: see Breathing Problems – Hyperventilation protocol
- Chronic shortness of breath: allow the client to do whatever they traditionally do to ease breathing (leaning forward, nebulizer, inhaler, etc.)
- Acute shortness of breath – rest in a semi-Fowlers or upright position, in a well-ventilated environment with warm, humidified air (if available) until symptoms are relieved or client is transported to a local medical facility
- Maintain calm environment and reassure client

Additional Considerations:

- Shortness of breath that is associated with chest pain could indicate a pulmonary embolus (blood clot in the lung) or a myocardial infarction (heart attack) and is a medical emergency.
- Shortness of breath associated with orthopnea or the inability to lie flat may indicate fluid in the lungs (heart failure, pulmonary infiltrates) or surrounding the heart and/or lungs (pericardial effusions).
- Abdominal distention (gas, ascites) or morbid obesity may cause shortness of breath in a supine position. Breathing should improve if the client is placed in a semi-Fowlers (semi-recumbent) position.

See also: Chest Pain/Pressure, Congestion.

Breathing Problems: Asthma/COPD

Treatment Goal:

Return breathing to normal

Possible Causes:

Asthma and chronic obstructive pulmonary disease (COPD) are grouped together under obstructive breathing problems. A history of asthma may be linked to a genetic pre-disposition or exposure to tobacco smoke. Asthma attacks may be caused by an allergic reaction to something in the air, physical activity, exposure to tobacco smoke or exposure to certain medications (causing an allergic reaction). COPD includes all chronic obstructive airway diseases, including chronic bronchitis and emphysema (of varying causes).

History:

- Determine the presence of other concerning symptoms: chest pain/pressure or tightness, sweating, nausea, lightheadedness
- Ask client for any past medical history of serious illness, especially lung and heart disease and diabetes
- Previous history of asthma, emphysema, chronic bronchitis (COPD). Clients with no prior history, but with wheezing or shortness of breath, should be considered a medical emergency
- Asthma attacks: previous triggers and effectiveness of treatment
- Current medications, any medication recently taken

Assessment:

- Obtain vital signs
- Listen to breath sounds while the client is sitting upright – asthma is characterized by wheezing or whistling sound which can occur with either inspiration or expiration
- Observe for signs of an asthma emergency – difficulty breathing, fright/anxiety, sweating, sitting upright and leaning forward, rapid heart rate and blue-tinged lips (due to inadequate oxygen

intake)

- Symptoms of COPD include chronic cough and a client using pursed lips to exhale (pink puffer). Those with emphysema will frequently have a ruddy complexion and a large, barrel chest.

Call Local EMS/911 for:

- Obvious respiratory distress with difficulty breathing
- Accompanying chest pain, sweating, nausea or dizziness
- If medication to treat an asthma attack is not available
- Any attack that the client reports is more severe than normal
- Any attack where the client raises the shoulders and chin to fight for a breath of air – this is indicative of impending respiratory failure
- Any asthma attack that does not improve within 15 minutes of taking medication
- A client that loses the ability to cough or talk during an attack
- Any client with COPD who begins to have difficulty breathing

Refer to local Health care system:

- If coughing up yellow, dark brown or bloody mucus
- Any new case of suspected (undiagnosed) asthma
- Any suspected, previously undiagnosed cases of COPD
- If client has begun to need asthma medication more frequently than usual

Treatment

- Asthma attacks can frequently be successfully treated with a bronchodilator (inhaler). Most asthmatics carry an inhaler with them and should be encouraged to use their medication. Volunteers can assist the victim with using their bronchodilator if a) the client states they are having asthma attack and has medication and b) the client identifies the medication and is unable to administer it without assistance. See protocol for inhaler under procedures.
- Chronic asthma can be managed with daily medication (as prescribed by a physician) that reduces inflammation
- For clients with COPD, neither antibiotic therapy nor treatment of their cough with cough suppressants is recommended
- Maintain calm environment and reassure client

Additional considerations:

- If a client does have a reaction to allergens in the air, try to identify what triggered the attack and attempt to reduce or eliminate the irritant.
- Many asthmatics have sensitivity to aspirin and other NSAIDs, which may cause an attack if taken.
- Half of all asthma attacks occur in children under the age of ten. Pediatric symptoms often include constant coughing, flaring of nostrils or grunting (in infants).
- COPD and emphysema are chronic diseases that are almost always associated with smoking and are seen most widely in older adults.
- Some clients require supplemental oxygen on an ongoing basis and, with access to their usual source of oxygen, can be accommodated in Red Cross facilities.

Breathing Problems – Hyperventilation

Treatment Goal:

- Identify possible serious causes of respiratory distress.
- Return breathing to a normal rate.

Possible Causes:

Breathing faster than normal may be due to emotional upset or tension/anxiety. It is also caused by injuries, such as head injuries, severe bleeding or conditions such as high fever, heart failure, lung disease, or diabetic emergencies. It can be triggered by asthma or exercise.

History:

- Determine the presence of other concerning symptoms – chest pain/pressure or tightness, sweating, nausea, lightheadedness
- Ask client for any past medical history of serious illness – especially lung and heart disease and diabetes
- Ask client or bystander, if possible, to describe the circumstances surrounding the episode of hyperventilation
- Ask client if they have experienced these episodes previously and what triggers the response and alleviates the symptoms
- Client may state they feel like they “can’t breathe” or “can’t catch their breath.”
- Client may feel dizzy or light-headed
- Client may experience numbness and tingling in the hands and/or feet or around the mouth

Assessment:

- Obtain vital signs (especially respiratory rate)
- Note if breathing is rapid and shallow
- Note if there is any substernal retraction (sucking-in beneath the ribs)
- Listen to breath sounds, which may be either clear or diminished. If wheezing is heard, refer to Breathing Problems Asthma/COPD protocol.

Call Local EMS/911 for:

- If unable to help client relieve symptoms
- Any risk factor for heart disease, coronary artery disease or heart attack
- Any concerning symptoms (see above)

Refer to Local Healthcare System:

All cases of hyperventilation for follow-up.

Treatment:

- Encourage the client to relax and encourage slow, deep breaths through pursed lips or through the nose
- Reassure the client in a calm, soothing voice
- Have the client breathe into a paper bag or into their cupped hands to help alleviate symptoms. Symptoms are caused by an imbalance of oxygen and carbon dioxide in the blood. **(Do not use this technique if client has heart or lung problems or if the altitude is above 6000 feet)**
- Plastic bags should never be used due to the risk of suffocation
- Referring the client to a Disaster Mental Health volunteer would be appropriate

Additional Considerations

- Rapid breathing creates a situation where there is a low level of carbon dioxide in the blood. This creates the numbness and light-headed sensation associated with hyperventilation.
- Frequently, if the client should faint, breathing immediately returns to normal.
- Normal respiratory rates:

Age	Respiratory Rates
Newborn to 1 year	40–60 breaths/minute
1 year to 6 years	18–26 breaths/minute
7 years to Adult	12–26 breaths/minute

See also: Anxiety.

Bruising

Treatment Goal:

- Reduce discomfort
- Reduce or limit damage to tissue

Possible Causes:

Bruising may be caused by minor bumps and sprains or traumatic blows and internal bleeding

History:

- Determine cause of bruise, if possible
- If injury, determine if disaster related
- Determine whether client takes aspirin or any blood-thinning medications
- Determine if client has history of chronic illness

Assessment:

- Obtain vital signs
- Observe size and extent of bruising
- Determine the location of the bruise – if on the abdomen or chest there should be concern about internal injury
- Is bruising around the eye, inspect the eye for blood. Ask if there is any loss of vision, change in vision or inability to move eye in all directions
- Assess level of pain
- Bruises are reddish/blue initially and then green/yellow as they fade
- Assess for presence of lump or hematoma
- Assess for possible signs of abuse

Call Local EMS/911 for:

- Any concern about possible internal injuries
- Any traumatic injury to the eyes
- Severe pain
- Rapid or weak pulse
- Rapid breathing
- Pale ashen appearance
- Nausea or vomiting
- For any traumatic bruising of the back, chest or abdomen, or large areas of tenderness, swelling or firmness at site of bruising, suspect possibility of internal bleeding, possibility of shock.

Refer to Local Healthcare System:

- If bruise is severe, if a painful lump develops, or if there is any suspected underlying injury (broken bone, sprain, etc.)
- Any bruising caused by injury to a client who is taking a blood thinner

- If client has an underlying chronic illness
- If pain increases or ability to move affected body part decreases
- Unexplained recurrent or multiple bruises

Call local law enforcement:

- If client reports that bruising was caused by violence from a family member or other shelter resident
- Suspected abuse or maltreatment of a client (physical abuse is a crime)

Treatment:

- Apply cool pack (chemical or ice/water mixture) to the bruised area for fifteen minutes to reduce swelling and to stop any remaining bleeding under the skin. Repeat several times a day for 48 hours.
- After 48 hours, a warm compress can be used instead of ice to help with tissue healing. Heat should not be applied to the area until after 48 hours due to risk of continued bleeding.

Additional considerations:

- People who have been abused frequently present with bruises on the face, back, abdomen, thighs and around the neck or buttocks. Bruises may have a recognizable shape, such as the shape of a clothes hanger or belt buckle. There are frequently multiple bruises and at varying degrees of healing (some new reddish/blue and some yellow/brown and faded).
- Elderly persons may be more prone to bruising because of thinning supportive tissues and increased capillary fragility.
- The extent and severity of bruising will be worsened in clients receiving anticoagulant medications and chronic steroid therapy.
- Blood in the subcutaneous tissues not confined to a space is subject to gravity and may spread. Distinguish enlargement of a bruise due to dependent seepage from enlargement due to continued bleeding.

See also: Cuts and Scrapes, Bleeding, Arm/Hand Injury and Pain, Leg/Foot Injury and Pain, Violence/Domestic Abuse.

Burns – Chemical

Treatment Goal:

- Limit tissue damage
- Reduce pain associated with burn
- Early contact with Poison Control Center (local or 1-800-222-1222)

Possible Causes:

Chemical burns are caused by caustic ingredients commonly found in household products (bleach, toilet bowl cleaner, drain cleaners, lawn and garden chemicals etc.) or industrial chemicals

History:

Any known exposure to chemicals – either through household cleaning agents or industrial agents

Assessment:

- Obtain vital signs
- Determine location and extent of injury
- Length of exposure to chemical and if still present on skin

- Try to identify the chemical and its source

Call Local EMS/911 for:

- Any burn that has affected more than 10% of the body
- Any client showing signs of shock (rapid pulse/breathing). See Shock protocol.
- Any burn that affects breathing or is close to the mouth
- Any chemical burn to the eyes
- Any concern for a chemical contamination that can affect others

Refer to Local Healthcare System:

- Any burn that penetrates the top layer of skin
- Any burn which occurs in the hands, feet, groin, face, buttocks or over a major joint
- Any burn larger than the palm of your hand

Treatment:

- Follow poison control Instructions
- Remove any contaminated clothing and jewelry using impermeable gloves. Store them in a safe place (plastic bag) so that no one else can be contaminated.
- Brush dry or powdered chemicals off with a gloved hand and a cloth
- Flush the affected area with large quantities of running water for 15-30 minutes per instructions of National Poison Control
- If eye is burned by a chemical, continuously flush the eye (from nose outward and downward) with running water until the arrival of EMS
- Wrap the affected area loosely with a clean dressing
- If substance is known or manufacturer's label is available, refer to the information on the bottle for treatment advice or call National Poison Control: 1-800-222-1222
- Over-the-counter analgesics can be useful for pain relief
- Contact the local poison control center for further advice

Additional Considerations

- Make sure chemicals are being properly stored – in either a locked cabinet or out of the reach of children.
- It is always useful to determine the telephone number for the local poison control center in the area you will be working.

See also: Infection.

Burns – Electrical

Treatment Goal:

- Prevent additional injury to client
- Reduce pain associated with burn
- Prevent infection

Possible Causes:

Electrical burns are caused by an electrical current (lightning, electrical appliance, etc.) that passes through the body – sometimes not leaving any outward signs of trauma.

History:

- (Client may be unable to give any history at time of treatment)
- Determine the circumstances surrounding the electrical injury
- Amount of electricity (volts/watts) to which the client was exposed
- Amount of time of contact

Assessment:

- Look and care for life-threatening conditions, such as respiratory or cardiac arrest
- Caring for any immediate life-threatening conditions takes priority over caring for burns
- Look for any signs of fractures (including spinal fractures), in those cases, do not move client
- Obtain vital signs (specifically heart rate and respiratory rate as these are frequently affected in an electrical situation) and document
- Look for 2 burn sites

Call Local EMS/911 for:

- Cases of client being struck or nearly struck by lightning
- All shocks from current higher than household plugs (greater than 110 volts).
- Cases that caused loss of consciousness or memory loss
- Cases of electrical burn that leave the client with breathing difficulty
- Muscle pain or contractions
- Seizures
- Numbness/tingling
- Any abnormal vital sign

Refer to Local Healthcare System:

All electrical burns because the extent of injury may not be readily apparent

Treatment

- Look at your surroundings before touching client – he/she may still be in contact with the electrical device that caused the injury. If in doubt, call EMS immediately.
- Turn off the source of energy, if possible. If unable, do not attempt to pull the client away from the energy source until the power can be turned off. A non-conductive tool (wood, plastic, etc.) should be used to drag the client away from the energy source.
- Check unconscious client for potential need for CPR (feel for pulse first) – electrical injuries frequently cause cardiac arrhythmias or cardiac arrest
- Prevent shock by having client remain lying down with their feet elevated 8-12 inches
- Using standard precautions cover any burn injuries with a dry, clean bandage

Additional considerations

Electrical injury frequently passes through the body without leaving outward signs of injury, although internal damage could be quite severe

See also: Infection.

Burns – Thermal (heat)

Treatment Goal:

- Cool and cover the burn
- Quick referral for critical burns
- Limit damage to tissue
- Prevent/minimize/treat for shock

- Reduce discomfort to client
- Prevent infection

Possible Causes:

Fire, sunlight or hot substances cause thermal burns of varying severity

History:

- Type of exposure (hot substance, grease, liquids)
- Length of time exposed
- Where the burned areas are and the extent (body percentage) of those burns:

Burned Area	Body % of Burn
Head	9%
Front torso	18%
Back torso	18%
Arm	9%
Groin	1%
Leg	18%

Assessment:

- Obtain vital signs
- Pay close attention to victim's airway-soot or burns around the mouth, nose or face may signal air passages or lungs have been burned
- Assess skin for amount of surface area affected. The size of the palm of the client's hand is equal to approximately one percent of their body surface area.
- First-degree: injury to only the outside layer of skin causing redness, pain, mild swelling and no blister or break in the skin
- Second-degree: injury to the layers of tissue below the surface of the skin causing blisters, pain, swelling and oozing of moisture from the skin
- Third-degree: Destroys all layers of skin and causes white/leathery skin at burn site and little pain (due to nerve damage)

Call Local EMS/911 for:

- Cases of third-degree burns or burns to the face/neck
- Burns that involve hot grease, melted clothing sticking to skin
- Any difficulty breathing- possible cases of airway and lung burns, smoke inhalation, with or without burns to the skin
- Any burns covering more than one part of the body
- Any circumferential burn (going around an entire limb or digit)
- Any burns resulting from explosions

Refer to Local Healthcare System:

- Cases of second degree burn that affect five percent of the body on an adult and three percent of the body of a child
- Any burns on the hands or feet
- Burns that affect the very young or the very old

Treatment:

- Cool all burns as rapidly as possible with cool water (not ice) by flushing gently and continuously. Always use standard precautions.
- Remove client from source of heat if possible
- First-degree: Run the affected extremity under cool water or apply a cold compress until pain

decreases. Clean with soap and water and cover with a clean bandage. Antibiotic ointment is appropriate, if available. Analgesics are appropriate for pain relief, if requested and not contraindicated.

- Second-degree: Run the affected extremity under cool water or apply a cold compress to bring the skin temperature down and limit tissue damage. Do not use ice. Clean with soap and water, pat dry and cover with a sterile bandage. Remove jewelry or restrictive clothing and elevate affected extremity. Do not break blisters. Analgesics and/or anti biotic ointment is appropriate, if requested and not contraindicated.
- Third-degree: Maintain airway, if not breathing, as breathing problems are common with third-degree burns. Call EMS. Place a cool cloth on the affected area, cover with a sterile dressing or clean sheet, elevate affected extremity, and watch for signs of shock (rapid pulse/breathing). Do not attempt to remove clothing or other fibers in burns, apply ointments to burn or put ice or ice water on the affected area.
- Guard client from hypothermia
- Shock: Keep the client lying flat unless the neck or face has been burned or the client is having trouble breathing – then they should be propped up. Elevate the feet 8-12 inches and cover the client with a blanket to keep them warm but not hot. Give nothing by mouth and wait for EMS to arrive.

Additional Considerations

- Child abuse can present itself through burns as well as bruising. Young children are frequently burned in the bath tub or sink due to inadequate supervision. Burns with distinctive edges (from being immersed), circular cigarette burns and burns at various degrees of healing all suggest child abuse and should be reported.
- Infants and children have a greater surface area relative to their total size which leads to greater loss of fluid and heat. They are at extra risk for shock, airway difficulties and hypothermia.
- The Rule of Nines is commonly used to estimate the percentage of body that has been affected by the burn. In an adult, the head or one arm represents nine percent of the total body surface, and one leg or the front or back of the trunk represents eighteen percent.
- Clients who have singed nasal hairs or burns around the nose/lips may have experienced smoke inhalation and should be referred to the local health care system
- Skin damaged by burns easily becomes infected due to the body's inability to protect itself from invading organisms
- Older adults are especially vulnerable to burns. Older adults lose their ability to sense heat and will often unintentionally become burned

See also: Infection, Breathing Problems – Shortness of Breath.

Burns-Sunburn/Radiation burns

Treatment Goal:

- Determine source of burn (sun, medical, other)
- Cool burn
- Protect from further damage
- Reduce area of exposure
- Reduce length of exposure
- Prevent or reduce possibility of radiation sickness
- Prevent/reduce long term effects of radiation exposure

Possible causes:

American Red Cross – Disaster Health Services Protocols

- Sun burn, UV light, X-rays, radiotherapy, radiological accident, terrorism (example would be a dirty bomb).
- Release of radiation into the environment can create radioactive dust and dirt (fallout). Damage to skin or other biological tissue
- Long periods in the sun without protection (sunbathing, working outdoors)
- Radiation exposure occurs when a person is near a radiation source
- External contamination occurs when loose particles of radioactive material falls on surfaces of skin or clothing
- Internal contamination occurs when radioactive particles are inhaled, ingested or lodge in an open wound

History:

- Reports being present during a radiation emergency, or fear of being contaminated by fall out
- Cancer patient being treated by radiation therapy
- Works in medical, industrial or research site that handles radioactive materials
- Over exposed to sun without sunscreen or appropriate clothing cover

Assessment:

Symptoms may occur from hours to days following exposure. May come in cycles

- Obtain vital signs.
- Intensely painful burn like skin injuries without a history of exposure to heat or caustic chemicals. Other symptoms maybe reported as itching, tingling, erythema (redness), edema (swelling), blistering, ulceration, bleeding, hair loss, skin pigment changes
- Note area affected, record skin characteristics and size of affected area

Call Local EMS/911 for:

- Cases of 3rd degree burns or burns to face and neck
- Any burn that is greater than 3 percent of body surface
- Any cause to believe that burn has caused internal tissue damage
- Any suspected burn from radiologic accident or terrorism; make sure to notify EMS of suspicion of radiologic accident or terrorism so appropriate PPE precautions can be taken. Also notify HS Supervisor and Public Health Authorities.

Refer to Local Healthcare System:

- Burns in the very young and the elderly
- Any large burn that is blistered or oozing fluid (second degree)
- All burns that are known to be caused by medical radiation

Treatment-same as for thermal burns:

- Symptom based
- Topical creams containing aloe vera
- Infection control, keep burn area covered with clean
- Pain management with anti-inflammatory medications such as Ibuprofen, following manufacturer's directions
- Psychological support
- Refer to DMH if deemed necessary for added support to client

Additional Considerations:

- In cases of Radiation accident or act of terrorism, it is highly possible that clients may have high anxiety or feelings of panic.
- Cases of exposure involving terrorism that were not initially identified immediately after the accident or they develop after client is in the shelter.

Chest Pain/Pressure

Treatment Goal:

- Early recognition and referral of life-threatening cardiac condition
- Relieve discomfort.
- Provide reassurance

Possible Causes:

Chest pain is caused by both cardiac and non-cardiac conditions. Examples of non-cardiac conditions include muscle strain in the ribs, pleuritic pains associated with pneumonia and heartburn. Life-threatening non-cardiac chest pain occurs in a pulmonary embolism or dissecting aortic aneurysm. The two main causes of cardiac-related chest pain are angina (temporary chest pain/pressure due to decreased oxygen to the heart muscle) and myocardial infarction (blockage of an artery in the heart muscle causing a heart attack). Hyperventilation can also cause chest pain.

History:

- Onset of symptoms and circumstances surrounding the onset (client at rest vs. physically active) and if symptoms are relieved by rest
- Quality of pain: sharp, dull, aching, stabbing, burning, etc.
- Location of discomfort: epigastric, between the shoulder blades, radiating down one or both arms or up to the jaw, substernal, etc.
- Severity of pain (0-10 scale)
- Past history of heart attack, family history of heart disease/heart attack
- History of angina and treatment
- Presence of additional symptoms, particularly shortness of breath, sweating, nausea or pain radiating to the arms, back or neck
- Past medical conditions that increase the risk for a serious event include prior heart disease, high cholesterol, smoking, prior coronary artery bypass surgery or stents, diabetes, blood clots in the legs or lungs, prior stroke or transient ischemic attacks (TIAs), angina (chest pain) or high blood pressure
- All current medications

Assessment:

- Obtain vital signs
- Feel skin for cold/clammy feeling or presence of sweat
- Observe for shortness of breath
- Listen to heart rate/rhythm and breath sounds
- If chest pain can be pinpointed, and pain increases upon touch (most likely chest-wall pain)
- Ask client if he/she has pain with coughing or deep breathing

Call Local EMS/911 for:

- All new cases of chest pain and all cases of unstable angina in clients with a history of chest pain
- Any client with history of angina who experiences chest pain that does not resolve with their normal treatment (e.g. nitroglycerin therapy) after five minutes
- Any chest pain associated with fever and shortness of breath

Treatment:

- Have client rest comfortably and loosen tight clothing

- For clients with a known history of coronary artery disease or stable angina (chest pain upon exertion that resolves with rest), encourage client to rest and take their own nitroglycerin tablet, if available
- For clients without a history of coronary artery disease or clients with unstable angina (chest pain occurring at rest or not responding to usual therapy), encourage client to rest and call local EMS immediately
- Make sure that clients who are already taking daily aspirin have taken their aspirin that day. If not, they should chew an aspirin – unless contraindicated (known allergy to aspirin, etc.)
- If heart attack is suspected- if oxygen is available and staff is trained in it's use: administer at 2 liters of nasal oxygen via cannulae and 30% face mask until EMS arrives

Points of Interest:

- Acute cardiac disease can present with vague symptoms, particularly in the elderly, women and those with diabetes. Be very cautious with these groups.
- Sometimes clients with myocardial infarctions may not have any chest pain, but may only experience shortness of breath, sweating or nausea (particularly in the above groups).
- Millions of Americans experience stable angina which does not constitute a medical emergency. However, immediate referral to the local health care system is necessary if their usual symptoms change or they stop responding to treatment.
- Sudden chest pain associated with breathing difficulty and (maybe) coughing up blood can be indicative of a pulmonary embolism while persistent chest pain with shortness of breath and sweating can be indicative of a heart attack.
- Gastro-esophageal reflux disease (GERD) may be a cause of chest pain and “heart burn” but do not assume that this is the cause.

See also: Abdominal Pain, Back Pain, Breathing Problems, Shortness of Breath, Indigestion, Nausea/Vomiting.

Choking/Obstructed Airway

Treatment Goal:

- Prevent loss of consciousness or death
- Return breathing to normal

Possible Causes:

Choking is the most common cause of respiratory emergency. A person whose airway is blocked can quickly stop breathing, lose consciousness, and die.

The most common causes of choking include:

- Trying to swallow large pieces of poorly chewed food
- Wearing dentures. Dentures make it difficult for someone to sense whether food is fully chewed.
- Eating while talking excitedly or laughing or eating too fast
- Walking, playing, or running with food or objects in the mouth
- Recent alcohol consumption

History:

- Onset of choking
- Determine whether this is an airway obstruction emergency
- Determine whether the obstruction is partial or complete

Assessment:

- What is blocking the airway - tongue, swollen tissues of mouth or throat, food, small toy, dentures or fluids such as vomit, blood or mucus?
- Partial obstruction-still able to move air to and from lungs
 - wheezing sounds
 - clutching at throat (universal sign of distress from choking)
 - coughing
 - a partial obstruction can quickly become a complete obstruction
- Complete obstruction-no air movement to and from lungs
 - unable to speak, cry, breathe or cough effectively
 - High pitched sound to no sound at all
 - Dusky appearance

Call Local EMS/911 for:

- All cases of suspected airway obstruction
- Client is unconscious
- If client is an infant, child or elderly
- If ability to cough is not forceful enough to clear the obstruction

Conscious Adult – Cannot Cough, speak or Breathe

- Check Scene. Check Person. First Ask, “Are you choking?”.....if client says yes, nods, or clutches throat, obtain consent and start the following procedure
- Have someone call 911
- Lean the person forward and **give** 5 back blows with the heel of your hand. abdominal thrusts to a **conscious** adult, stand behind victim and wrap arms around his or her waist
- Victim may be seated or standing
- Make a fist with one hand and place the thumb side against the middle of the victim’s abdomen just above the navel and well below the lower tip of the breastbone.
- Grab your fist with your other hand and give 5 quick upward abdominal thrusts.
- Continue back blows and abdominal thrusts until- object is forced out, person can breathe or cough forcefully, person becomes unconscious.
- Even if object is removed and client resumes normal breathing, offer to send him/her to the Emergency Room with arriving EMS or recommend follow up with local physician. If client declines, document the refusal for follow-up.

Unconscious choking adult – Breaths Do Not Go In

- If victim becomes **unconscious**, lower victim to the floor
- Open airway by tilting the head back
- Attempt to dislodge and remove the object by sweeping it with your index finger
- Use a hooking action to remove the object, being careful not to push the object deeper into the victim’s throat
- Try to open the victim’s airway by using the head-tilt/chin lift (as in CPR). Often the throat muscles relax enough after the person becomes unconscious to allow air past the obstruction into the lungs.
- Give 2 rescue breaths-if air does not go in assume the airway is still obstructed
- If the chest does not rise --- Give 30 Chest compressions.
- Tip: Remove breathing barrier when giving chest compressions
- Look for an object – remove if one is seen
- Try 2 rescue breaths. If breaths do not go in, reposition head and repeat
- Repeat sequence until object is expelled, you can breathe air into the victim, or until EMS arrives Give care based on conditions you find.
- Monitor breathing and pulse until EMS arrive

- Even if adult expels object that caused the choking, and seems to be breathing well, adult should be taken by EMS to local Emergency Room, as they may still have unidentified breathing problems

Conscious Choking Child – Age 1 to 12

- Cannot cough, speak or breathe
- Check Scene and then check child
- Have someone call 911.
- Obtain consent from parent or guardian, if present
- Lean the child forward and give 5 back blows with the heel of your hand
- Give 5 quick, upward abdominal thrusts
- Continue back blows and abdominal thrusts until object is forced out, child can breathe or cough forcefully or child becomes unconscious
- Even if the child expels the object and seems to be breathing well, refer for advanced medical follow up at the nearest Emergency Room

Unconscious choking child

- Breaths do not go in
- Retilt child's head and try 2 rescue breaths
- If chest does not rise- give 30 Chest compressions
- Look for an object and remove if one is seen
- Try 2 rescue breaths
- If breaths go in – check for signs of life, including a pulse
- Give care based on conditions you find.

Conscious Choking Infants – (Under age 1)

- Check scene and then check infant
- Have someone call 911
- Obtain consent to give care from parent or guardian present
- Give 5 chest thrusts
- Continue back blows and chest thrusts until object is forced out and infant can breathe or cough forcefully or infant becomes unconscious
- Even if an infant seems to be breathing well, send to closest emergency room as he/she should be examined by more advanced medical personnel as soon as possible

Unconscious Choking Infant

- Assess ill or injured infant
- Re-tilt infant's head and try 2 rescue breaths
- If chest does not rise give 30 chest compressions
- Look for an object. Remove if one is seen
- Try 2 rescue breaths – If breaths do not go in continue rescue breaths and compressions until signs of life return including a pulse or EMS arrives.
- Give care based on conditions you find and send to closest Emergency Room for assessment.

Additional Considerations

Breathing may be partially or completely obstructed by an **anatomical obstruction** or a **mechanical obstruction**:

- An anatomical obstruction occurs when the airway is blocked by an anatomical structure like the tongue or swollen tissues of the mouth and throat. This can also be the result of an injury to the neck or a medical emergency such as anaphylactic shock.
- A mechanical obstruction occurs when the airway is blocked by a foreign object, such as a piece of food, a small toy, or fluids such as vomit, mucus, or saliva.

Obstructions can be partial or complete. The airway structures of infants and children are smaller and more easily obstructed than an adult airway. An infant's airway and eating skills may not be fully developed.

Note: If a parent or guardian is present, obtain consent before caring for a conscious choking infant. Tell the infant's parent or guardian your level of training and the care you are going to provide. Consent is implied if the parent or guardian is not available.

Cold Related Injury – Frostbite

Treatment Goal:

- Prevent additional injury to client.
- Reverse tissue damage.

Possible Causes:

Exposure to extreme cold, usually affecting the hands, feet, nose and/or ears

History:

- Nature and duration of exposure to cold
- If the client has sensation in the affected area
- Medical history of peripheral vascular disease, diabetes, smoking or alcohol abuse
- Current medications

Assessment:

- Obtain vital signs and document
- Early stages: skin cold, pale or reddened, with either a “pins and needles” burning pain sensation or numbness
- Later stages: skin waxy-looking, red/black/blue discoloration, and swollen usually without pain. Blisters possible.

Call Local EMS/911 for:

All suspected cases of frostbite; particularly if there is no sensation or reduced sensation present

Treatment:

- It is important that the tissue not re-freeze once re-warming has begun – this will lead to extreme tissue damage. If re-freezing is a possibility, it is better not to attempt to re-warm prior to transferring the client to a medical facility.
- Ensure a warm environment and remove any wet or cold clothing from client
- Do not massage frostbitten extremities
- Re-warm the affected area by placing the extremity in warm water (100-105° F) for approximately 30 minutes. Make sure that it is not too hot by testing it yourself. The water may need to be changed frequently.
- If warm water is not available, place warm blankets around extremity – do not place near direct heat as skin may burn
- Encourage client to move extremities (fingers or toes) but not to walk on affected extremity. Place gauze between fingers and toes.
- Provide client with warm, non-caffeinated, non-alcoholic beverages
- If client is experiencing pain and requests medication, ibuprofen or acetaminophen is appropriate unless contraindicated

- Do not break blisters

Additional considerations:

- People who take beta-blockers are at increased risk of frostbite due to the decreased blood flow to the skin.
- Clients with a history of atherosclerosis (hardening of the arteries) and Raynaud's disease are also at increased risk
- Hypothermia and frostbite may occur together

See also: Cold-Related Injury – Hypothermia

Cold-Related Injury – Hypothermia

Treatment Goal:

- Return body temperature to normal.
- Prevent injury or death of client.

Possible Causes:

Prolonged exposure to icy water or other cold environments which results in a core body temperature less than 95° F

History:

- Nature and duration of exposure to cold environment
- Type and extent of injury, if any
- Alcohol use
- Chronic diseases
- Current medications

Assessment:

- Obtain vital signs (especially oral temperature) and document
- Delayed or altered mental state or loss of consciousness is a sign of a serious problem
- The presence of shivering is a good sign – lack of shivering may indicate severe hypothermia (usually associated with mental status changes)
- Pulse rate may be slow and/or irregular
- Check for signs of frostbite. See Cold-Related Injury – Frostbite protocol

Call Local EMS/911 for:

- All cases of near-drowning
- All clients with mental status changes or drowsiness
- Any client with an oral temperature less than 93° F

Refer to Local Healthcare System:

Any client with mild hypothermia (93-95° F) who is not able to maintain an oral temperature of greater than 95° F after attempts are made at re-warming

Treatment:

- Remove client from cold environment
- If unconscious, handle the client very gently as sudden movements/jolts can cause cardiac arrest
- Remove wet clothing and cover client in warm clothes, towels, blankets. Do not apply direct

heat to client or massage limbs

- If conscious, provide client with warm, non-caffeinated, non-alcoholic drinks
- If CPR must be initiated on a client with hypothermia, continue to perform CPR – even if client appears to be deceased – until the body temperature can be raised above 90° F

Additional Considerations

- Diabetics and others with poor circulation, those with congestive heart failure or taking beta-blockers, and alcoholics are more susceptible to hypothermia
- Older adults and young children are especially susceptible to hypothermia
- Most thermometers do not accurately measure temperature below 94° F
- Environment does not have to be extremely cold – prolonged exposure to cool or damp environments may also cause hypothermia
- Immersion in cold water rapidly leads to hypothermia

See also: Cold-Related Injury – Frostbite

Confusion – Altered Mental Status

Treatment Goal:

- Resolve confusion associated with situational disorientation
- Identify and rectify potential safety concerns for clients with chronic confusion
- Assess for acute and/or serious conditions

Possible Causes:

Confusion may be a symptom associated with an acute medical problem (e.g. infection, hypoxia, hypotension, low blood sugar, stroke, etc.). Other causes include fever, fluid/electrolyte imbalances, poisoning, the use of certain medications (over-the-counter, prescription and illegal drugs), or chronic disease (e.g. Alzheimer's disease), mental, emotional or behavioral disorders.

History:

- Onset of symptoms – sudden confusion (hours to days) vs. progressive confusion (months to years)
- History of confusion in the past
- Concurrent symptoms indicative of infection – headache, fever, frequency and/or burning of urination, recent respiratory infection, etc
- Recent visual and/or auditory hallucinations
- Recent change in sleep pattern or sleep deprivation.
- Past medical problems
- Current medications taken – both prescription and illegal.

Assessment:

- Obtain vital signs: hypotension, tachypnea or tachycardia are serious findings
- Assess for level of consciousness (awake and talking, awake/not talking, can be aroused by voice, aroused by pain, not aroused)
- Assess for level of orientation (person, place, time)
- Evidence of Head Injury
- With the assistance of a mental health worker, interview the client and determine if they are able to:
 - a) Answer questions appropriately.

- b) Follow a conversation.
- c) Understand where they are.
- d) Remember important facts.
- e) Make critical judgments that affect safety.

Call Local EMS/911 for:

- Any case of sudden or rapid-onset confusion
- Any case of unexplained confusion
- Any client suspected of being a risk to themselves or others

Refer to Local Healthcare System:

- Any case of slow-onset confusion or change in baseline status
- Any case requiring possible adjustment in prescribed medications

Treatment

- Do not administer anything by mouth to confused clients
- Delirium is an acute condition in which there is almost always an underlying physical condition which requires immediate medical diagnosis and treatment
- Those clients experiencing delirium are also at risk of injuring themselves or others, either intentionally or unintentionally. Implement measures to protect the client and others from injury until EMS arrives.
- Chronic dementia can be managed in the shelter environment as long as the client is not at risk of harming him or herself or others and has a family member or caregiver with him or her. Encourage the caregiver to re-establish a routine as quickly as possible after the disaster and to re-orient the client to person, place, time and new environment (if applicable) frequently. Since symptoms of confusion frequently worsen in the evening, closer supervision by the caregiver should be encouraged for the evening hours.

Additional Considerations

- Disorientation is a state of confusion involving time, place or person in an otherwise alert individual. Transient, situational disorientation to time and/or place is often benign.
- If confusion develops or worsens suddenly, this can be an indication of delirium. This could be due to a serious medical condition or the affects of drugs, and should be referred to local EMS immediately for diagnosis and treatment.
- Dementia is characterized by a slower, more insidious onset of confusion.
- Abruptly stopping the use of alcohol and many medications, both prescription and illicit, may cause delirium.
- In young people, sudden delirium may be due to a serious infection, like sepsis, meningitis or encephalitis.
- In older adults, sudden confusion may be due to an infection somewhere else in the body – dehydration, urinary tract infection, pneumonia or influenza.

See also: Bleeding, Dizziness, Fainting, Headache, Diabetic Emergencies, Poisoning, Shock, Stroke, Substance Abuse/Withdrawal, Fever

Congestion – Lower Respiratory (Cough, bronchitis, pneumonia, “chest cold” symptoms)

Treatment Goal:

- Alleviate symptoms

- Prevent spread of illness
- Prevent acute respiratory distress

Possible Causes:

Lower respiratory illness may be caused by bronchitis or pneumonia and is characterized by frequent coughing (productive or non-productive) with or without a fever. Pneumonia has many different causes (aspiration into the lungs, decreased breathing volume post-surgery, etc.).

History:

- Any chest or lung pain associated with breathing (pleuritic pain)
- Underlying condition or illness which may predispose a client to bronchitis and/or pneumonia (emphysema/COPD, heart failure, HIV/AIDS, poor general health, etc.)
- Recent upper respiratory infection or exposure to an individual who had a known or suspected respiratory infection
- Exposure to any known respiratory irritant (chemicals, dust, etc.)
- History of smoking tobacco products
- History of alcoholism
- History of chronic sinus problems or environmental allergies
- Recent extended stay in a hospital or nursing home
- Current medications taken
- History of vaccination – pneumococcal (within five years) or influenza (current year)

Assessment:

- Obtain vital signs
- Tachypnea (respiratory rate greater than 24 per minute) can be a sign of serious lung compromise
- Assess for signs/symptoms of an upper respiratory infection (runny nose, sore throat, fatigue, and perhaps a mild fever) which may lead to a lower respiratory infection
- Assess for presence of phlegm associated with cough which may be clear/white (common in viral infections) or green/yellow (common in bacterial infections) or blood-tinged (common in bacterial infections and pulmonary emboli)
- Listen to breath sounds, rales, wheezes or rhonchi may indicate a significant problem
- Observe for signs of shortness of breath

Call Local EMS/911 for:

- Clients with respiratory distress (shortness of breath, resting respiratory rate greater than 26 per minute)
- Clients with a change in level of consciousness (may indicate hypoxia)
- Clients with acute shortness of breath that may be related to heart disease

Refer to Local Healthcare System:

- Any client with an acute coughing illness that includes a fever of greater than 101° F or discolored (green/yellow) or blood tinged sputum
- Any case of cough (non-chronic), with or without fever, that lasts more than one week, has blood in the sputum, and/or the client has a history of or possible exposure to tuberculosis
- Any client that is experiencing trouble breathing due to a cough and/or thick mucus
- Any suspected case of pneumonia or client with “wet” breath sounds. A diagnostic x-ray would be needed to confirm/rule-out pneumonia.

Treatment:

- Comply with [FDA recommendations and disaster health services guidance](#) that restricts use of cold and cough medications for all children younger than six years old.

- For dry, non-productive coughing, encourage the client to rest and drink plenty of fluids (non-caffeinated and non-alcoholic). If requested, a cough suppressant would be appropriate, unless contraindicated.
- For productive coughing, cough suppressants should not be encouraged as coughing is an effective means for moving phlegm out of the lungs. Clients should rest and drink plenty of fluids. An expectorant would be helpful to loosen phlegm, unless contraindicated.
- If not contraindicated, an NSAID (Ibuprofen) or acetaminophen would help reduce fever, if present.
- Encourage the client to breathe the steam from a bath of hot water (with a towel draped over the head). This may help loosen phlegm and dilate narrowed airways.
- Reinforce infection control measures to limit spread of contagious diseases.

Additional Considerations:

- Pleuritic pain, fever and shortness of breath are commonly seen symptoms in cases of pneumonia
- Wheezing may or may not be present in bronchitis or pneumonia
- “Wet” breath sounds are typically present in pneumonia and do not clear with coughing. Wet breath sounds may also be heard in bronchitis but tend to clear or move with coughing.
- Chronic bronchitis and bronchitis that is suspected to be caused by a viral infection (white or clear mucus) do not respond to antibiotic therapy
- Vaccination may prove effective at preventing some pneumonia and should be recommended for all clients over the age of 65 and high-risk clients – immune-compromised, diabetics and those with cardiac/pulmonary disease

See also: Breathing Problems, Cough, Fever, Influenza, Sore Throat.

Congestion – Upper Respiratory (“cold” symptoms)

Treatment Goal:

- Alleviate symptoms
- Prevent spread of illness

Possible Causes:

Symptoms may be caused by viral infection or less frequently, bacterial infection. Allergies (“hay fever”) may also cause any or all of the following: headache, sore throat, nasal congestion, cough, sneezing, runny nose, fever

History:

- Specific symptoms the client is experiencing and when they began
- Any known environmental allergies
- Known exposure to others with similar symptoms
- Recent travel, especially international

Assessment:

- Obtain vital signs. A fever may indicate a bacterial infection.
- Examine back of throat for redness, enlarged tonsils or exudates (pus)
- Palpate (feel) lymph nodes under jaw line and anterior neck for tenderness and/or enlargement
- Observe respiratory effort – count respirations for one minute
- With a stethoscope (listen to) breath sounds for wheezing, rales, rhonchi or diminished sounds
- Note the color and amount of phlegm

Call Local EMS/911 for:

- Client has chest pain and/or shortness of breath
- Difficulty swallowing, unable to swallow or control saliva, speech is muffled
- Altered mental status

Refer to Local Healthcare System:

- Any client with a fever greater than 101° F or blood-tinged nasal discharge or sputum
- Facial pain, particularly if associated with a fever (may indicate acute sinusitis)
- Any symptom(s) that persist more than 5 days, or that worsen.
- Evidence for Strep Throat or other contagious diseases

Treatment:

- Comply with [FDA recommendations and disaster health services guidance](#) that restricts use of cold and cough medications for all children younger than six years old.
- Encourage client to drink plenty of fluids, rest and not come in close contact with others (no sharing of drinks, etc.)
- Encourage client to cover his or her mouth when coughing and to wash his or her hands frequently throughout the day
- If the client is requesting medication, over-the-counter medications geared toward treatment of specific symptoms should be used
- Antihistamines are used for congestion caused by hay fever
- Anti-tussives may be effective cough suppressants
- Decongestants work to clear nasal congestion but should be used with caution in clients with a history of high blood pressure
- Expectorants work to loosen phlegm and mucus
- Analgesics may also be appropriate to help alleviate aches and pains
- Ensure that medications are not contraindicated prior to distributing to client
- Encourage parents to offer frequent fluids to help alleviate congestion
- Saline nose drops and a bulb syringe can be used in infants with nasal congestion
- Reassure clients and parents that most viral infections will resolve with time
- Reinforce infectious control measures to limit spread of contagious diseases

Additional Considerations:

- A “cold” is not the “flu.” Influenza is a rapid-onset acutely febrile illness associated with severe myalgia, but rarely a runny nose.
- Many over-the-counter “cold” treatments have many different medications included and are geared toward treating multiple symptoms. Try to treat only those symptoms presented by the client by choosing medications with a single active ingredient. Pay special attention to ingredients that may be contraindicated in clients with high blood pressure.
- Non-seasonal outbreaks of upper-respiratory symptoms may suggest an alternative diagnosis – public health officials should be notified in suspicious cases
- Persons with altered immunity and certain co-morbidities (lung disease, diabetes) are more susceptible to illness and are at higher risk for progression to more serious illnesses like pneumonia and respiratory distress
- Smokers or others with a chronic cough should not be treated with antitussives
- Many over-the-counter medications are not appropriate for pediatric clients younger than 12 years. Medication prepared especially for children ages 6 and over should be used only according to the manufacturer’s dosage guidelines.
- Parents should always use a measuring device (dropper, dosing cup or spoon) when administering liquid medications
- Parents may not be aware of the recent FDA recommendations regarding cough and cold medicines in children and should be educated accordingly

See also: Breathing Problems, Cough, Fever, Influenza, Sore Throat

Constipation

Treatment Goal:

- Return bowel habits to normal.
- Reduce discomfort.

Possible Causes:

Constipation is the infrequent or uncomfortable passing of stool. This condition may be chronic or acute. One cause of constipation is slowing of stool transport through the intestines due to inactivity, certain medications or other disorders. Other causes include dehydration, low-fiber diet and obstruction.

History:

- Determine the normal bowel habits
- Date of last bowel movement
- Pain either during a bowel movement or between
- Cramping and/or bloating
- Nausea or loss of appetite
- Recent dietary changes
- Current medications taken
- History of chronic bowel problems or surgery

Assessment:

- Obtain vital signs
- Palpate abdomen for distention or tenderness
- Listen to abdomen for bowel sounds

Refer to Local Healthcare System:

- Any case of constipation that causes the client great concern
- Any marked change from usual bowel habits
- Any case of constipation with abdominal tenderness

Treatment:

- Chronic constipation: Encourage client to incorporate more fruits, vegetables and bran into his or her diet. Drinking plenty of fluids and increasing activity will help, as well. If a laxative is necessary, recommend the client take whatever medication has been effective in the past.
- Acute constipation: Encourage the client to take all of the above actions. When medication is necessary, encourage the client to take a medication suited to their situation, unless contraindicated. Stool softeners work well to increase the water content in the stool and reduce the effort needed to pass stool; making it a good choice for those clients who recently underwent surgery or otherwise should not strain. Stimulant laxatives use irritating ingredients to stimulate the walls of the intestine to contract and move stool. Enemas serve to mechanically flush stool out of the colon.

Additional Considerations:

- Older adults are more prone to constipation due physiologic changes that take place in the colon, increased use of medications and inactivity

- Prolonged use of laxatives can cause a change in the lining of the intestines and create a dependence on the medication

See also: Abdominal Pain, Back Pain, Indigestion

Cough

Treatment Goal:

- Reduce cough symptoms
- Prevent injury to client
- Assess for more serious health condition

Possible Causes:

Coughing occurs when the airway is irritated and can be caused by allergies or respiratory infection. Common causes of cough are allergies, respiratory infections, asthma and congestive heart failure. Common causes of nocturnal cough (cough at night) are congestive heart failure and gastro-esophageal reflux disease (GERD).

History:

- How long the client has had the cough
- What time of day the cough occurs
- What factors affect the cough (cold air, eating, lying down, etc?)
- Any associated shortness of breath, chest pain, hoarseness, dizziness, wheezing, chills/fever or night sweats
- Presence of sputum and amount/color of sputum
- History of smoking tobacco products
- History of asthma, emphysema/COPD, bronchitis, GERD, congestive heart failure
- History of immune suppression

Assessment:

- Obtain vital signs (especially temperature and respiratory rate)
- Observe for shortness of breath
- Listen to breath sounds – may be decreased over a certain area or there may be congestion that does or does not clear with coughing
- Observe the client for effectiveness of cough (is the client able to clear phlegm?)

Call Local EMS/911 for:

- Any client who is short of breath or unable to catch their breath due to coughing
- Refer to Local Healthcare System:
- Any client who is experiencing a cough with fever or has blood in their sputum

Treatment:

- Comply with [FDA recommendations and disaster health services guidance](#) that restricts use of cold and cough medications for all children younger than six years old.
- Clients with a new cough should be encouraged to cover their nose and mouth when they cough, wash their hands frequently, and avoid direct contact with other clients as their cough could be caused by an infectious agent
- Clients experiencing a new cough or a cough with fever should be encouraged to rest, drink plenty of fluids and take analgesics and/or antipyretics and cough medications as needed.
- Antitussive therapy: May be effective at suppressing a cough, unless contraindicated. Coughs

that are productive (able to move phlegm) should not be suppressed but the underlying cause of the cough should be identified and treated appropriately (i.e., coughing caused by respiratory infection should be treated with antibiotics). These products usually come in the form of a liquid or cough drop.

- Expectorant/Mucolytic therapy: For dry or unproductive coughs, expectorants and mucolytics are effective at loosening and thinning phlegm, unless contraindicated. They do not suppress a cough.
- Non-pharmaceutical therapies include warm, moist vapor (such as a humidifier) to reduce airway irritation
- Health teach regarding all OTC drug therapies and advise client to make good choices to manage symptoms

Additional Considerations:

- Brown, yellow or greenish sputum may, but not always, indicate a bacterial infection
- Blood in the sputum (hemoptysis) may be caused by pneumonia, pulmonary emboli or tuberculosis
- Antihistamines and decongestants are not effective at treating a cough unless the cough is caused by allergic irritants
- Croup is a hacking, bark-like cough sometimes experienced by children – mostly at night and is characterized by a croaking sound upon inhalation and difficulty breathing. Treatment includes a mist vaporizer or sitting with the child in a closed, steam-filled bathroom while working to calm and reassure the child. Call 911 if symptoms become worse or do not respond to treatment within 20 to 30 minutes.
- A cough in a child younger than three years may be caused by an aspirated foreign body
- Whooping cough (Pertussis) is a highly contagious disease that, because of immunization, is uncommon in the United States. Pertussis is characterized by fits of coughing that end in a high-pitched, deeply in-drawn breath and affects mostly children younger than five years. If whooping cough is suspected, refer client to the local healthcare system for diagnosis and treatment.

See also: Breathing problems Asthma/COPD, Congestion, Fever, Influenza, Measles, Tuberculosis

Cramps – Abdominal

Treatment Goal:

- Reduce discomfort
- Assess for more serious health condition

Possible Causes:

Gastrointestinal: non-specific upset (gas, bloating), food allergies/lactose intolerance, food poisoning, infections (viral or bacterial gastroenteritis)

Gynecologic/ obstetric: menstrual cramping, uterine contractions (pregnancy)

History:

- Quality of pain (cramps vs. dull ache)
- Location – menstrual cramping is frequently present in the pelvis/lower abdomen, back and legs, while intestinal cramping may be diffuse over the abdomen and may radiate to the back
- Presence of typical symptoms of the client's pre-menstrual syndrome
- Present, anticipated or missed menstrual cycle
- Known or suspected pregnancy

- Presence of nausea, with or without vomiting, and diarrhea associated with gastrointestinal illness
- Ingestion of unfamiliar food or food not eaten regularly

Assessment:

- Obtain vital signs
- Pain Scale index 0-10
- Assess for tenderness, distention or guarding: these could be signs of a more serious condition. See Abdominal Pain protocol

Call Local EMS/911 for:

- Any possibility of miscarriage or premature labor
- Refer to Local Healthcare System:
- Any case of abdominal pain/cramps associated with tenderness to palpation
- All suspected cases of food poisoning or gastrointestinal infections
- Any severe abdominal discomfort of unknown origin
- Diarrhea that continues for more than three days should be reported to a physician

Treatment:

- For suspected GI upset or food poisoning: Encourage the client to rest in a comfortable position. If client has been vomiting, wait until vomiting stops and encourage client to frequently drink small amounts of mild fluids (water, tea, electrolyte fluids such as Gatorade). Do not give food, especially fatty or fried foods.
- For pre-menstrual/menstrual cramping: Non-steroidal anti-inflammatory medications work well to alleviate discomfort, unless contraindicated. Warm compresses may also help. Encouraging the client to sleep and exercise regularly will also help relieve some of their discomfort.

Additional considerations:

- Menstrual cramps usually begin approximately 24 hours before menstruation and can last up to two days after onset of menstruation.
- Traveler's diarrhea, frequently experienced when traveling outside of the country or to lesser developed countries, can be effectively treated with plenty of water and anti-diarrhea medications.

See also: Abdominal Pain, Constipation, Diarrhea, Indigestion, Nausea/Vomiting, Vaginal Discharge/Itching, Childbirth, Miscarriage.

Cramps – Muscular

Treatment Goal:

- Eliminate cramping/pain
- Reduce discomfort

Possible Causes:

Cramps can occur due to fatigue, over-exercising, tension and infection. Exercise-induced electrolyte imbalance and poor circulation to the leg may also be the cause of muscle cramping. Muscle cramps usually affect the calf muscles and feet.

History:

- Location and severity of the cramp

- The presence of a recent injury
- Recent strenuous or prolonged physical activity
- Amount of water consumption over the past 24 hours – especially in warm climates

Assessment:

- Obtain vital signs
- Assess affected area for injury bruising, lumps, swelling or point tenderness

Refer to Local Healthcare System:

- Any cramp not relieved with rest, massage, analgesics and warm compress

Treatment

- Encourage the client to gently massage and stretch the cramped muscle
- Encourage the client to take a hot bath or place a warm compress on the affected area
- For cramps in the feet and/or toes, gently pull the toes up toward the body on the front of the foot to stretch the muscles
- An over-the-counter analgesic may be helpful at reducing pain, if requested by client and not contraindicated
- For prevention, drink plenty of water and stretch properly before exercise

See also: Arm/Hand Injury and Pain, Back Pain, Dehydration, Heat-Related Illness, Leg/Foot Injury and Pain, Neck Pain/Stiffness.

Cuts and Scrapes/Lacerations and Abrasions

Treatment Goal:

- Stop any bleeding
- No delay referral if wound(s) need closure
- Prevent further injury or infection

Possible Causes:

Open wound in which the skin has been broken due to a cut by a sharp object or scrape

History:

- Activity engaged in when the cut or scrape occurred
- Pain score (0-10 scale)
- Type of object that caused the cut and/or scrape
- Date of last tetanus shot
- Current medications, especially anticoagulants or steroids

Assessment:

- Obtain vital signs.
- Assess for bleeding.
- Determine depth of cut and if any tendons and/or ligaments are exposed.
- Check for function distal to the cut/scrape (have the client move their fingers, toes, etc.).
- Look for objects or dirt embedded in the cut or under the skin, but do not probe

Call Local EMS/911 for:

Severe bleeding or bleeding that does not stop with direct pressure and/or elevation of limb after 10 minutes.

Refer to Local Healthcare System:

- Any wound that is longer than 1/3 inches, is on the face, is deep or has edges that do not meet up
- Any cut caused by an obviously dirty object
- Any potential nerve or tendon involvement
- All puncture wounds
- Any signs of infection (redness, swelling, skin warm to touch)
- Any client wishing to receive a tetanus booster

Treatment:

- Cuts:
 - Use standard precautions before handling wound
 - If bleeding, apply direct pressure over the wound with sterile dressing for 5-10 minutes or until bleeding stops
 - Once bleeding has stopped, wash wound with soap and flush copiously with water. Be sure to clean out any obvious objects or dirt in wound
 - Pat dry and apply a dry, sterile dressing. The use of a triple antibiotic ointment to superficial cuts and abrasions may reduce the risk of infection
- Scrapes:
 - Wash your hands with soap and water and apply gloves before handling wound
 - Wash wound with soap and water. Minor scrapes should be left open to air. Large wounds should be covered with an antibiotic ointment and sterile dressing.

Additional Considerations:

- Wounds to the scalp may be very bloody even if the wound is minor
- Puncture wounds typically bleed very little, if at all, but are at increased risk for tetanus

See also: Bleeding, Bruising, Arm/Hand Injury and Pain, Leg/Foot Injury and Pain, Rape/Sexual Assault, Violence/Domestic Abuse, Shock.

Dehydration

Treatment Goal:

- Return fluid balance to normal
- Prevent injury to client
- Treat underlying cause of dehydration
- Assess for more serious health condition

Possible Causes:

Dehydration occurs when the body loses more water than it takes in. Losses could be due to diarrhea, vomiting and heat stress/excessive sweating. Inadequate intake may be due to nausea/vomiting and lack of potable water or other fluids. In addition, certain diseases (Addison's disease, uncontrolled diabetes mellitus, diabetes insipidus) and certain drugs (diuretics, lithium, excessive alcohol) cause an increase in urination which may cause dehydration.

History:

- Mental confusion or lethargy (a sign of severe dehydration)
- Recent increase in thirst or constant "dry mouth" sensation
- Decreased sweat

- Diminished or absent urination
- Color of urine (light/clear vs. dark yellow/amber)
- Less than six wet diapers per day for infants
- Recent episode of diarrhea/vomiting
- Current medications
- Weakness, dizziness, lightheadedness, fatigue

Assessment:

- Obtain vital signs – check specifically for orthostatic hypotension (lightheadedness or low blood pressure when client stands up)
- Look at skin and mucous membranes for dryness – lips may be cracked and/or dry. Client may report “dry mouth”
- Reduced skin elasticity/turgor (“tenting” – loss of ability to “bounce back” when pinched)
- Lack of perspiration if febrile or overheated
- Sunken eyes or, for infants, sunken fontanel (soft spots on head)

Call Local EMS/911 for:

- Signs of moderate dehydration in infants, children or the elderly who can become severely dehydrated more quickly. Sunken eyes, no tears, sunken soft spot on infants head
- All suspected cases of severe dehydration (confusion, lightheadedness, low blood pressure, tachycardia/fast pulse)

Refer to Local Healthcare System:

- Any client whose symptoms of mild dehydration do not improve with fluid therapy
- Any client that is not able to take liquids him or herself to rehydrate
- No urination in eight hours (for adults) or fewer than six wet diapers per day (for infants)
- Any client taking a medication or with a pre-existing disease for which excess fluid loss/dehydration may occur

Treatment:

- Encourage all clients to drink six glasses of water or fluid daily – increasing their intake during hot days or after physical exertion. Avoid caffeine and alcohol.
- Mild dehydration can be treated by drinking plenty of water and replacing lost electrolytes with a sports drink. Children should receive oral rehydration solutions such as Pedialyte. Drink small amounts frequently, rather than a large glassful. Once the client is re-hydrated, follow-up with him or her to make sure he or she continues to drink plenty of fluids.
- When necessary, oral rehydration solution can be made by mixing ½ teaspoon salt, ½ teaspoon baking soda and three tablespoons sugar in a quart of pure water.
- All fluids should be given slowly and at frequent intervals. A general rule of thumb is to continue giving fluids until urine output increases and the urine color is light yellow.
- Identifying and treating the cause of dehydration will help prevent recurrent episodes (diarrhea, etc.). See Diarrhea protocol.
- Severe dehydration, characterized by low blood pressure, orthostatic hypotension, mental confusion (irritability in infants) and/or reduced consciousness, along with the classic signs of dehydration, should be referred to local EMS immediately.

Additional Considerations:

- Older adults and young children are at increased risk for dehydration
- Globally, dehydration is second to diarrhea as the leading cause of death in children
- Avoid using beverages other than water. Sports drinks and rehydration solutions to treat dehydration can make the condition worse, Coffee and soda are also contra-indicated. Too much fruit juice, especially in children, can also make diarrhea worse.

- Clients with diabetes mellitus, who are not at risk for hypoglycemia, should always be given sugar-free fluids

See also: Bleeding, Cramps – Muscular, Diarrhea, Fever, Heat-Related Illness, Shock

Diarrhea

Treatment Goal:

- Relieve symptoms
- Prevent spreading of bacterial and viral infection to others

Possible Causes:

The causes of diarrhea may not always be easy to pinpoint. Some possible causes may be a viral infection. Medications, antibiotics or inflammation of the intestinal lining from illness or food intolerance can cause diarrhea. Maybe caused by food or water borne pathogens. In some people, emotional stress and anxiety may cause diarrhea.

History:

- Increase in the volume, frequency and wateriness of stool
- Presence of abdominal pain
- Color of stool (red, maroon or black, tarry stools may an indicator of blood)
- Presence of gas, cramping, urgency, nausea/vomiting
- Onset of symptoms (sudden/acute vs. persistent/chronic)
- Recent changes in diet
- Current medications, especially antibiotics
- Exposure to others with similar symptoms
- Signs/symptoms of dehydration. See Dehydration protocol.

Assessment:

- Obtain vital signs, especially temperature
- Assess for dehydration (see Dehydration protocol)
- Palpate abdomen for tenderness, guarding and distention

Refer to Local Healthcare System:

- Diarrhea associated with fever greater than 101° F, passing of painful stool, abdominal pain or blood in stool (red, maroon, black or tarry color)
- Diarrhea that persists for more than 72 hours
- Inability to take oral fluids
- Any child with currant-colored, jelly-like stools (a sign of intussusception or telescoping of the intestine)

Treatment: Dependant on cause

- In cases of non-bloody stool; encourage small frequent sips of water, but no food for several hours. Then advance to eating mild foods, such as rice, dry toast, crackers, bananas and applesauce.
- Have client avoid spicy foods, fruits, alcohol and caffeine drinks until 48 hours after diarrhea has stopped
- Avoid use of over the counter anti-diarrhea medications for first 6 hours, and then use only if there are no other signs of illness, such as fever, cramping. Symptoms will usually resolve within 24-48 hours. Advise client to stop taking them as soon as stools thicken.

- Ensure to disinfect surfaces that clients come in contact with-especially dining tables and chairs
- Infectious diarrhea is easily spread to others – particularly in crowded conditions. Encourage the client to wash their hands frequently (and after every trip to the restroom) and avoid close contact with others. Infectious control measures should be immediately instituted in shelter environments.
- Antibiotic-caused diarrhea: The use of antibiotics may cause diarrhea by killing the good bacteria in the intestines. If symptoms are severe, another antibiotic may need to be prescribed.-refer to local healthcare system, or prescribing physician.
- Inflammation: Encourage the client to remove the irritant from their diet (coffee, fatty/spicy foods, etc.) and the symptoms should resolve.
- Encourage the client to increase the amount of fluid (non-alcoholic/non-caffeinated) they take in to help prevent dehydration.

Additional Considerations:

Infectious diarrhea is easily spread to others, particularly in crowded conditions. Educate clients about the need for proper sanitation. If there are multiple cases of diarrhea in a single facility or from a common food or water source, consult the local health department to investigate.

See also: Abdominal Pain, Cramps – Abdominal, Dehydration, Indigestion, Influenza, Nausea/Vomiting.

Dizziness (Vertigo)

Treatment Goal:

- Assess for more serious health condition
- Relieve uncomfortable symptoms
- Prevent injury to client

Possible Causes:

- A false sense of self or surroundings
- Feeling of moving or spinning frequently accompanied by nausea and loss of balance
- Possible causes include inner ear problems, brain disorders, motion sickness, transient ischemic attack, increased intracranial pressure and certain medications

History:

- Onset of symptoms
- Presence of any additional symptoms; nausea/vomiting, headache, vision changes
- Blurry vision and/or headache, slurred speech, weakness in arms or legs, uncoordinated movement (may indicate brain involvement)
- Recent upper respiratory infection
- If sensation is present at rest or with abrupt change of position
- Sense of fullness in one and/or both ears or change in hearing
- Ringing in the ear (tinnitus)
- History of brain and/or inner ear disorder
- Current medications

Assessment:

- Obtain vital signs
- Assess for mental status changes/confusion
- Observe client's gait and motor control

- Assess for unintentional eye movement (nystagmus, or jerkily moving eyes)
- Listen for slurred speech when client speaks
- Check for coordinated movement and muscle strength in extremities

Call Local EMS/911 for:

Any case of vertigo accompanied by slurred speech, severe headache, muscle weakness, or uncoordinated movement

Refer to Local Healthcare System:

- Any case of vertigo that does not resolve itself within two days or prevents client from being able to sit/walk
- Any case of sudden or rapid onset vertigo

Treatment:

- Have the client lay quietly in a position of comfort. Closing eyes may help.
- Encourage the client to rest and keep their head still or change positions slowly – rapid movement or turning the head may exacerbate the condition
- Most vertigo resolves on its own within a day or two
- Vertigo caused by a viral infection of the ear may not subside until the underlying infection is treated

Additional Considerations:

The majority of cases of vertigo are caused by inner ear disorders but more serious conditions should not be overlooked

See also: Bleeding, Breathing Problems Hyperventilation, Ear Problems, Fainting, Headache, Heat-Related Illness, Neck Pain/Stiffness, Stroke, Substance Abuse/Withdrawal.

Ear Problems – Ear ache

Treatment Goal:

Relieve discomfort

Possible Causes:

Pain or pressure in or around ear caused by infection, earwax, jaw problems or foreign object lodged in ear

History:

- Onset of symptoms
- Quality of pain – sharp stabbing, dull ache, etc.
- Changes in hearing
- Recent upper respiratory infection
- Recent tooth infection or other jaw injury

Assessment:

- Obtain vital signs (temperature may be slightly elevated with infection)
- Look at affected ear for drainage or obvious signs of a foreign object

Refer to Local Healthcare System:

- Any case where a foreign object lodged in the ear is suspected

- Any case of earache that does not respond to treatment within three days
- Any client who has drainage coming from the affected ear
- Ear pain associated with fevers, especially in children

Treatment:

- If requested by client, treat pain with analgesics as recommended by manufacturer's label, unless contraindicated
- Over-the-counter treatment is usually effective and includes antihistamines, nasal spray and analgesia
- If a foreign object is clearly visible in the ear, you may try to gently remove it with tweezers and then refer client to seek medical attention for follow-up

Additional Considerations:

- Young children frequently suffer from ear problems and will present with crying, irritability and pulling on/rubbing the affected ear
- Aspirin should never be given to children under the age of 18
- Do not place anything inside the ear – cotton swabs, hairpins, etc.

See also: Congestion, Fever, Headache, Neck Pain/Stiffness, Paralysis/Weakness – Facial or Limb, Sore Throat, Toothache, Infection, Measles, Mumps.

Ear Problems – Hearing changes

Treatment Goal:

Assess for more serious health condition

Possible Causes:

A decreased ability to hear can be progressive (often seen in older adults) or acute – due to a perforated eardrum or ear infection. Tinnitus (ringing in the ears) can be caused by certain disorders/infections in the ear and by taking certain medications.

History:

- Onset of symptoms (rapidly vs. over a period of time)
- Type of hearing change: hearing loss, ringing in ears, etc.
- Symptoms associated with infection or perforation: pain in ear, discharge, etc.
- Current medications, including recent antibiotics, aspirin or chemotherapy

Assessment:

- Obtain vital signs
- Assess for signs of drainage from ear or foreign object in ear

Refer to Local Healthcare System:

- All cases of sudden or rapid onset of hearing changes
- All cases of hearing changes that do not resolve on their own within two days or with treatment of underlying cause (for example, ear infection)
- Any suspected case of foreign object in ear
- Tinnitus that affects only one ear or pulsates

Treatment:

- Dependant on underlying cause of hearing change

- High doses of aspirin can lead to tinnitus/ringing ears. If hearing loss is thought to be related to aspirin therapy, encourage client to discontinue medication and follow-up with his or her primary care physician.

Additional Considerations:

- Clients transported on military aircraft, (in repatriation events) and who did not properly use hearing protection may have temporary hearing loss
- Hearing loss is common after a blast incident

See also: Congestion, Earache, Neck Pain/Stiffness, Paralysis/Weakness – Facial or Limb.

Edema (swelling)

Treatment Goal:

- Reduce swelling
- Prevent injury to client

Possible Causes:

- Dependent edema is usually found in the lower extremities or other dependent position (back and/or buttocks of a bed-ridden client) and could be caused by heart failure, renal failure, liver disease, deep vein thrombosis (unilateral leg swelling) or musculoskeletal injury (see Leg/Foot Injury protocol).
- It is normal for pregnant women to have some dependent edema during last months of pregnancy.
- Non-dependent edema may be seen in kidney disease, liver disease or left-sided heart failure. Depending on cause, lymphedema (swelling caused by lymphatic fluid) is often unilateral.

History:

- Past medical history
- Onset of symptoms (chronic vs. acute)
- History of cardiac, pulmonary, renal or liver problems
- Obesity
- Pregnancy (note which trimester)
- Previous history of blood clots in legs or lungs
- Current medications, specifically diuretics (“water pills”), cardiac medications and anticoagulants
- Sedentary lifestyle or recent physical inactivity (including prolonged travel)
- Recent injury or surgery
- Presence of associated pain/bruising in swollen extremity

Assessment:

- Obtain vital signs
- Listen to heart rhythm and breath sounds. The presence of rales (“wet” breath sounds) indicates heart failure.
- Document whether edema is pitting or non-pitting. If pitting, document number of seconds before indentation resolves.
- Check for abdominal distention
- Document whether edema is unilateral or bilateral. Measure and record circumference of both legs in cases of unilateral leg swelling.
- Check for discoloration of skin, e.g., redness or bruising

Call EMS:

- Any pregnant client who has significant edema of face and hands, legs
- Any new case of edema that does not resolve with rest and leg elevation or is associated with shortness of breath, abnormal breath sounds and/or tachycardia
- Any chronic case of edema when the client has not been taking their medication or has shortness of breath or abnormal breath sounds
- Any client suspected of having or at risk of deep vein thrombosis (unilateral leg swelling)

Treatment:

- Stable edema/chronic heart failure: Client will most likely be prescribed medications already and should be encouraged to take these medications as prescribed. Also encourage the client to eliminate smoking and alcohol from his or her lifestyle and reduce sodium in his or her diet. For short-term treatment of symptoms, client can rest with legs elevated.
- If feasible and a weight scale is available, monitor daily weights in persons with dependent edema who have heart, kidney or liver disease. Clients with progressive or abrupt weight gain should be referred for evaluation.
- Lymphedema: Compression bandages and pneumatic stockings can be used to help the swelling associated with excessive lymphatic fluid in either the arm or leg.
- Injury: see Leg/Foot Injury and Pain protocol.

Additional Considerations:

- The main symptoms of right-sided heart failure is swelling in the legs and feet, while left-sided heart failure is characterized by pulmonary congestion and abdominal swelling (ascites)
- Many people will experience leg swelling unrelated to any medical condition (after standing for long periods of time)

See also: Abdominal Pain, Leg/Foot Injury and Pain, Immune-Compromised Clients, Pregnancy

Eye Problems – Pain/Inflammation

Treatment Goal:

- Assess for more serious health condition
- Reduce inflammation
- Relieve discomfort

Possible Causes:

Redness, irritation and pain in the eye due to infection, environmental allergies, a foreign body or a sty. Infections could be caused by numerous types of bacteria, fungus, virus or parasite.

History:

- Any change in vision in one or both eyes
- Onset of symptoms (rapid vs. gradual)
- Sensitivity to light (photophobia)
- Pain score (0-10 scale)
- Watering of eyes
- Environmental allergies
- Sensation of grittiness or “sand” in the eye
- Recent eye procedure or surgery
- Eye crusted close, especially upon awakening in the morning

Assessment:

- Obtain vital signs
- Assess visual acuity in each eye (covering one at a time). Document whether the client is blind (can see black only), can see light only (not shapes), can count fingers only or can read words. The two eyes should be equal.
- Assess for the presence of a sty (localized swelling of one or more of the glands surrounding the eyelid)
- Presence and character of discharge (e.g. watery, mucous, purulent)
- Blisters on the cornea
- Concurrent painful skin lesions over the body which may indicate herpes zoster (shingles)

Call Local EMS/911 for:

Any abrupt or rapid change in vision

Refer to Local Healthcare System:

- Any sore or blister on the eyeball/eyelid or pus
- Any change in vision/visual acuity
- Any sty which does not resolve within three days
- Any potential or suspected case of infection (e.g. conjunctivitis)
- Any foreign body sensation that does not resolve with flushing the eye

Treatment: - Always use standard precautions

- Sty: Apply warm compress to the affected area for 10 minutes several times per day
- Allergies: Encourage client to avoid the agent that causes them sensitivity Antihistamines may be effective at reducing eye irritation and other allergic symptoms, unless contraindicated. Artificial tears (without preservatives) may be used to flush irritants and/or keep eyes moist.
- Infection: Any suspected case of infection should be referred to the local healthcare system and the client encouraged to wash their hands frequently, not touch their face, and avoid contact with others as eye infections are highly contagious. If contact lenses are worn, the client should remove them and not use a new pair of contacts until the infection is completely resolved.
- Crusting/discharge: Wash eyelids/lashes gently with a warm, wet washcloth
- Suspected foreign body/dust: Attempt to wash any foreign object out of the affected eye by tilting the client's head to the side and flushing with clear water or saline solution for up to fifteen minutes. The eyelid should be held open but the eye itself should not be touched. If the object is not able to be washed out, cover the eye with a light bandage and seek medical attention. No attempt should be made to remove any object that does not flush out of the eye or is embedded in the eye.
- Clients should be instructed not to wear contact lenses until all symptoms have resolved

Additional Considerations

- Infants are particularly prone to eye infections
- Viral eye infections spread rapidly from one eye to the next and usually have watery eye discharge which may be copious. This can lead to an outbreak in crowded conditions.
- Hand washing by both the affected client and staff is critical if an infection is suspected
- Bacterial eye infections usually have a mucous/purulent discharge

See also: Burns – Chemical, Headache, Infection

Eye Problems – Injury

Treatment Goal:

- Prevent further injury to eye
- Reduce discomfort

Possible Causes:

Foreign object in eye, scratch to the cornea, burn or blunt injury to the eye.

History:

Trauma to face or eye, including blow to head

- Change in vision
- Exposure to chemicals or extreme heat
- Increased sensitivity to light (photophobia)
- Current medications taken
- Wearing of contact lenses

Assessment:

- Obtain vital signs
- Assess visual acuity in each eye (covering one at a time). Document whether the client is blind (can see black only), can see light only (not shapes), can count fingers only or can read words. The two eyes should be equal.
- Pain score (0-10 scale)
- Bruising or bleeding under the surface of the skin
- Ability of client to open eye
- Pupillary reaction (eyes equal and reactive to light)
- Ability of client to move eye in four directions (up, down, left, right) with or without pain
- Redness/swelling of affected eye
- Bleeding to eye/face region

Call Local EMS/911 for:

- Any injury associated with vision loss or change
- Any bleeding noted in the eyeball or under the conjunctiva
- Presence of blood between iris and cornea (interior chamber)
- Any difference in size of pupils
- Any client with a puncture wound by a foreign object
- Any possible burn to the eyes
- Any acute onset of severe eye pain with or without known injury

Refer to Local Healthcare System:

- All blunt injuries to the head or face
- Bruising around the eye (black eye) to follow-up for potentially broken facial bones
- Any client with a foreign object that is not able to be successfully washed out

Treatment: standard precautions

- If a penetrating injury to the globe (eyeball) is suspected, do not put ANY pressure on the eye with a dressing or by touching. Call EMS.
- Attempt to wash any foreign object out of the affected eye by tilting the client's head to the side and flushing with clear water or saline solution for up to fifteen minutes, from inner corner to outer corner (nose to ear direction). The eyelid should be held open but the eye itself should not be touched. If the object is not able to be washed out, cover the eye with a light bandage and seek medical attention. No attempts should be made to remove any object that does not

flush out of the eye or is embedded in the eye.

- Cool packs (chemical or ice/water mixed) should be applied to the eye area intermittently for the first 24-48 hours to decrease swelling and pain
- Avoid aspirin therapy or other non-steroidal anti-inflammatory medication which may cause bleeding in the eye

Additional Considerations:

- Corneal abrasions (scratches) are often associated with the sensation of having a foreign body in the eye

See also: Bleeding, Bruising, Cuts and Scrapes, Violence/Domestic Abuse

Eye Problems – Vision Changes

Treatment Goal:

Assess for more serious health condition

Possible Causes:

Vision changes that occur over time may be due to macular degeneration, cataracts, retinopathy, or open-angle glaucoma. Acute vision changes/distortions could be due to injury (to the head or eye), blood clot to the optic nerve, detached retina or closed-angle glaucoma.

History:

- Onset of symptoms (gradual or rapid)
- Type of vision change (loss of vision, diminished acuity, halos, floaters, decreased peripheral vision, etc.)
- Injury or blunt trauma to head/face
- History of eye surgery, vision problems, or disease involving cranial nerves (e.g. Bells' Palsy)
- Presence of other symptoms (eye pain, redness, photophobia, headache, nausea)
- Current medications taken
- Use of and reason for glasses/contact lenses

Assessment:

- Obtain vital signs
- Visually inspect eyes for obvious signs of injury
- Pupil size, shape, reaction to light and uniformity
- Assess visual acuity in each eye (covering one at a time). Document whether the client is blind (can see black only), can see light only (not shapes), can count fingers only or can read words. The two eyes should be equal.
- Hazy appearance or clouding of the cornea
- Symmetry of eye movements
- Drooping (ptosis) of eyelid

Call Local EMS/911 for:

- Any injury to the head and/or face that results in changes to vision
- Any acute or rapid-onset distortion/loss of vision

Refer to Local Healthcare System:

- Any client experiencing double vision
- Any client with changes to the structure of the eye (pupil shape differs from the other pupil, etc.)

Treatment:

For injury or blunt trauma: Using standard precautions encourage client to keep eyes closed and apply a cold compress to affected area. Call local EMS.

Additional Considerations:

Damage to the optic nerve may cause loss of vision. Damage to the cranial nerves that control papillary changes and eye movement may lead to changes in vision.

See also: Headache, Neck Pain/Stiffness, Paralysis/Weakness – Facial or Limb, Stroke.

Fainting (syncope)

Treatment Goal:

- Prevent injury to client.
- Regain consciousness
- Assess for more serious health condition

Possible Causes:

Syncope: A brief loss of consciousness due to a reduction in the amount of oxygen reaching the brain. Possible causes include abnormal heart rhythm, not witnessed seizure, pulmonary embolism, emotional/physical stress, hyperventilation/shortness of breath, exposure to hot temperatures, hypoglycemia, orthostatic hypotension and certain medications (anti-hypertensives and sedatives).

History:

- Conditions surrounding the fainting episode (fear, stress, pain)
- History of an abnormal heart rhythm or palpitations
- Chest pain, shortness of breath or problems breathing
- Previous history of fainting or light-headedness
- Recent exposure to hot climate

Assessment:

- Obtain vital signs, especially blood pressure and respiratory rate as both may be low. Heart rate may be faster than normal, slower than normal or irregular. Consider checking orthostatic blood pressure.
- Assess for mental status changes, level of consciousness or confusion
- Listen to heart rate and rhythm for possible arrhythmias
- Quality of skin (pale, damp, cool)

Call Local EMS/911 for:

- Any client that stops breathing while unconscious
- Any client with unstable vital signs after fainting
- Any client with confusion or altered mental status after fainting
- Any child or elderly client who faints
- Any client who does not fully recover from fainting after five minutes
- Recurrent episodes of fainting

Refer to Local Healthcare System:

All cases of fainting

Treatment:

- In all unconscious clients, first assess the “ABCs” (airway, breathing and circulation) by checking their breathing and looking for a pulse. If any of the ABCs are absent, start CPR and call EMS immediately.
- Client has fainted: Keep the client lying down and assist with cooling if fainting due to hot weather. Elevate legs and loosen tight clothing around the neck. If client vomits, help them turn to his or her side. Check for injuries that may have occurred due to falling. Remain with client until fully recovered.
- If symptoms are due to breathing problems, refer to Shortness of Breath and/or Hyperventilation protocols for further guidance.
- Client feels faint: Encourage client to lie down with legs elevated 8 to 12 inches. If the condition may be due to hot weather, assist the client with cooling off – fan, cool cloth to face, etc. Encourage client to drink plenty of fluids to prevent dehydration.
- If symptoms are due to emotional/physical stress, calm and reassure the client and remove the source of stress. Ask if client would like to speak with a Disaster Mental Health worker.

Additional Considerations:

- Syncope may be associated with serious medical conditions (cardiovascular disease, cerebrovascular disease, neurologic disorders) and many medications
- People taking diuretics are at increased risk of fainting
- Abrupt exposure to hot temperatures frequently leads to increased risk of fainting until the body adapts to the increased temperature

See also: Bleeding, Breathing Problems, Seizures/Convulsions, Dehydration, Dizziness, Ear Problems, Heat-related Illness, Influenza, Diabetic Emergencies, Pregnancy, Shock, Stroke

Fever

Treatment Goal:

- Assess for more serious health condition
- Prevent the transmission of infectious diseases
- Return temperature to within normal limits

Possible Causes:

Elevated body temperature, usually due to illness or infection but may occur with immunizations or environmental exposures

History:

- Onset of symptoms
- Recent illness, injury or surgery
- Other concerning symptoms of an infection (headache, photophobia, confusion, low blood pressure, shortness of breath, productive cough, flank pain, dysuria, high fever, myalgias, etc.)
- Recent exposure (within two weeks) to others with illness
- Location and/or quality of any pain with pain score (0-10 scale)
- Presence of chills, sweating or flushing
- Recent travel, especially overseas
- Medications taken, especially antipyretics (name, dose and time of last dose)

Assessment:

- Obtain vital signs

American Red Cross – Disaster Health Services Protocols

- A fever is defined as a temperature greater than 99.0° F
- Assess the level of consciousness or for signs of confusion
- If fever is thought to be due to injury, assess affected area for signs of infection (reddened skin that is warm to touch, pus, pain, etc.)
- Listen to breath sounds for signs
- Check eyes with flashlight for signs of photophobia (sensitivity to light)

Call Local EMS/911 for:

- Any fever associated with severe headache, stiff neck, swelling in the throat, rash, shortness of breath or mental confusion
- Any infant younger than six months with a temperature greater than 101° F or any adult/child older than six months with a temperature greater than 105° F

Refer to Local Healthcare System:

- Any infant younger than six months with a temperature greater than 100.5° F or any adult/child older than six months with a temperature greater than 103° F
- All suspected cases of influenza in a shelter should be referred to the isolation care area for assessment
- Any client with a fever and signs of a specific infection
- Any temperature greater than 101° F that persists for more than three days
- Any fever without obvious reason or fever that is accompanied by a rash
- Any fever that occurs within two weeks after surgery

Treatment:

- If fever is thought to be related to an infection, the source of the infection should be identified and treated by the local health care system.
- Clients with fevers may be infectious and should be referred to the isolation care Area of the shelter.
- Encourage the client to rest and drink plenty of fluids.
- Over-the-counter medications such as aspirin, ibuprofen and acetaminophen are usually effective at reducing fever. Encourage the client to take antipyretics on a regular schedule to help keep the fever away, unless contraindicated. **Never give aspirin to anyone under the age of eighteen due to the risk of Reye's syndrome.**
- Follow manufacturer guidelines in dosages for antipyretic medications
- Cool compresses and sponging with lukewarm water can also help reduce body temperature. Avoid rapid cooling.

Additional Considerations:

- Oral temperatures may be obtained for adults by placing the thermometer under the tongue for three minutes. In infants and young children, the temperature may be obtained by placing the thermometer under the arm for three minutes, although this will register a temperature approximately one degree lower than an oral temperature.
- Influenza causes high fevers and myalgias and is very contagious. If influenza is suspected, the client or worker needs to be referred to the isolation care area for assessment and possible referral to local health care system.
- Febrile seizures occur in children younger than five years that have a high fever

See also: Congestion, Seizures/Convulsions, Dehydration, Diarrhea, Ear Problems, Eye Problems, Headache, Heat-Related Illness, Influenza, Infection, Nausea/Vomiting, Neck Pain/Stiffness, Rash, Sore Throat, Tooth Problems, Difficulty with Urination, Vaginal Discharge/Itching/Immune-compromised Clients, Communicable Diseases/Headache

Headache

Treatment Goal:

- Assess for more serious health condition
- Reduce discomfort

Possible Causes:

- Most headaches are benign and are related to tension, eyestrain, hunger, or caffeine withdrawal. Frequent use of pain relievers can cause rebound headaches that return as the effect of the last dose wears off.
- Other causes can include sinus infection, fever, high blood pressure, brain tumor, head injury and meningitis, cerebral hemorrhage.
- Headaches in children can be related to stress about school, relationships or peer pressures.

History:

- Onset of symptoms: abrupt, rapid or gradual
- Location and quality of pain (sharp, pulsating, dull, etc.)
- Pain score (0-10 scale)
- Recent injury or trauma involving the head or neck
- History of sinus problems or sinus surgery
- History of migraine headaches
- History of high blood pressure
- Current medications
- Sensitivity to light, noise, smells or activity
- Report of visual changes or photophobia
- Recent withdrawal from medication or caffeine
- Nausea or vomiting

Assessment:

- Obtain vital signs, paying particular attention to temperature and blood pressure. If blood pressure is abnormal, recheck in both arms to verify reading
- Assess for level of consciousness and confusion
- Observe for slurred speech, unilateral limb weakness, lack of muscle coordination or facial droop. See Stroke protocol
- Check pupil size and reaction to light and photophobia
- Assess pain on a scale of 0-10

Call Local EMS/911 for:

- Any injury or trauma to head or neck
- Any headache with severe eye pain
- Any client who presents with weakness, paralysis, slurred speech, facial droop, visual changes, photophobia or changes in level of consciousness
- Any client who has a severe headache associated with a systolic blood pressure greater than or equal to 150mmHg and/or a diastolic blood pressure greater than or equal to 110mmHg
- Any sudden onset “thunderclap” or “worst ever” headache

Refer to Local Healthcare System:

- Any severe or persistent headache
- Any headache associated with a fever and/or stiff neck

- Any headache associated with vomiting
- New or frequent headaches in a client who rarely gets headaches
- Mild headaches that become severe
- Any headache that wakes a client from sleep
- Any child who is having headaches more than once a week
- Headaches that awaken the child at night
- A headache occurring with other symptoms

Treatment:

- Mild headaches are managed well by resting quietly in a darkened room with a cool compress to the forehead.
- If client requests, an over the counter pain reliever such as Acetaminophen or Ibuprofen may be dispensed. Instruct client to follow manufacturer dosage instructions. **Aspirin should never be given to anyone younger than 18 years.**
- Most tension headaches respond well to rest, a warm compress applied to the back of the neck and/or acetaminophen or non-steroidal anti-inflammatory medications, unless contraindicated.
- Clients with migraine headaches should take medications as prescribed by their physician.
- Headaches associated with a fever and/or stiff neck may be due to meningitis or other infection and should be referred to the emergency department of the local hospital immediately.

Additional Considerations:

- Tension headaches tend to be mild to moderate and cause a generalized aching in the head.
- Headaches due to high blood pressure are frequently referred to as “throbbing” or “pulsating.”

See also: Dehydration, Dizziness, Heat-Related Illness, Influenza, Nausea/Vomiting, Neck Pain/Stiffness, Paralysis/Weakness – Facial or Limb, Tooth Problems, Stroke, Meningitis.

Heat-Related Illness – Heat Exhaustion

Treatment Goal:

- Prevent injury to client
- Return physical status to within normal limits

Possible Causes:

Heat illness is a continuum from mild heat intolerance, to moderate heat exhaustion, to severe heat stroke. Heat exhaustion is caused by an imbalance of nutrients/electrolytes in the body as a result of exposure to heat over a period of time. It is often associated with dehydration.

History:

- Onset of symptoms
- Length of time spent in high temperatures
- Presence of fatigue, weakness, nausea, dizziness, headache, confusion and/or fainting
- Presence of skeletal muscle spasms
- Medication History

Assessment:

- Obtain vital signs, paying particular attention to temperature
- Assess for level of consciousness or confusion
- Assess skin – will be hot to touch, flushed and moist
- Heart rate may be rapid and weak

- Breathing may be fast and shallow

Call Local EMS/911 for:

All suspected cases of heat stroke (confusion, hypotension, any temperature greater than 105° F).

Refer to Local Healthcare System:

- Any suspected case of significant dehydration
- Any client with a temperature of greater than 103° F
- Any client whose symptoms do not resolve after treatment

Treatment:

- Cool the client by moving them to shade, into an air conditioned environment or wiping them with a cool wet cloth
- Replace lost fluids by encouraging the client to drink water

Additional Considerations:

- Certain populations are more vulnerable to heat exhaustion: older adults, chronic alcoholics, the obese and those taking medications such as antipsychotics and antihistamines
- Recovery is usually rapid once actions have been taken to treat the heat exhaustion

See also: Fever, Dehydration.

Heat-Related Illness – Heat Stroke

Treatment Goal:

- Rapidly reduce client's temperature to within normal limits
- Prevent injury to client

Possible Causes:

Body fails to regulate its own temperature, and it continues to rise. Body systems become overwhelmed by heat and stop functioning

History:

- Exposure to hot temperatures
- Vomiting
- Confusion
- Delirium.
- Headache
- Vertigo
- Fatigue
- Seizures/convulsions
- Unconsciousness

Assessment:

- Obtain vital signs
- Any temperature greater than 103° F (or high body temperature) is an emergency
- Assess for level of consciousness and signs of confusion
- Assess skin – it will be red, hot and dry, even in the arm pits
- Absence of sweating
- Listen to heart rate/breath sounds. Heart rate may be weak and rapid while breathing may be

shallow and fast.

- Assess pupils – they may be dilated

Call Local EMS/911 for:

- If client's temperature exceeds 102.3
- All suspected cases of heat stroke (confusion, hypotension, any temperature greater than 105° F (Life threatening)

Refer to Local Healthcare System:

Any client who may have symptoms of heat exhaustion

Treatment:

- Call the local EMS immediately
- Remove client from the hot environment to a cool area
- Elevate legs slightly
- Remove unnecessary clothing
- Reduce body temperature however possible – wrap client in cool, wet sheets or apply cold packs to the groin, neck and armpits
- Fan the client to help increase evaporation
- Frequently monitor body temperature to make sure temperature is not lowered too far
- If EMS is delayed call the hospital emergency room for instructions

Additional Considerations:

- Infants and clients with diabetes, alcoholism, diarrhea and/or vomiting are at increased risk of heat stroke during hot weather.
- Risk of heat stroke is increased for all populations during very humid weather as the body is unable to sweat enough to reduce body temperature.
- Most people can eventually acclimate to a hot environment, but it may take several weeks to do so.

See also: Fever, Dehydration.

Indigestion – “Heart Burn”

Treatment Goal:

- Assess for more serious health condition
- Relieve discomfort

Possible Causes:

Generally due to eating unfamiliar or spicy food, eating too fast or too much or drinking alcohol. More serious or chronic causes of indigestion may be due to gastro-esophageal reflux disease, gallbladder disorders, ulcer or stomach cancer.

Acute myocardial infarction may be described by client as heart burn or indigestion

History:

- Onset of symptoms
- Location of indigestion (epigastric, behind breast bone, etc.)
- Any worrisome symptoms for a myocardial infarction (heart attack) such as shortness of breath, sweating, nausea, chest pain or radiating pain
- Any risk factors for a myocardial infarction such as prior heart disease, diabetes, family history,

hypertension, smoking or obesity

- Recent change in diet
- Type/amount of food eaten
- Alcohol consumption (quantity and frequency)
- Recent changes in bowel habits
- Color of recent stools
- Presence of blood in vomit or stool
- Current medications, especially pain relievers (aspirin, ibuprofen)
- History of stomach ulcers or gastric bleeding

Assessment:

- Obtain vital signs
- Palpate abdomen for tenderness or rigidity
- Assess pain (Scale of 1-10)

Call Local EMS/911 for:

- Indigestion associated with sweating, shortness of breath, or pain radiating to the neck, jaw or arm
- Indigestion associated with abnormal vital signs
- Sudden and/or severe indigestion

Refer to Local Healthcare System:

- Clients with indigestion who also have risk factors for a myocardial infarction
- Frequent indigestion paired with weight loss or vomiting
- Black, tarry stools or “coffee grounds” in vomit (may need ER)
- Symptoms recur several times per week or wake the client from sleep

Treatment:

- Encourage client to eat smaller meals, reduce stress and maintain a healthy weight
- Encourage clients to avoid fatty foods
- Encourage clients not to lay down directly after eating
- Antacids may be effective at reducing symptoms
- Over the counter antacids, unless contraindicated is highly effective in relieving most cases of indigestion/mild reflux symptoms

Additional Considerations:

- Symptoms may increase during pregnancy or if the client is obese.
- Ulcers are characterized by epigastric abdominal pain that is made worse by either eating or by having an empty stomach. Eating small, frequent meals may provide temporary relief of discomfort but symptoms may flare at night.

See also: Abdominal Pain, Chest Pain/Pressure, Cramps – Abdominal, Diarrhea, Nausea/Vomiting.

Itching – Head

Treatment Goal:

- Prevent potential spread to others
- Relieve symptoms

Possible Causes:

Itching of the scalp could be due to dry skin (dandruff) or an infestation of lice

History:

- Intense itching of the head
- Recent close contact with someone known to have lice
- History of dry skin in the past

Assessment:

- Obtain vital signs
- Wearing gloves and using a tongue-depressor, inspect the client's scalp and hair roots for signs of flaking skin or presence of lice

Refer to Local Healthcare System:

- Suspected lice infestations should be referred to the local healthcare system for diagnosis and to direct treatment
- The overwhelming majority of cases of both dandruff and lice can be effectively managed with over-the-counter treatments

Treatment: Always use standard precautions.

- Lice: Instruct the client to avoid contact with others until the lice infestation is treated with medicated shampoo (RID, for example) and any remaining nits are removed with a fine-toothed comb. Dispose of the comb after use. All furniture, bedding, clothing and cloth items (e.g. stuffed animals) should be sprayed with a product containing the active ingredient permethrin or washed in the hottest water temperature possible. Other items may also be placed in plastic bags for two weeks to allow the lice to die. Check for the presence of lice on all family members, playmates and any potential close contacts.
- Monitor and direct cleaning of bedding, clothing and furniture if lice is discovered on one or more clients
- Dandruff: Encourage the client to use a shampoo that is geared specifically toward those with dry scalp (e.g. Head & Shoulders) and avoid over-drying the scalp with harsh styling products or hairdryer.

Additional Considerations:

- A lice infestation can be determined by inspecting the scalp and hair root for small white nits (eggs) that are attached to the hair or the insect itself which is small and dark.
- Lice can infest any part of the body with hair

See also: Lice.

Itching – Skin

Treatment Goal:

- Assess for more serious health condition
- Identify cause of symptoms
- Relieve symptoms

Possible Causes:

Contact dermatitis (skin allergy), plants (poison ivy/oak), skin products, detergents, metals, materials (e.g. wool). Hypersensitivity reactions, (insect bites, scabies, drug reactions). Scabies, skin infections,

cold weather, prolonged exposure to water.

History:

- Known exposure to someone with itching of the skin
- Exposure to poison ivy, poison oak
- Recent use of an unfamiliar product (bath soap, detergent, perfume, etc.) which may have caused an allergic reaction
- Possible exposure to plants or insects
- Change in medications or new prescription
- History of atopic dermatitis or chronic skin condition

Assessment:

- Obtain vital signs
- Assess for presence of insect bites

- Assess for rash, hives, areas of redness or evidence of scratching
- Assess for raised area on skin or appearance of tunneling under the skin
- Look for evidence of vesicles (blisters) and/or pustules
- Observe the location and pattern (if any) of rash, bites or other skin changes
- If hives are present, assess for breathing difficulties or shortness of breath

Call Local EMS/911 for:

- Any expanding redness of the skin that covers a large area of the body, looks/acts like a burn and/or may be associated with a drug reaction
- Any itching lesions/hives that are associated with lightheadedness, low blood pressure, trouble breathing or other symptoms of anaphylaxis

Refer to Local Healthcare System:

- Any suspected case of fungal/bacterial infection or parasite infestation
- Itching that lasts for more than a few days or that comes and goes frequently should be evaluated for allergic reaction
- Any case of drug reaction
- Anyone with contact dermatitis of the face (especially near the eyes)

Treatment: Always use standard precautions

- For dry skin, encourage client to keep baths brief and to use cool/lukewarm water. Pat dry. Body lotion should be applied while still damp.
- For contact dermatitis or poison ivy: Soothing lotions containing menthol, camphor, chamomile, eucalyptus or calamine may be effective at reducing symptoms.
- Corticosteroid creams and/or oral antihistamines may help reduce symptoms due to allergic reaction or poison ivy/oak, unless contraindicated.
- Parasites, fungal and/or bacterial skin infections will require treatment with prescription medications.
- Check to see if local area as any areas of poison oak/ivy and then alert others to avoid contact

Additional Considerations:

- Itching hands, especially with red streaks and spots, may be a sign of scabies. The presence of scabies does not become apparent until approximately three weeks after exposure.
- The presence of hives and/or extensive skin redness suggests a more serious hypersensitivity reaction.
- Plant contact dermatitis usually appears within 24 hours of exposure and new lesions may

continue to appear for up to 14 days. Although the blisters themselves are not infectious, the plant oil can remain on objects (clothing, tools, pet fur, etc.) for a long period of time.

See also: Rash, Poisoning, Impetigo, Ringworm, Scabies, Pinworms, Chickenpox, Shingles.

Leg/Foot Injury and Pain

Treatment Goal:

- Prevent further injury from occurring
- Determine extent of injury
- Reduce discomfort

Possible Causes:

Muscle strain, dislocation, sprain, fracture, tendonitis, deep vein thrombosis, vascular insufficiency

History:

- Type of activity client was engaged in when the pain or injury occurred
- If the client felt and/or heard a bone snap
- Past medical history related to musculoskeletal injury and/or surgery
- If the pain is not related to an injury, assess for symptoms of a pulmonary embolism (chest pain, shortness of breath, hemoptysis, tachycardia)

Assessment:

- Obtain vital signs
- Assess pain scale of 0-10
- Assess all injuries for presence of a pulse distal to the injury, skin color and temperature, and range of motion. Do not force movement.
- Point tenderness over a specific area is often the sign of a fracture
- Strain: dull pain in the affected muscle that worsens with movement, swelling
- Tendonitis: pain at the joint not associated with any injury but may be due to repetitive use or infection
- Dislocation: swelling, deformity, severe pain, discoloration, tenderness and/or numbness of an affected joint
- Sprain/strain: pain and/or swelling at joint that worsens with movement, possible bruising around area of injury
- Fracture: pain and/or tenderness at site (usually with significant point tenderness) when touched or moved, client has difficulty moving the injured part, client may feel grating sensation, the injured part may move unnaturally, bruising may be present
- If the pain is non-traumatic, check to see if one calf is more swollen than the other, for calf tenderness or for a palpable clotted vein (“cord”)
- If tendonitis is suspected, assess for an infection; check for warmth, redness and swelling, and check for pain with passive movement

Call Local EMS/911 for:

- Any extremity that is cool, pale or blue, or if a pulse cannot be detected distal to the injury
- All cases of severe pain, regardless of suspected cause
- Any leg pain with shortness of breath, chest pain or hemoptysis (coughing up blood). Or suspected deep vein thrombosis

Refer to Local Healthcare System:

- All suspected dislocations and fractures
- All suspected cases of tendonitis or infection
- All cases of moderate to severe pain, regardless of suspected cause.

Treatment:

- Sprain/strain: Rest and elevate the affected area, apply cool packs intermittently for the first 24-48 hours then switch to warm compresses. Apply supportive bandage (ACE wrap) to the affected joint. Loosen bandage if swelling increases or extremity becomes cold or mottled. Muscle sprains/strains respond well to NSAIDs (Ibuprofen, Naprosyn, etc.) if client requests pain relief and does not have any contraindications. Advise client to follow the manufacturer's recommended dosages.
- Tendonitis: Rest the affected area and apply ice packs intermittently for the first 24-48 hours. If client requests pain relief medication, non-steroidal anti-inflammatory medications work best at relieving pain and reducing inflammation, unless contraindicated. Assess for allergy to aspirin or NSAIDs.
- Dislocation: Do not move or try to put a dislocated bone back into place. Immobilize the joint and limb as much as possible. Client should not put weight on the affected extremity. Have client transported to a medical facility rapidly, via EMS if necessary.
- Fracture: Closed (no break in the skin): Immobilize the affected extremity and have client transported to a medical facility.
- Fracture: Open (skin is broken): Call local EMS. Using standard precautions, cut clothing away from the wound, being careful not to touch the exposed bone. Cover area with sterile dressing. If bleeding, apply direct pressure to wound. If EMS is not immediately available, splint the fractured area as it is and gently help the client into a comfortable position until EMS arrives. Client should not put weight on affected extremity.

Additional Considerations:

- When unsure of a diagnosis, treat the injury as a fracture. Definitive diagnosis requires professional assessment and radiologic testing at a medical facility.
- Geriatric clients are more prone to musculoskeletal injury and bone fracture.
- If client is to be transported to a medical facility for further treatment, do not give anything to eat or drink as surgical repair may be required.

See also: Bites, Blisters, Bruising, Frostbite, Cramps – Muscular, Cuts and Scrapes, Edema.

Nausea/Vomiting

Treatment Goal:

- Assess for more serious health condition
- Prevent dehydration

Possible Causes:

Nausea with or without vomiting can be precipitated by a wide range of conditions – many of which are associated with gastrointestinal disorders (e.g. cholecystitis, gastritis, hepatitis, viral infections of the intestines, food poisoning, intestinal obstruction and excessive drinking or eating). It could also be triggered by emotional upset, stress, migraine headaches or pregnancy. It can also be caused by more serious conditions (non GI) such as allergic reactions to bites/stings, gastrointestinal bleeding, heart attack, heat exhaustion, shock, sepsis and head injury.

History:

American Red Cross – Disaster Health Services Protocols

- Onset and duration of symptoms
- Differentiate between nausea, vomiting without emesis (“dry heaves”) and vomiting with emesis
- Number of times vomiting has occurred within a defined period of time
- Color/amount of emesis (e.g. coffee ground-colored emesis three times a day for two days). Be particularly concerned about bloody, maroon or coffee-ground emesis.
- Recent eating pattern, including foods and medications
- Excessive drinking, including recent use/abuse of alcohol
- An allergic reaction to food, medicines or a bite or sting by an insect. See Bites protocols.
- Possibility of poison ingestion
- Prolonged exposure to high temperatures. See Heat Exhaustion protocol.
- Trauma or serious injury, especially to neck/head
- Recent diarrhea. See Diarrhea protocol
- Chest pain/pressure, sweating, and/or pain radiating to the neck, jaw or left arm See Chest Pain/Pressure protocol
- Known/suspected pregnancy
- Emotional upset
- Current medications

Assessment:

- Obtain vital signs, paying special attention to an elevated temperature, tachycardia, or low blood pressure
- Assess skin for presence/absence of sweat and presence or absence of bites and/or stings
- Assess mucous membranes (inside of mouth) for signs of dehydration
- Listen to abdomen for presence or absence of bowel sounds
- Palpate abdomen for tenderness, guarding and/or rigidity

Call Local EMS/911 for:

- All cases of possible head injury, heart attack, sepsis, allergic reaction/ anaphylaxis or shock
- Any client who is unconscious and vomiting
- Any client who is confused or has an altered mental status
- Any client with emesis that contains blood or is coffee ground-colored

Refer to Local Healthcare System:

- All cases of frequent vomiting that lasts longer than four to six hours, of the client not able to keep liquid down, or of vomiting that continues for more than one or two days
- Any suspected case of pregnancy that has not been previously diagnosed
- In children younger than two, any projectile vomiting (forceful vomiting that is expelled one to two feet)

Treatment:

- Encourage the client to rest and take frequent sips of fluids (diluted non-carbonated beverages, apple or grape juice (avoid citrus) or bouillon, weak tea, gelatin desserts) to prevent dehydration. Avoid solid food and fluids that are highly acidic (e.g. orange juice). Once vomiting has stopped, slowly work back to a regular diet.
- Encourage client who has vomited to attend to oral hygiene (gargle with mouthwash or brush teeth)
- Infants and children who are vomiting should be turned on their side to prevent emesis from entering their lungs. Children should be encouraged to take frequent sips of water or pediatric rehydration solution (e.g. Pedialyte) every 10-20 minutes to prevent dehydration. No Pepto-Bismol for children
- Always use standard precautions when contact with blood or body fluids is a possibility
- Encourage client to avoid taking in large amounts of food or liquids, even and especially as they

begin to feel better

- Refer to Diarrhea protocol, if applicable

Additional Considerations:

- Infants, older adults and those with chronic illnesses are at higher risk for developing dehydration due to vomiting, especially if associated with diarrhea.
- Vomiting in infants and children is common and usually due to a viral infection, food poisoning, car sickness, colic and/or food allergies. Infants frequently spit up food after eating and this should not be confused with vomiting.

See also: Abdominal Pain, Cramps – Abdominal, Diarrhea, Fever, Heat-Related Illness, Indigestion, Influenza, Pregnancy, Substance Abuse/Withdrawal, Poisoning, Chest Pain/Pressure.

Neck Pain/Stiffness

Treatment Goal:

- Assess for more serious health condition
- Reduce discomfort

Possible Causes:

A stiff or painful neck can be due to muscle strain, spinal cord compression, or injury. It may also be a symptom of meningitis or encephalitis

History:

- Onset of symptoms
- Activity surrounding onset of symptoms, including trauma
- History of neck pain/stiffness in past, especially disc or vertebrae disorders
- Presence or absence of shooting pain or tingling sensation down one or both arms
- Recent fever

Assessment:

- Obtain vital signs, paying special attention to an elevated temperature. Document on Health Assessment Record
- If injury or trauma can be ruled out, assess neck for range of motion
- Assess hand strength by having client grip your hands simultaneously
- Assess area of discomfort for outward signs of injury
- Observe for reflex flexion of the hips and knees with passive flexion of the neck while client is in a supine position

Call Local EMS/911 for:

- In all cases of neck or head injury, do not move client or neck while waiting for EMS to arrive
- Any client with neck pain not associated with trauma-with headache, fever and pain on passive flexion of neck, nausea, and vomiting
- Any client with a past medical history of cervical/spinal surgery or disorder who has had a recent worsening of symptoms

Refer to Local Healthcare System:

- Any client with a suspected muscle strain that does not resolve within two days
- Any client who has a positive reaction to the passive flexion of the neck while in the supine position

Treatment:

- If a muscle strain is suspected, encourage the client to avoid engaging in strenuous activities and place a warm compress on the affected area for 24-48 hours
- If requested, non-steroidal anti-inflammatory medications may also be helpful in reducing discomfort, unless contraindicated

Additional Considerations:

An involuntary flexion of the hips and knees when you passively flex the neck of the supine client is known as a positive Brudzinski sign and may indicate meningitis or subarachnoid hemorrhage.

See also: Back pain, Cramps – Muscular, Earache, Headache, Influenza, Nausea/Vomiting, Sore throat, Meningitis, Fever.

Nose Bleed

Treatment Goal:

- Stop bleeding
- Assess for more serious health condition

Possible Causes:

Nose bleeds can be caused by dry air, infection, repeated blowing of the nose, scratching the nose or a blow/injury to the nose.

History:

- Onset of symptoms
- Activity engaged in when nose bleed began
- Any injury/trauma to nose or face
- History of coagulation problems
- Current medications, especially blood thinners

Assessment:

- Obtain vital signs, paying special attention to an elevated temperature
- Estimate amount of blood loss using an objective measure (e.g., bloody cloth
- 6cm x 8cm)

Call Local EMS/911 for:

- All cases of severe nose bleeds that cannot be stopped, particularly in clients taking blood thinners
- Clients who are hypotensive or tachycardic

Refer to Local Healthcare System:

- Any recurrent nosebleed
- Any elderly client with a nosebleed that does not immediately respond to treatment

Treatment:

Always use standard precautions.

- Have client sit with his or her head upright and lean slightly forward, keeping mouth open for breathing
- Have the client squeeze the nose on the soft cartilage portion – not the bone – continuously for at least 5-10 minutes

- Be sure to release the nose slowly and do not allow client to touch or blow the nose as this may cause a re-bleed.
- If bleeding continues, squeeze the nose for another five minutes and place an ice pack or cold cloth on the bridge of the nose to help constrict blood vessels
- If bleeding does not stop after the second episode of pinching, have client transported to the hospital (continue to pinch during transport)

Additional Considerations:

Children frequently get nose bleeds that are not serious and stop in a few minutes nose bleeds in the elderly should be taken seriously

See also: Bleeding.

Paralysis/Weakness – Facial or Limb

Treatment Goal:

- Assess for more serious health condition
- Timely transfer to higher level of care

Possible Causes:

Paralysis that affects the face could be caused by Bell's Palsy, a transient ischemic attack (TIA) or a stroke (cerebrovascular accident – CVA)

History:

- Onset of symptoms: are symptoms still present or have they subsided?
- Presence of headache before or in conjunction with the paralysis/weakness
- Sudden paralysis or weakness on one side of the body with facial drooping
- Loss and/or slurring of speech
- Mental confusion
- Lack of muscular coordination
- Loss of bladder/bowel control
- History of blood clots or previous TIA/CVA
- Current medications, especially aspirin or other blood-thinner

Assessment:

- Call EMS-timely transfer of stroke victims to a hospital can mean better outcomes
- Obtain vital signs, paying special attention to an elevated blood pressure
- Assess hand strength by asking client to grip hands simultaneously
- Assess client's ability to speak clearly and to choose appropriate words
- Assess client's coordination of movements and ability to move upper and lower extremities
- Assess the client's ability to walk, observing gait and balance
- Check pupil size and reaction to light
- Assess facial symmetry. Look for differences between features of the right and left side of the face (e.g. smile/frown, raise eyebrows) and presence or absence of eyelid drooping.

Call Local EMS/911 for:

- Sudden signals of stroke think F.A.S.T.: Face, Arm, Speech, Time
- All cases of facial drooping or paralysis
- All cases of altered speech or limb weakness or paralysis
- All suspected cases of TIA or stroke

Treatment:

- Get the client to an acute care facility as quickly as possible. Do not give client anything to eat or drink. Do not give client any medications.
- If the client is having trouble with saliva, place client on their weakened side so secretions can drain from the mouth.
- Have the client to rest quietly until local EMS arrives. Comfort the client and family as much as possible.

Additional Considerations:

- A client's prognosis improves when they can be transferred to an acute care facility for diagnosis and treatment quickly
- A stroke is due to a lack of adequate oxygen getting to the brain either because of a blood clot or a brain hemorrhage.
- Bell's Palsy is a sudden weakening or paralysis of one side of the face due to malfunction of one of the cranial nerves. Symptoms mimic that of a stroke minus the weakening of the arm/leg of the affected side as in a stroke. Bell's palsy has been associated with herpes zoster.

See also: Stroke.

Rash

Treatment Goal:

- Assess for more serious health condition
- Relieve minor symptoms

Possible Causes:

Allergic reactions, fever, heat, (prickly heat) contact dermatitis (e.g. plants, metals) or infectious diseases

History:

- Recent change/addition in medications taken, Current medications taken
- Sensitivity/allergy to substances
- Pruritic (itchy) or not
- Recent exposure to others with rash
- Immunization history if infectious rash is suspected (e.g. measles, chickenpox)
- Past medical history
- Infant who has been dressed too warmly or exposed to hot weather

Assessment:

- Obtain vital signs, paying particular attention to any fever, tachycardia and hypotension. Document on *Health Record*
- Assess affected area for quality of rash: size, shape, pattern (linear, scattered, etc.), presence of hives, itching/burning, redness, etc.
- Assess rash for secondary changes (development of blisters, etc.)
- Prickly Heat will look like tiny pimples and usually appear on the head, neck and shoulders

Call Local EMS/911 for:

- Any reaction to food, medication or environmental allergen that causes lightheadedness, difficulty breathing or swallowing

- Any rash with fever or severe illness
- If prickly heat is accompanied by a fever of 100.4 degrees or higher in an infant younger than 3 months and if fever doesn't come down within 20 minutes of removing some of the infant's clothing

Refer to Local Healthcare System:

- Any rash that becomes blue or purple or if blood-red spots appear
- Any rash with large (greater than one inch in diameter) blisters
- Any rash that becomes worse or shows signs of infection
- Any painful rash
- Any rash that results from a bite or sting
- Any rash associated with medications
- Any rash on the face or near the eyes
- Itching is severe
- Rash is present concurrently with other symptoms

Treatment:

Always use standard precautions

- For rashes of all origins, it is recommended that the area be kept clean and dry
- Dust powders and soothing lotions on the affected area and encourage client to wear loose-fitting clothing that will not rub the affected area
- Hydrocortisone cream may relieve minor allergic or inflammatory irritations. Do not use if infection is suspected.
- For contact dermatitis (such as poison ivy), soothing lotions containing menthol, camphor, chamomile, eucalyptus or calamine may be effective at reducing symptoms
- Corticosteroid creams and/or oral antihistamines may help reduce symptoms due to allergic reaction or poison ivy/oak, unless contraindicated.
- Topical anesthetic creams (over-the-counter benzocaine or lidocaine) may relieve the symptoms of minor burning and itching. Do not use on open wounds
- For possible food and environmental allergies, encourage the client to take an antihistamine (Benadryl), if not contraindicated, and avoid further contact with the allergen
- Diaper rash can be treated with a variety of barrier creams such as A&D ointment, Desitin, etc
- If infectious rash is suspected, contact the local public health department
- Do not overdress children and infants
- Keep children and infants sleeping areas as cool as possible
- Keep children and infant's skin cool and dry

Additional Considerations:

- Rashes are common in infants. Diaper rash being uncomfortable but not dangerous.
- Contact dermatitis caused by plants (poison ivy, oak, etc.) is not infectious. However, the plant oils may last on clothing, objects and/or pets for a long period of time.
- A painful rash that is located primarily on one side of the body or runs along a nerve path is suggestive of a herpes zoster (shingles) infection. See Shingles protocol

See also: Bites, Blisters, Burns, Fever, Heat-Related Illness, Influenza, Neck Pain/Stiffness, Impetigo, Ringworm, Scabies, Chickenpox, Herpes, Shingles, Mumps, Measles

Seizure/Convulsion

Treatment Goal:

- Protect client from injury during the seizure
- Ensure an open airway after the seizure

Possible Causes:

A seizure is caused by abnormal electrical discharges from the brain. Seizures can be caused by a primary disorder (e.g., epilepsy), head injury, stroke, brain damage at birth, brain tumor, infection (febrile seizures) or alcohol withdrawal.

History:

- History of previous seizures
- Current medications taken
- Any trauma or injury to the client
- Loss of memory immediately preceding event

Assessment:

- Obtain vital signs (watch for an elevated temperature, which may cause febrile seizures or temporary loss of breathing)
- Observe for twitching of the face or limbs
- Muscle spasms or tremors
- Loss of consciousness – partial or complete
- Loss of bladder or bowel control

Call Local EMS/911 for:

- All cases of seizure/convulsions especially the person has never had a seizure before and the seizure lasts longer than 5 minutes or seizure is repeated
- Does not regain consciousness
- Is pregnant
- Is a known diabetic
- Has sustained injury
- Shows life threatening conditions

Treatment:

- If the client starts to fall, try to gently guide their fall to prevent head injury
- Move any dangerous objects away from client
- DO NOT place anything in client's mouth
- Do not hold or restrain client
- Protect the person's head. Place a thin folded towel or clothing beneath it.
- After the seizure has stopped, turn the client on their side to prevent choking on vomit or secretions. Make sure the airway is clear.
- Check for other injuries post-seizure (i.e. broken bones, chipped teeth, bleeding)
- Febrile seizure: Help to prevent febrile seizures in children by controlling elevated temperatures with acetaminophen or ibuprofen – do not give aspirin to any client under the age of 18. If a febrile seizure does occur call local EMS and, while waiting for their arrival, place cool washcloths on the client.

NOTE: Check scene and if injuries are apparent following seizure complete an incident report.

See also: Fainting, Fever, Headache, Stroke, Diabetic Emergencies, Poisoning, Shock, and, Substance Abuse/Withdrawal.

Sore Throat

Treatment Goal:

- Assess for more serious health condition
- Reduce discomfort

Possible Causes:

Sore throats (also known as pharyngitis) are frequently caused by the same viruses that cause the common cold. Streptococcus (strep throat) is a less common but more serious cause of a sore throat.

History:

- Onset of pain
- History of recent fever
- Amount of pain (0-10 pain score)
- Pain on swallowing, difficulty swallowing or inability to swallow
- Presence of ear pain
- Recent symptoms of an upper respiratory infection

Assessment:

- Obtain vital signs
- Using flashlight, assess back of throat and tonsils for redness, pus, swelling

Call Local EMS/911 for:

Clients that cannot swallow their own saliva or are having difficulty breathing

Refer to Local Healthcare System:

- Any sore throat associated with a fever
- Any sore throat with enlargement of the tonsils with or without pus

Treatment:

- Advise client that sore throats associated with the common cold typically resolve on their own within a day or two
- Sore throat lozenges and/or analgesics may help with discomfort.
- Encourage the client to drink adequate fluids
- Acetaminophen and non-steroidal anti-inflammatory drugs (NSAIDs) are frequently effective at reducing the pain, if not contraindicated
- Over-the-counter throat lozenges, sprays and gargles may provide temporary relief from pain

Additional Considerations:

- Some throat lozenges contain dextromethorphan which may not be good for elderly clients who are taking multiple medications
- Although children frequently have viral sore throats, strep throat is unusual in children younger than two years
- “Strep” throat is almost always associated with a fever. Viral sore throat may or may not have a fever. Clients without a fever usually do not need to be seen by a physician.

See also: Congestion, Cough, Dehydration, Earache, Fever, Influenza, Neck Pain/Stiffness, Toothache, Mumps, Measles, Meningitis.

Splinter

Treatment Goal:

- Prevent injury to client
- Remove foreign object from under skin

Possible Causes:

Splinters can be caused by a sliver of any foreign material (wood, glass, etc.) that becomes lodged under the surface of the skin.

History:

- Type of material believed to have caused the splinter
- Date of last tetanus shot, if known

Assessment:

- Obtain vital signs
- Assess area surrounding splinter for bleeding or other injury

Refer to Local Healthcare System:

- Any splinter that cannot be removed with tweezers
- Any client with signs of infection around the affected area

Treatment:

- Wash hands with soap and water and put on clean exam gloves. Clean the area surrounding the splinter with soap and water, as well
- Place tweezers in boiling water for approximately five minutes to sterilize. If boiling water is not an option, hold instrument over a flame for 30 seconds to sterilize. Let cool before use.
- If splinter is sticking out of the skin, gently pull the splinter out with the tweezers at the same angle at which it entered. Once removed, wash the area with soap and water and apply a clean band aid. Watch for signs of infection such as redness, pus or red streaks leading up the body from the wound.
- Be sure to clean tweezers after use
- If the splinter breaks off under the skin or is deeply lodged, refer client to a medical facility for removal of the splinter and a possible tetanus shot
- Small splinters can be left untreated. After a few days, a small pocket forms around the splinter and they may come out spontaneously or become more easy to remove with tweezers.

See also: Infection.

Tooth Problems – Lost/Broken Teeth

Treatment Goal:

- Prevent injury to client
- Relieve discomfort

Possible Causes:

Cavities and infections can often cause teeth to become loose in the gum, thus leading to tooth loss. Teeth could also be knocked out by sports activities, fighting or facial trauma in an accident.

History:

- When and where the loss of or injury to the tooth occurred
- Circumstances surrounding loss
- History of dental problems
- Presence or absence of pain
- Pain score (0-10 scale)

Assessment:

- Obtain vital signs and document on *Health Record*
- Examine mouth for signs of the tooth injury

Refer to Local Healthcare System:

Any client with a permanent tooth that has been broken, is loose, or was knocked out.

Treatment: Always use standard precautions

- If the tooth can be found, it should be handled very gently and only by the crown (avoid touching the root). Rinse the tooth off in cool water (no soap) and place it gently into the socket. Have client bite down on a piece of gauze or clean cloth to hold it in place. If unable to hold the tooth in place, gently wrap the tooth in gauze soaked in saline or water. Do not put the tooth in tap water or milk. Refer client to a dentist immediately – permanent teeth that have been knocked out may be able to be re-implanted if care is sought within 60 minutes.
- If bleeding is present, fold or knot a piece of gauze and place over the bleeding area in the mouth. Have client bite down on the gauze to apply pressure to the bleeding site for 20-30 minutes.
- A non-steroidal anti-inflammatory medication (ibuprofen, naprosyn, etc.) or acetaminophen may be helpful if the client is experiencing discomfort and requests a medication, unless contraindicated. Aspirin should not be taken because it may increase bleeding.

See also: Infection, Fever, Sore Throat.

Tooth Problem – Toothache

Treatment Goal:

Prevent injury to client

Possible Causes:

Cavities and infection

History:

- Onset of symptoms
- Pain score (0-10 scale)
- Location and quality of pain (dull, sharp, stabbing, etc.)
- The presence of fever
- History of dental problems
- Sensitivity to hot or cold

Assessment:

- Obtain vital signs, paying special attention to the presence of fever
- Examine the face for swelling, redness or asymmetry

Refer to Local Healthcare System:

- Recurrent toothache or toothache that does not resolve within 1-2 days
- Any toothache associated with a fever, except in infants who may have a low-grade fever with teething
- Any toothache associated with facial swelling or asymmetry

Treatment:

- If client requests medication, aspirin, acetaminophen, naproxen or ibuprofen may be helpful at reducing discomfort, unless contraindicated. Avoid aspirin if the client may require a dental extraction. Do not give aspirin to children younger than 18 years.
- Place a cool compress on the face over the affected area.
- Over-the-counter medications for toothache (like Ambesol) may provide some relief from discomfort

See also: Infection, Fever, Sore Throat

Urination, Difficulty with

Treatment Goal:

- Assess for more serious health condition
- Reduce discomfort

Possible causes:

Kidney stones, urinary retention, urinary incontinence, infection of the urinary tract, enlarged prostate, sexually transmitted disease

History:

- Onset of symptoms
- Presence/absence of pain
- Pain score (0-10 scale)
- Presence of fever
- Frequency and/or urgency of urination
- Color of urine
- Recent increase or decrease in volume of urine produced
- Presence or absence of burning or irritation before, during or after urination
- History of urinary problems in the past
- Presence of penile or vaginal discharge
- Current medications

Assessment:

- Obtain vital signs
- Gently palpate abdomen to assess for bladder distention and/or tenderness
- Inquire as to start of symptoms-time since last urination

Refer to Local Healthcare System:

- Any client with a distended bladder who is unable to pass urine. Acute urinary retention and bladder distention lasting several hours can become an acute (EMS) medical emergency-the client is not likely to report this until uncomfortable
- Any client with urinary difficulties that do not resolve within one to two days or is associated with a fever

- Any client with urinary difficulties associated with pain and/or burning during urination, with or without a fever
- Any sexually active client with penile or vaginal discharge

Treatment:

If client is able to pass urine and the bladder does not feel distended upon palpation, encourage the client to drink more fluids than usual (unless contraindicated) but avoid caffeine and alcohol.

Additional Considerations:

- Nausea and/or vomiting and chills and/or fever may be indicators of urosepsis. The presence of flank pain may be indicative of kidney infection.
- Incontinence, especially in dependent or debilitated people, may lead to urinary tract infections.

See also: Back Pain, Seizures/Convulsions, Dehydration, Fever, Heat-Related Illness, Confusion/Disorientation, Pregnancy, Rape/Sexual Assault.

Vaginal Discharge/Itching

Treatment Goal:

- Assess for more serious health condition
- Relieve discomfort

Possible Causes:

Frequently due to inflammation of the vagina caused by infection (bacterial or fungal) or chemical irritants (bubble bath, synthetic underwear, latex condoms/spermicide, etc.)

History:

- Onset of symptoms
- Color, consistency and amount of discharge
- Presence of foul odor
- Presence of itching, burning or pain
- Previous vaginal infections
- Possibility of sexually transmitted disease
- Recent antibiotic use
- Frequent douching
- Standing waist deep in high flood water for any period of time

Assessment:

- Obtain vital signs and document on *Health Record*
- Record symptoms as reported by client

Refer to Local Healthcare System:

- Any client with vaginal discharge with the exception of known yeast infections which have responded in the past to OTC medications
- Any child experiencing vaginal discharge

Treatment:

- Treatment will be based on the cause of the discharge. Refer client to the local health care system for diagnosis and treatment recommendation.
- If client has previously been diagnosed with a yeast infection and is familiar with the symptoms,

over-the-counter treatment may prove effective.

- To help prevent future irritation, encourage client to bathe regularly, keep the groin area dry, wipe from front to back after urination/defecation and wear natural-fibered underclothing.

Additional Considerations:

- Newborns frequently will have vaginal discharge tinged with blood due to estrogen absorption from the mother. This should stop within two weeks after delivery.
- Vaginal discharge (aside from menses) in older children is abnormal and should be referred to a medical professional.

See also: Abdominal Pain, Back Pain, Bleeding – Internal, Cramps – Abdominal, Fever, Difficulty with Urination, Childbirth, Pregnancy, Miscarriage, Rape/Sexual Assault, Infection.

III. Special Considerations

Altitude Sickness – Acute Mountain Sickness (AMS)

Altitude sickness is divided into three syndromes:

- Acute Mountain Sickness (AMS)
- High Altitude Cerebral Edema (HACE), and
- High Altitude Pulmonary Edema (HAPE)

AMS is the most common form of altitude sickness and will be discussed in this protocol. HACE and HAPE are serious forms and would need immediate urgent care.

Treatment Goal:

- Assess for pre-existing health conditions and need for urgent treatment
- Relieve sensation of difficulty breathing when possible – assess if there is position of comfort or relief

Possible Cause:

Transient shortness of breath or difficulty in breathing may be caused by high altitudes of 8,000-10,000 feet. Preexisting conditions may be exacerbated.

History

- Determine the presence of other acute symptoms
- Headache is the cardinal symptom sometimes accompanied by poor appetite, nausea, fatigue, dizziness, difficulty sleeping
- Headache onset is usually is usually 2-12 hours after arrival at a higher altitude often after the first night.
- AMS usually resolves with 24-72 hours of acclimatization.

Assessment

- Obtain Vital signs and document
- Listen to breath sounds for the presence of wheezes, rales or ronchi

Call local EMS/911 for:

- Symptoms increase and vital signs become unstable
- Symptoms are not relieved by descent to a lower altitude
- Any suspicion of a serious cause for shortness of breath
- Suspicion of stroke, heart attack or pulmonary embolus

Treatment:

- Observe and refer for urgent care if symptoms
- Stop the ascent or move to lower altitudes
- Supplemental oxygen may be needed and EMS should be called

Additional Considerations

- Volunteers and staff traveling to high altitude areas should be aware of signs and symptoms of AMS and how it could affect pre-existing conditions.
- Katrina evacuees to Denver Colorado experiencing acute symptoms were found to be related to altitude sickness

Blood Pressure, Elevated/High

Treatment Goal:

- Assess for serious health condition
- Identify risk factors and co-morbidity
- Determine need of referral for additional work-up/ treatment for hypertension (HTN)

- Prevent serious complications from undiagnosed/untreated high blood pressure such as cardiovascular disease, kidney disease, eye damage or stroke.

Possible Causes:

- An elevated blood pressure can be due to an established diagnosis of hypertension, or as a response to stress and anxiety. Elevated blood pressure is often a result of unhealthy life-style habits. The client may have a previously undiagnosed history of elevated blood pressure and would need follow up and monitoring for the condition.
- An elevated blood pressure can be the result of certain medications or other diseases.
- It can be hereditary or related to ethnicity.

History:

- Ask the client's age, the incidence of HTN rises in men after age 35, and in women after age 45, and certainly more likely in the elderly
- Determine presence of other concerning symptoms, such as headaches, chest pain, palpitations, shortness of breath, sweating, dizziness, nausea, or changes in vision
- Ask client for any past history of serious illness, especially previously noted situations of elevated blood pressure, a diagnosed history of hypertension, heart disease, diabetes, or kidney disease.
- Ask about risk factors such as:
 - African-American descent
 - Family history of HTN
 - Family history of diabetes
 - Smoking
 - Being overweight
 - Sedentary lifestyle, lack of exercise
 - High stress levels
 - Alcohol consumption
 - Medication use, including steroids, decongestants, and anti-inflammatory drugs on a regular basis
 - Low dietary intake of potassium, calcium or magnesium
 - Excessive use of salt
 - A diet that is high in fat, fast food or processed foods
 - Client is pregnant

Assessment:

- Obtain vital signs and document on the Health Record
- Have client refrain from smoking or ingesting products that contain caffeine for 30 minutes before measurement. (can cause a transient raise in blood pressure)
- Have client sit in a chair with feet flat on the floor or lay supine, arms bared and supported at heart level
- Rest for at least five minutes before beginning blood pressure measurement. This helps eliminate activity-related factors that can cause elevation in blood pressure.

American Red Cross – Disaster Health Services Protocols

- Make sure to use the appropriate size cuff for the size of the arm (using the wrong size cuff results in inaccurate readings)
- Wrap cuff smoothly and snugly around the upper arm, with the center of the bladder placed directly over the bend in the elbow and the cuff's lower edge placed about 2 fingers width above the bend. (incorrect placement will yield inaccurate readings)
- Take 2 or more readings, separated by 2 minutes and record. (averaging two or more readings from the same arm improves the reliability of the data)

Classification of Blood Pressure for Adults

Classification	Systolic		Diastolic
Normal*	< 120	and	< 80
Elevated	120 -139	or	80 - 90
Stage 1 HTN	140 -159	or	90 - 99
Stage 2 HTN	≥ 160	or	≥ 100
* 130/80 is considered the <i>upper limit</i> of normal: <ul style="list-style-type: none">• In a <u>pregnant</u> woman (at <u>any time</u> during the pregnancy)• If a client has <u>chronic kidney disease</u> or <u>diabetes</u>			

Call Local EMS/911 for:

- Chest pain or discomfort or sudden signals of stroke think F.A.S.T.
- Blood pressure is 180/110 or higher
- Swelling of hands, feet and/or face
- Sudden, severe headache
- Sudden, rapid rise in BP
- A pregnant client with a BP >145/85
- If a pregnant client has a history of preeclampsia
- A client with a history of diabetes or kidney disease and a BP >160/95 (or health care system depending on co-morbidity).

Refer to Local Health Care System:

- If client has any of the risk factors stated above
- If client has been monitored daily for 5 days, and the average BP is in the elevated stage
- If client has never been diagnosed or treated for HTN
- If client has been treated, and following prescribed treatment and BP is still elevated
- If the client is pregnant
- If the client has multiple health problems (co-morbidity)

Treatment:

- Confirm elevated blood pressure
- Set up the client with a daily visit to HS and record the BP on the *Health Record* on health services record for 5 days in a row. Average the blood pressure readings.
- Complete initial assessment, evaluate, accurately stage and complete risk assessment
- Is secondary cause suspected?
- Engage client in Lifestyle modification education
- Consider referral

Additional Considerations:

Despite what many people think, high blood pressure usually does not cause any symptoms. It is often called the “silent killer” for this very reason. By the time a person has symptoms such as severe headaches, dizziness or lightheadedness; they may have had untreated hypertension for an extended

period of time, and have already developed complications.

Childbirth, Emergency

Treatment Goal:

- Prevent injury to client or child
- Transfer client to medical facility as soon as possible

Possible Causes:

Full-term or pre-term delivery: If early in pregnancy and client is experiencing contractions/abdominal cramps and/or vaginal bleeding, see Miscarriage protocol.

History:

- Onset of contractions and how frequently (in minutes) client is having contractions
- Number of pregnancies carried to term in past
- Any medical problems during pregnancy
- Past medical history
- Current medications

Assessment:

Obtain vital signs and document

Call Local EMS/911 for:

- Contractions that are more frequent than every five minutes
- If the client feels the need to “push”
- A pregnant client who is in labor and has history of short labors

Refer to Local Healthcare System:

- Any client who has reported bloody show or leaking of fluid (water breaking)
- Any client who reports having “regular” contractions

Treatment: Always use standard precautions

- If at all possible, transfer client to a medical facility for delivery. If transfer is not possible, attempt to receive guidance from a physician or EMS dispatcher over the telephone.
- Place clean sheets or newspaper over a mattress or, if necessary, on the floor and have the mother lie on her back with her knees bent, feet flat and knees/thighs wide apart. Head and shoulders should be raised. Ensure privacy.
- Sterilize a knife or scissors by either boiling in water for at least five minutes or holding over a flame for 30 seconds. If boiling, leave the utensil in the water until ready to use. This will be used to cut the umbilical cord.
- Before delivery, gather together a blanket or towel to wrap the baby, strong string or shoelaces to tie off the umbilical cord, a pail (in case the mother vomits), a large plastic bag or container for the afterbirth (placenta), sanitary napkins and diapers.
- For delivery, wash your hands with soap and water and put on clean exam gloves. Do not place your hands or other objects inside the vagina. Once the baby’s head is out, guide and support it to keep it free from blood and other secretions. Check to make sure the umbilical cord is not wrapped around the baby’s neck. If the cord is wrapped around the baby’s neck, gently and quickly slip the cord over the baby’s head. If too tight to slip over the head, the cord must be cut now to prevent the baby from strangling.
- Continue to support the head as the baby is being born. The baby will be very slippery so be

very careful. Once the head and neck are out, the baby will turn on its side to allow passage of the shoulder. The upper shoulder usually emerges first. Carefully guide the baby's head slightly downward. Once the upper shoulder is out, gently lift the baby's head upward to allow the lower shoulder to emerge. Do not pull the baby out by the armpits. Carefully hold the baby as the rest of the body slides out. Note the time of delivery.

- To help the baby start breathing, hold the baby with his or her head lower than the feet so that secretions can drain from the lungs, mouth and nose. Support the head and body with one hand while grasping the baby's legs at the ankles with the other hand. Gently wipe out the nose and mouth with sterile gauze or a clean cloth. If the baby has not yet cried, slap your fingers against the bottom of the baby's feet or gently rub the baby's back. If unsuccessful, give artificial respiration through both the baby's mouth and nose, keeping the head extended. Once breathing, wrap the baby (including the top and back of the head) in a blanket or sheet to prevent heat loss. Place the baby on his or her side on the mother's stomach with the baby's head slightly lower than the rest of the body and facing the mother's feet. The umbilical cord should be kept loose. It is very important to keep the baby warm and breathing well.
- It is not necessary or desirable to cut the umbilical cord right away. If possible, wait about a minute until the cord stops pulsating. If the mother can be taken to the hospital immediately after the delivery of the afterbirth (which occurs 5 to 20 minutes after delivery of the baby) then the baby can be left attached to the umbilical cord and afterbirth. If you must cut the cord, tie a clean string around the cord at least four inches from the baby's body. Tie the string tight enough to cut off circulation in the cord. Using a second piece of string, tie another tight knot two to four inches past the first knot (approximately six to eight inches from the baby). With the sterilized utensil, cut the cord between the two ties.
- For delivery of the afterbirth, be patient. Do not pull on the umbilical cord to speed the delivery of the afterbirth. The mother's contractions will eventually push out the afterbirth. Place all afterbirth in a container and take it with the mother and baby to the hospital so that it may be examined.
- After delivery, place sanitary napkins against the mother's vagina to absorb blood. To help control bleeding, place your hands on the mother's abdomen and gently massage the uterus, which can be felt just below the mother's navel and feels like a large smooth ball. Do this every five minutes for an hour, unless medical assistance has arrived. If the bleeding is very heavy and/or prolonged, seek medical attention immediately. Keep the mother warm and comfortable.
- Encourage the mother to drink fluids.

See also: Abdominal Pain, Cramps – Abdominal.

Death/Serious Injury in Red Cross Facility

Treatment Goal:

- Provide privacy and support to family/other clients
- Contact appropriate authorities
- Document correctly
- Initiate condolence team

Possible Causes:

Death or serious injury could be due to natural causes ("old age"), exacerbation of a pre-existing condition, acute medical event (myocardial infarction), accident or criminal activity.

Call Local EMS/911 for:

All situations requiring emergency medical care beyond the scope of HS protocols

Management:

- Use other Red Cross personnel to provide for privacy and to support family members or other concerned shelter residents or clients
- Contact local EMS to provide emergency medical care. EMS will determine the severity of the situation and do further notification if a death is involved. Follow the directions of the local EMS and avoid disturbing the scene of the incident.
- Contact local law enforcement if a criminal act is suspected. Follow the directions given by local law enforcement authorities. Also contact the Life, Safety and Asset Protection manager on the disaster relief operation or, if not available, contact the Life Safety and Asset Protection lead in the Disaster Operations Center at national headquarters.
- Complete a Client Incident Report and *Health Record* – documenting all known information about the client and the incident.
- Notify the HS manager at the disaster relief operation headquarters. The HS manager will contact the HS lead at national headquarters. Fax copies of the *Health Record* and the Client Incident Report to the Disaster Operations Center at National Headquarters, Attention: Health Services.
- The HS manager on the relief operation will notify Mass Care and Operations Management on the relief operation. Operations Management will ensure that the service area and the Disaster Operations Center at national headquarters are notified.
- The HS lead at national headquarters will contact our Claim Administrator.

Additional Considerations:

- Any death or serious injury in a Red Cross facility should be handled with the utmost consideration and respect for the client and his or her loved one. Ensure privacy for both the body and the remaining family and friends. Disaster Mental Health workers should be consulted to provide additional support.
- Document all events on the *Health Record* and Client Incident Report very carefully and provide whatever support is required by local EMS and law enforcement.

Diabetic Emergencies

Treatment Goal:

- Prevent injury to client
- Assess for more serious health condition
- Replace medications if lost/damaged due to disaster

Possible Causes:

There are two types of diabetic emergencies: hyper- and hypoglycemia. Hyperglycemia (high blood sugar) can be caused by stress, illness, diet or lack of adequate control with diabetic medications. Diabetic ketoacidosis (DKA) is a particularly severe form. Hypoglycemia (low blood sugar) can be caused by over-treatment with diabetic medications and/or lack of adequate food intake.

History:

- Major signs and symptoms of diabetic emergencies are similar
- Type of diabetes: Type I (insulin-dependant) or Type II (non-insulin dependant)
- Normal daily blood sugar, if known (self-monitored)
- Type and dosage of diabetes medication taken and date/time of last dose
- Date/time and content of the last meal consumed and if there has been a recent change in diet
- Recent injury, infection, surgery or emotional stress

- Excessive thirst and/or drinking more water than usual
- Increased frequency and amount of urination
- Nausea and/or vomiting
- Confusion or loss of consciousness
- Abdominal pain
- Increased nervousness/anxiety
- Feeling or looking ill
- Shakiness/tremors
- Hunger
- Sweating (diaphoresis) and/or paleness

Assessment:

- Obtain vital signs and document
- Tachycardia and tachypnea can be a sign of DKA
- Abnormal pulse (rapid or weak)
- Assess mental status for signs of confusion
- Assist client, if necessary, in checking capillary blood sugar
- Assess level of consciousness
- Assess hydration status (skin turgor, mucous membranes, etc.)

Call Local EMS/911 for:

- Any client with confusions or a change in level of consciousness
- Any client with a blood sugar level greater than 300 for insulin-dependant diabetics or greater than 600 for non-insulin dependant diabetics
- Any client with a blood sugar level less than 50 for adults or less than 40 for infants and children that does not respond to oral glucose
- Any client with a symptomatic low blood sugar that does not feel better within five minutes of taking in sugar or carbohydrates

Refer to Local Healthcare System:

Any client with a blood sugar greater than 300

Treatment:

If blood sugar is unknown, it may not be necessary to differentiate between insulin reaction and diabetic coma because the basic care for both conditions is the same and will not hurt the client until advanced medical care arrives. If client is conscious, give him or her sugar. Most candy, fruit juices and non-diet soft drinks have enough sugar to be effective. If the person's problem is hypoglycemia, the sugar will help quickly. If the person has hyperglycemia, the excess sugar will do no further harm.

- Hyperglycemia (blood sugar greater than 200): Encourage client to treat their blood sugar with their normal amount of insulin (sliding scale) or medication, if available. If insulin is unavailable, refer client to local healthcare system for treatment. Encourage client to drink water or other sugar-free non-carbonated fluids. Have client recheck their blood sugar one hour after treatment.
- Hypoglycemia (blood sugar less than 50 for adults and less than 40 for infants/children): Have client recheck their blood sugar as abnormal values are frequently inaccurate. If value is still low or client is experiencing symptoms of hypoglycemia, encourage client to eat or drink a snack containing sugar or carbohydrates (fruit juice, candy, crackers, etc.) – but only if fully conscious. If client is confused but conscious, apply a glucose substance under the tongue (honey or cake frosting work well). Check vital signs frequently and if possible have the client check blood sugar level every 15 minutes until stable and greater than 70.

Additional Considerations:

- Signs of hyperglycemia include excessive thirst and/or drinking more water than usual, increased frequency and amount of urination, nausea and vomiting, and abdominal pain. Hyperglycemia may lead to diabetic ketoacidosis (DKA) or hyperglycemic hyperosmolar state (HHS). Both are medical emergencies.
- Signs of hypoglycemia include increased nervousness and/or anxiety, shakiness, shivering, hunger, sweating, paleness, hypotension and/or tachycardia. Hypoglycemia is sometimes referred to as “insulin shock” and is a medical emergency.
- Experienced clients often recognize the difference between hyper- and hypoglycemia by how they feel.
- Blood sugar levels that fall outside of the normal ranges preset in a glucometer are frequently unreliable and should be rechecked. When in doubt, treat for hypoglycemia.
- In severe cases of both hyper and hypoglycemia, clients can become confused or even unconscious.

See also: Seizures/Convulsions, Dizziness, Fainting, Confusion, Anxiety.

Immune-Compromised Clients

Treatment Goal:

- Prevent injury to client
- Reduce risk of infection

Possible Causes:

Immune deficiencies could be caused by congenital disorders or through acquired means such as cancer, kidney failure, liver/spleen disease, HIV/AIDS or malnutrition. Deficiencies in the immune system can also be caused by certain medications, specifically cancer therapies, organ transplant medications and corticosteroids.

History:

- Type of immune-deficiency (congenital vs. acquired infectious vs. noninfectious)
- Presence of any current infections
- Past medical history
- Current medications taken

Assessment:

- Obtain vital signs, paying special attention to temperature
- Assess for signs and/or symptoms of infection

Refer to Local Healthcare System:

Any illness or infection that may affect the wellbeing of the client

Treatment:

- Use universal precautions for all possible exposures to blood or body fluids
- Provide all clients with a clean and sanitary environment. Encourage hand washing by verbally reminding clients as well as posting appropriate signage.
- When possible in a shelter, offer the immune-compromised client a separate living space or arrange for alternate housing (hotel, trailer, etc.)
- Identify shelter residents who may potentially be infectious (with influenza, etc.) and move them

to the Isolation Care Area of the shelter

- When there has been a spill or accident involving the body fluids of someone infected with the HIV virus, use standard precautions (appropriate for the situation) and an alcohol-based cleaning product to thoroughly clean the soiled equipment and environment. Be sure to dispose of soiled materials in a biohazard container. To prevent exposure, ideally clients could clean up their own spill.

Additional Considerations:

- HIV/AIDS is the most common acquired immune-deficiency
- Individuals who are immune-compromised may be more susceptible to severe infections. Frequently, minor illnesses and infections progress to more serious illnesses in those who are immune-compromised
- Aside from HIV/AIDS, most other causes of immune-deficiency are not infectious and there is no need to treat the client as such
- HIV/AIDS cannot be spread by touching intact skin, so there is no need to wear gloves unless there is a possibility of blood or body fluid exposure

See also: Infection, Fever

Infection

Treatment Goal:

- Identification of infectious process
- Proper treatment or referral
- Reduce complications
- Assess for more serious health condition

Possible Causes:

Infection can be caused by any number of microorganisms: bacterial, viral or fungal. Signs and symptoms of infection will depend on the location and source of the infection.

History:

- Onset of symptoms
- Location of wound, if present
- Pain score (0-10 scale)
- Nausea and vomiting, generalized malaise, chills
- History of immune-deficiency
- Past medical history
- Current medications taken

Assessment:

- Obtain vital signs, pay particular attention to an elevated temperature and document
- Assess wound (if present) for redness, swelling, pus, hardening of the tissue or red streaks that originate at the wound

Refer to Local Healthcare System:

All clients with signs and symptoms suggestive of an infection

Treatment

- For wounds, see Cuts and Scrapes protocol

- For potential respiratory infection, see Congestions – Lower Respiratory protocol and Cough protocol
- For potential urinary tract infection, see Urination, Difficulty With protocol
- For potential vaginal infection, see Vaginal Discharge/Itching protocol
- For potential eye infection, see Eye Inflammation/Pain protocol
- For potential ear infection, see Earache protocol
- For potential influenza, see Influenza-Like Illness protocol
- See Fever protocol

See also: Fever.

Miscarriage/Missed Abortion/Spontaneous Abortion

Treatment Goal:

- Early recognition and identification of possible miscarriage
- Timely referral for OB/GYN evaluation

Possible Causes:

Threatened fetal loss or fetal loss before week 20 of pregnancy—may be complete or incomplete loss of fetal tissue. Miscarriages are common and can occur naturally or due to trauma and/or injury to mother. May be due to uterine anomaly, incompetent cervix, fetal genetic factors

History:

- Onset and type of symptoms (abdominal cramping, abdominal pain, vaginal bleeding, etc.)
- Weeks gestation
- Number of previous pregnancies
- History of miscarriage in the past
- Past medical history; with attention to autoimmune disease, diabetes, infections
- Current medications

Assessment:

Obtain vital signs and document on *Health Record*

Call Local EMS/911 for:

- Any pregnant client who experiences heavy or continuous bleeding
- Any pregnant client who has abdominal pain
- Any client that is tachycardic or hyper/hypotensive.
- Any client that has both cramping and bleeding that occurs together

Refer to Local Healthcare System:

All pregnant clients who experience abdominal cramping or vaginal spotting

Treatment:

- Encourage the client to rest in most comfortable position possible until advanced medical assistance arrives
- Protect woman from getting chilled or overheated
- Take steps to minimize shock if profuse vaginal bleeding
- Provide for privacy
- If any tissue or unusual-looking clots pass, save in a container to bring to the doctor's office for inspection

Additional Considerations:

Miscarriages occur in approximately ten percent of pregnancies, usually within the first twelve weeks of pregnancy

See also: Abdominal Pain, Bleeding, Cramps – Abdominal.

Poisoning: National Poison Control Center 1-800-222-1222

Treatment Goal:

- Prevent injury, illness or death from poisonous substance
- Appropriate decisions about care and referral-Poison Control Center will direct these decisions
- Determination of life-threatening vs nonlife-threatening exposure to poison

Possible Causes:

Poisoning can be either intentional or unintentional. Poisons can enter the body through ingestion, injection, inhalation, absorption. Prescription and non-prescription medications, household products, toxic gases and certain foods are the most common causes of poisoning but any substance, taken in sufficient quantity, can be harmful.

History:

- Name and amount and location of substance, if known
- Time frame since poisoning
- How it entered the body
- Intentional (suicidal gesture) or unintentional
- Past medication history
- Current medications taken

Assessment:

- Obtain vital signs and document on *Health Record*
- Assess for level of consciousness and respiratory and circulatory status
- Question if client is pregnant or possibly pregnant-important for poison control reporting
- Assess pupil size and reaction to light
- Record symptoms-look for nausea, vomiting, diarrhea, chest or abdominal pain, breathing difficulties, sweating, loss of consciousness, seizures, burn injuries around/in mouth or skin, headache, dizziness, weakness, irregular pupil size, burning or tearing eyes, abnormal skin color

Call Local EMS/911 for:

- Any client who has been exposed to a toxic substance and is confused or has abnormal vital signs
- Any client who intentionally exposes himself/herself or another person to a harmful substance

Refer to Local Healthcare System:

All other cases of exposure or suspected exposure to a harmful substance

Treatment:

Call local poison control number, then follow-up with either local EMS (for unstable clients) or the national phone number for the poison control center (1-800-222-12220).

Follow the directions of the poison control center:

- If ingested, do not give anything to eat and drink unless specifically directed to do so by poison control
- Remove client from source of poison if necessary and possible
- For ingested poisons- If directed by poison control center- give client syrup of ipecac or activated charcoal. Follow dosage instructions per client age/weight
- Apply clean exam gloves in situations where contact with the hazardous substance is possible. Remove client from exposure, if possible (chemical spill, toxic gas, etc.)
- If dry substance, use gloved hand or cloth to brush off chemical. Even though dry chemicals can be activated by water, continuous running water in most cases will flush the chemical from the skin before the water can activate it
- If substance is present on the skin or in the eyes, and if directed so by poison control, flush the area with copious amounts of water. (shower with cool water), and continue to do so until advanced medical care arrives. If treatment is required, transfer client to a local medical facility.
- If client vomits, use a clean container to save some of the vomit to send with client to hospital
- If it is safe and possible, send the substance or container to the hospital with the client to assist with diagnosis and treatment
- Food poisoning symptoms can start between 1-48 hours after eating contaminated food. If suspected food poisoning in a shelter environment, the shelter manager must be notified immediately
- Victims of inhaled poisons need oxygen as soon as possible. If available and trained to do so, administer oxygen at 2 liters/min until advanced help arrives

Additional Considerations:

- Children and older adults are at highest risk for unintentional poisoning; children from getting into household products and older adults from confusion over medications.
- There is a National Association of Poison Control Centers for more information.

See also: Abdominal Pain, Breathing Problems, Seizures/Convulsions, Diarrhea, Dizziness, Fainting, Indigestion, Confusion/Disorientation, Nausea/Vomiting, Rash.

Pregnancy

Treatment Goal:

Maintain a healthy pregnancy

History:

- Weeks of pregnancy and anticipated due date
- Number of previous pregnancies and deliveries
- Past medical history
- Current medications taken

Assessment:

Obtain vital signs and document.

Refer to Local Healthcare System:

- Any pregnant client with no prenatal care
- Any vaginal bleeding
- Stomach pain or cramps
- Persistent vomiting

- Severe, persistent headaches
- Swelling of the face or fingers
- Blurring or dimness of vision
- Chills and fever
- Sudden leaking of water from the vagina
- Seizures
- Difficulty breathing
- High blood pressure

Management and Health Teaching:

- Encourage the client to eat well, including fruits, vegetables and fiber in her diet. A prenatal vitamin containing iron and folic acid may be recommended by the client's physician.
- The client should consult with her physician before taking any medication, even over-the-counter medications, as they may be contraindicated in pregnancy.
- Ensure all pregnant clients continue with regular prenatal visits, even if she has no complaints. Assist with appointments in local area if client is displaced for any length of time.

See also: Dizziness, Fainting, Nausea/Vomiting, Abdominal Pain, Emergency Childbirth

Rape/Sexual Assault

Treatment Goal:

- Prevent further injury to client
- Preserve potential evidence

Possible Causes:

Unwanted fondling or (forceful) intercourse

History:

Avoid questioning client about details surrounding the incident as this information may become part of a criminal investigation

Assessment:

- Obtain vital signs
- Assess for cuts, bruises or burns that require immediate attention

Refer to Local Healthcare System:

All suspected cases of rape and sexual assault

Management and Health Teaching:

- Call the police immediately to report the crime
- Comfort the client and provide emotional support. Consult with Disaster Mental Health and the Life Safety and Asset Protection activity. Do not leave the client alone.
- Treat noticeable injuries like cuts, bruises or burns that require immediate care
- Encourage the client to NOT change clothes, shower or bathe, brush his or her teeth, or eat and/or drink anything as this may hinder the ability to collect evidence
- Refer client to a trusted physician or to the local emergency department for medical treatment
- Preserve any evidence
- Maintain safety for yourself as well as client
- Be aware that in a confused disaster environment, sexual predators may seek out victims that

may include children as well

Additional information:

- Rape is a crime in every state
 - Sexual assault includes forced vaginal or anal intercourse, oral sex, penetration with an object, and/or forced touching or fondling
-

Shock

Treatment Goal:

- Prevent injury to client
- Assess for more serious health condition

Possible Causes:

There are several types of shock which are caused by various conditions. Anaphylactic shock is caused by an allergic reaction to a medication, food or insect sting. Cardiogenic shock can result from myocardial infarction or other cardiac disease. Shock can also be caused by a severe injury that results in heavy blood loss or lack of oxygen. Insulin shock is due to hypoglycemia and septic shock is caused by a severe infection

History:

- Known allergies to foods, insect stings or medications
- Past reactions to allergens
- Cardiac disease, past history of MI
- Recent trauma or injury
- Recent fever, infection or illness
- For diabetics, time and amount of last dose of insulin and time and quantity of last meal

Assessment:

- Obtain vital signs and document.
- Pulse may be rapid and weak and breathing may be rapid and shallow
- Drop in blood pressure
- Look for other signs of shock which include: restlessness, irritability, excessive thirst, N&V
- Look for signs of bleeding and, if possible, stop it immediately
- Assess respiratory and circulatory status ; rapid and weak pulse
- Level of consciousness; drowsiness, loss of consciousness
- For diabetics, capillary blood glucose level
- Assess skin for sweating, paleness, ashen, bluish cool, moist skin
- Check pupils for size and reaction to light

Call Local EMS/911 for:

All cases of suspected shock, regardless of cause

Treatment:

- All types of shock, regardless of cause, are medical emergencies and local EMS should be contacted immediately
- If client is not breathing effectively or has no pulse, initiate CPR
- Keep the client lying down with feet elevated 8-12 inches (if the client is conscious and does not have injuries to the back, neck or head)
- Further treatment will depend on the cause of shock

- If available, anaphylactic shock can be treated with an anaphylaxis emergency kit (Epi-pen) while waiting for EMS to arrive, if client has his or her own kit
- For shock due to volume loss (e.g., bleeding), attempt to prevent further loss of fluid
- Insulin shock can be treated with food containing sugar (fruit juice, honey, sugar water), if client is conscious
- For suspected septic shock, keep the client lying down and cover with a light blanket until EMS arrives

Additional Considerations:

Call 911 immediately for any client that is confused, hypotensive or severely tachycardic

See also: Bleeding, Seizures/Convulsions, Dehydration, Diarrhea, Fever, Confusion/Disorientation, Infection, Chest Pain/Pressure, Stroke

Stroke

Treatment Goal:

- Prevent injury to client
- Decrease chances of permanent damage by rapid assessment and transport to higher level of care

Possible Causes:

Strokes are caused by a lack of oxygen to the brain caused by either a bleed in an artery (hemorrhage) or by a blood clot

History:

- Onset of symptoms – are symptoms still present or have they subsided?
- Presence of headache before or in conjunction with facial paralysis
- Sudden paralysis or weakness on one side of the body with facial drooping
- Loss and/or slurring of speech
- Loss of vision in one eye or visual field in both eyes
- Mental confusion
- Lack of muscular coordination
- Loss of bladder and/or bowel control
- History of blood clots or previous TIA/CVA
- Current medications, especially aspirin or other blood-thinner
- Pain behind one ear or piercing pain of the face, scalp or ear

Assessment:

- Check scene, then check person
- Obtain Consent
- Sudden signals of stroke, THINK F.A.S.T.
 - Face- weakness on one side of the face and ask the person to smile
 - Arm- Weakness or numbness in one arm ask the person to raise both arms
 - Speech – slurred speech or trouble getting words out Ask the person to speak a simple sentence
 - Time- Note time when signals were first observed
- Obtain vital signs, paying special attention to an elevated blood pressure
- Assess client's coordination of movements and ability to move upper and lower extremities
- Assess the client's ability to walk, observing gait and balance

- Check pupil size and reaction to light
- Assess facial symmetry. Look for differences between features of the right and left side of the face (e.g. smile/frown, raise eyebrows) and presence/absence of eyelid drooping.

Call Local EMS/911 for:

- All cases of facial drooping or paralysis, and/or can't speak
- All suspected cases of TIA or stroke

Treatment:

- If unconscious, maintain open airway
- Monitor ABCs
- Get the client to an acute care facility as quickly as possible
- Do not give client anything to eat or drink
- Do not give client any medications
- Place client on their weakened side so secretions can drain from the mouth
- Have the client to rest quietly until local EMS arrives
- Provide privacy
- Comfort the client and family as much as possible

Additional Considerations:

A client's prognosis improves when they can be transferred to an acute care facility for diagnosis and treatment within 30 minutes of onset of symptoms.

See also: Paralysis/Weakness – Facial or Limb, Seizures/Convulsions, Headache.

Substance Abuse/Withdrawal

Treatment Goal:

- Early recognition of withdrawal symptoms
- Care appropriate and timely referral to appropriate setting

Possible Causes:

Substance abuse can be caused by taking in excessive and persistent amounts of alcohol, illicit drugs and/or prescription medications taken outside the usual standards of medical practice or medical need. Steroids, growth hormone, diuretics and laxatives are also commonly abused substances. Withdrawal symptoms are caused when the client stops using the addictive substance.

History of substance abuse:

- Recent change in mood or behavior
- Slurred or incoherent speech
- Sudden loss of weight or inattention to personal hygiene
- Past drug use/abuse (type of drug, amount taken, last time drug was used)
- Past medical history
- Current medications taken

History of withdrawal:

- Nervousness, sleeplessness
- Nausea, vomiting, diarrhea (heroin)
- Muscle pain
- Agitation, hallucinations (alcohol)

- Last use of substance
- Length and frequency of prior use
- Past medical history
- Current medications taken

Assessment:

- Obtain vital signs, if client is cooperative and document
- Assess level of consciousness, orientation to person, place and time
- Observe movements for coordination
- Listen for slurring of speech or nonsensical conversation
- Check arms and legs for signs of injection marks
- Smell for the scent of alcohol
- Check pupils for size and reaction to light

Call Local EMS/911 for:

- Any client who appears to be intoxicated or under the influence of a harmful substance and has an altered level of consciousness (difficult to arouse) as they may experience a drug-related emergency (overdose) or may attempt to harm themselves or others
- Any client with an altered level of consciousness or confusion
- Call local law enforcement if client becomes aggressive or uncooperative with efforts to help

Refer to Local Healthcare System:

- Any known or suspected alcoholic that has not had access to alcohol recently and is experiencing symptoms of alcohol withdrawal
- Any known or suspected drug abuser that has not had access to their substance recently and is experiencing symptoms of withdrawal

Treatment:

- First, assess whether the situation is one that can be handled safely or if outside help is needed. If client is sleeping with normal breathing, and can be easily aroused, no immediate treatment is required.
- If unconscious, make sure the client is breathing. Initiate CPR, if necessary, and contact local EMS.
- If conscious and under the influence of a harmful substance, ask the client what drug he or she took, the amount and when it was taken. Contact local EMS and convey this information to them. Keep client awake and talking until EMS arrives. If client becomes aggressive, keep yourself and others away from client until help arrives – DO NOT attempt to restrain client. Consult with Life Safety and Asset Protection, if necessary.
- If vomiting, place client on his or her side to help prevent emesis from entering the lungs.
- Alcoholics who are experiencing symptoms of withdrawal typically self-medicate themselves by drinking.
- Refer client to Disaster Mental Health worker and the local health care system if client would like information regarding rehabilitation.

Additional Considerations:

- Signs of drug usage and treatment will depend on the particular substance being abused.
- Nearly eight percent of the US population has a problem with alcohol use, with men being four times more likely than women to become alcoholics.
- Alcohol withdrawal symptoms usually occur 12-48 hours after the individual stops drinking and are characterized by sweating, weakness, tremors and perhaps seizures and hallucinations.

See also: Nausea/Vomiting, Anxiety, Diarrhea, Seizures/Convulsions.

Violence/Domestic Abuse

Treatment Goal:

- Identify potential cases of abuse and/or neglect
- Report such cases to the appropriate authorities
- Maintain safe environment

Possible Causes:

Abuse can be seen in various forms – emotion, physical or sexual – and usually involves a family member, neighbor or some other adult

History:

- Frequent complaints of pain or illness
- Injury that does not fit the description of what caused it
- Pain during urination
- Frequent broken bones
- Excessive aggression
- Social withdrawal or depression
- Child who has an unusual fear of adults

Assessment:

- Obtain vital signs and document
- Observe for signs of malnutrition or unkempt appearance (possible neglect)
- Check skin for unexplained bruises, burns or cuts that may be at various stages of healing (physical abuse)

Call Local EMS/911 for:

- Any serious injury to a client
- Notify local law enforcement of any violent or threatening behavior in a client in shelter

Refer to Local Healthcare System:

Any client suspected of being physically or sexually abused

Treatment:

- Provide comfort to the client and treat noticeable injuries such as cuts, bruises or burns
- Consult with a Disaster Mental Health worker and Life Safety and Asset Protection regarding the most appropriate referral
- If child abuse or elder abuse is suspected, local authorities should be contacted
- Suspected cases of sexual abuse or rape should be reported to local law enforcement. See Rape protocol.
- Be aware that in the shelter environment that tensions will be heightened and
- there may be increased risk for violence among shelter residents
- Stay aware of environment
- Consult with Disaster Mental Health to strategize regarding stress reduction in at risk families and clients

Additional Considerations:

- Many states have laws that require health professionals to report suspected cases of violence, abuse or neglect. If you are unsure of the law in the state where you are working, refer all suspected cases to the local healthcare system so they may take appropriate actions.

- Children and older adults are at higher risk of being abused than the general population

See also: Arm/Hand Injury and Pain, Bleeding, Bruising, Burns, Cuts and Scrapes, Leg/Foot Injury and Pain, Rape/Sexual Assault.

IV. Communicable Diseases

Fifth Disease

Treatment Goal:

- Relieve discomfort
- Prevent spread to pregnant women
- Differentiate from other viral illnesses causing rashes

Possible Causes:

Viral disease affecting primarily school aged children, with peak in late winter and early spring generally harmless in children but poses a slight risk to developing fetuses.

History:

- Typical bright red non-tender facial rash producing “slapped cheek” appearance
- Lacy pink rash on the backs of arms, legs, torso, and buttocks
- Rash comes and goes for several weeks in response to changes in temperature and sunlight
- Polyarthrititis and arthralgias-usually involving small joints of extremities in symmetric fashion
- Mild fever

Assessment:

- Obtain vital signs and document on *Health Record*
- Note presence and characteristic of rash
- Note if rash worsened by heat or sunlight
- Note if rash itches or not. (Fifth disease rash is nonpruritic or not itchy)
- Inquire as to initial start of rash (most contagious the week before rash starts)
- Inquire as to who the child was near in week prior to development of rash

Refer to Local Healthcare System:

- Any pregnant woman who reports being exposed to someone with Fifth disease or who exhibits this characteristic rash
- Any child who exhibits high fever (over 102)
- Joint pain worsens or does not improve

Treatment:

- Treatment is supportive only
- Non-steroidal ant inflammatory drugs for arthralgias/arthritis
- Follow manufacturer’s dosage instructions for age
- Reassurance to parents that illness is self-limiting and may last 1-2 weeks

Additional Considerations:

- The rash will spare the area around the nose and mouth, so is classic and characteristic of Fifth Disease
- Peak age 5-18 years
- Infection in early pregnancy may result in fetal death (10%) or severe anemia but is usually asymptomatic and is NOT associated with congenital malformations.

Hepatitis

Treatment Goal:

- Assist in adequate medical evaluation and referral to public health/health care system
- Prevent transmission of virus to others
- Prevent complications

Possible Causes:

Inflammation of the liver due to any cause. Viral hepatitis (A, B, C, D, E) can be either short lived (acute) or last for at least six months (chronic). Non-viral hepatitis is usually caused by excessive alcohol intake or use of certain medications or drugs. Hepatitis A and E are caused by infected stool which can be transmitted by improper food handling or eating shellfish taken from a high sewage waterway. Hepatitis B, C and D are transmitted through infected blood and body fluids passed to others through sharing of needles (IV drug use or tattoos), contaminated blood, sexual intercourse or from an infected mother to her baby.

History:

- Onset of symptoms
- Poor appetite
- Flu-like symptoms (nausea/vomiting, fever, joint pain)
- Recent darkening of the urine
- Travel overseas or to an underdeveloped country
- Recent bout with food sickness
- IV drug use
- Tattoos
- Unprotected sexual intercourse
- Past medical history
- History of vaccination against Hepatitis A or B
- Current medications

Assessment:

- Obtain vital signs
- Assess skin for presence of red, itchy hives
- Assess skin and the whites of the eyes for a yellow discoloration (jaundice)

Refer to Local Healthcare System:

- All suspected cases of undiagnosed hepatitis
- Any client with a rash associated with fever
- Any client who shows signs of jaundice

Treatment

- Prevention: Encourage clients to reduce or eliminate high-risk behaviors – IV drug use, unprotected sexual intercourse, etc
- Once infected, client symptoms are managed but there is no treatment for the virus. Alcohol should be avoided.

Additional Considerations:

- Acute viral hepatitis occurs suddenly and usually lasts just a few weeks – producing symptoms that range from a mild flu-like illness to liver failure
- Cases of Hepatitis A and E are typically mild (except in pregnancy) and usually resolve without treatment. There are no chronic effects nor does the person become a chronic carrier of the virus. Nonetheless, these cases of hepatitis can lead to outbreaks in unsanitary conditions.

- Vaccination currently exists for only Hepatitis A and B. Those at high-risk of exposure are encouraged to get vaccinated (health care workers, IV drug users, etc.).

See also: Fever, Nausea/Vomiting, Abdominal Pain.

Herpes Simplex Viruses (HSV-1 and HSV-2)

Treatment Goal:

- Reduce discomfort
- Prevent transmission to others

Possible Causes:

HSV-1 and HSV-2 are caused by infection with the herpes simplex virus producing small, painful, fluid-filled blisters on the skin or mucous membranes, is highly contagious and transmitted by direct contact. Herpes simplex-1 is generally located on the lips or inside the mouth while Herpes simplex-2 is found on or near the genitalia.

History:

- Onset of symptoms
- Recent occurrence of HSV-1 trigger (fever, menstruation, emotional stress, upper respiratory infection)
- Presence of sores around lips or in the mouth
- Presence of sores in the genital area
- Fever
- Pain score (0-10 scale)
- Headache or body aches

Assessment:

- Obtain vital signs
- Assess inside mouth for swelling of the gums or red, fluid-filled sores on the mucous membranes

Refer to Local Healthcare System:

- Any previously undiagnosed case of potential herpes virus for definitive diagnosis
- If sores have lasted more than 2 weeks
- Any client with a potential herpes sore in/near the eye

Treatment:

- There is currently no treatment to eradicate the virus. Medication (anti-virals) can help to alleviate some of the symptoms and reduce the time of active infection by a day or two
- Clients experiencing sores should keep the area clean and dry. Placing a cold compress on cold sores may help to alleviate some of the discomfort.
- To help prevent the spread of the virus to others, clients should be encouraged to not kiss, share objects (utensils, cup, toothbrush, etc.), or have unprotected sexual intercourse until the sores have healed completely.
- Additional Considerations:
- Although the possibility of spreading herpes virus is higher when sores are present, the virus can be spread to others even when there are no sores present.
- Anyone with eczema (a skin disorder) should avoid a client with active herpes infection as it may cause a serious skin infection.

See also: Fever; Headaches; Urination, Difficulty With; Vaginal Discharge

Herpes Virus: Chickenpox (varicella zoster)

Treatment Goal:

- Prevent spread of communicable disease
- Reduce discomfort
- Prevent complications

Possible Causes:

Exposure to the varicella-zoster virus

History:

- Prior immunization for chicken pox
- Medications-especially corticosteroids or cancer chemotherapies
- History of immune disorders
- Onset of symptoms (usually 10-21 days after infection)
- Mild headache
- Fever
- Recent loss of appetite
- Generalized malaise
- Exposure to someone with symptoms of chickenpox

Assessment:

- Obtain vital signs and document on *Health Record* . Client may have a slight fever.
- Assess skin for rash. The rash will begin as red flat sores.
- Over 5 days, the rash may spread to cover the trunk of the body extremities, and may cover the face, throat, mouth, ears, groin and scalp as well
- Develops as raised, itchy, fluid-filled blisters
- Gently palpate neck for enlarged lymph nodes
- Be aware of signs of encephalitis: severe headache, stiff neck, unusual sleepiness or lethargy, persistent vomiting

Call Local EMS/911 for:

- Any signs or symptoms of encephalitis
- If there is a fever of 103 or higher

Refer to Local Healthcare System:

- All suspected cases of chickenpox for a definitive diagnosis, and so the client can be appropriately isolated
- Pregnant or immune-compromised clients who have been exposed to someone with chickenpox
- If sores are in client's eyes
- Those cases of chickenpox at higher risk of developing complications (elderly adults, infants younger than 12 months, immune-compromised clients, etc.)
- Any rash associated with a fever should be referred for a definitive diagnosis

Treatment:

- Isolate immediately any client suspected of having chicken pox

- Chickenpox is a highly infectious virus and can be transmitted to others (by airborne droplets) from 2-3 days before onset of symptoms until the last sore has crusted over – usually about a week after onset of symptoms
- Any client with chickenpox should be kept isolated from those who do not have immunity (either natural immunity or through vaccination)
- Cool compresses with baking soda added to the water may ease itching
- If asked for medication, oral antihistamines given according to manufacturer direction by age of client may reduce the itch
- Acetaminophen to relieve the fever, dosage as recommended by manufacturer
- DO NOT give Aspirin to anyone younger than 18 years due to risk of Reye's syndrome
- Keep the skin clean and dry to help alleviate itching and prevent a bacterial infection from developing in the open sores
- It may be helpful to recommend that parents apply mitts or socks over the hands of small children, and to keep their nails trimmed, to help prevent scratching

Additional Considerations:

- Prior to the development of a vaccine in the 1990s, nearly 90 percent of children acquired chickenpox by the age of 15. The vaccine has decreased the number of cases of chickenpox by 70 percent.
- Once an individual recovers from chickenpox, they cannot contract the virus again. However, the virus remains dormant in the body and can reactivate later in life, causing shingles. See Shingles protocol.
- The disease is generally more severe in adulthood
- Encephalitis is a rare but dangerous complication of chicken pox

See also: Rash, Itching – Skin, Headache, Fever

Herpes Virus: Shingles (varicella zoster)

Treatment Goal:

- Reduce discomfort
- Prevent complications

Possible Causes:

Shingles: Re-emergence of the varicella zoster virus that has lain dormant since the initial infection with chickenpox. Generally affects one or two of the large nerves that spread outward from the spine. Exact cause of reactivation is unknown but may be linked to a weakened immune system.

History:

- Onset of symptoms
- Presence of chickenpox infection in the past
- Level of pain (0-10 score)
- Generalized malaise
- Presence of fever and/or chills
- Nausea and/or diarrhea
- History of weakened immune system
- History of vaccine

Assessment:

- Obtain vital signs and document on *Health Record*

- Assess skin for the nerve path along which the sores travel. Sores will be small clusters of fluid-filled blisters.

Refer to Local Healthcare System:

- Early referral may mean effective start of medications that can reduce pain and rash
- Any client who is showing signs of shingles along a cranial nerve (nerve of the face)
- Any client who is experiencing a rash with fever to rule-out a more serious condition
- Clients with severe pain not controlled by over-the-counter pain medications

Treatment:

- Until the blisters scab (approximately five days after symptoms start), the affected individual is infectious and should be isolated from those who do not have immunity from varicella zoster.
- The pain of shingles can be severe and may even occur before the development of rash.
- For pain management, either a non-steroidal anti-inflammatory drug (ibuprofen or aspirin) or acetaminophen may be effective at reducing discomfort, unless contraindicated. Follow manufacturer's directions for contraindications and dosage.

Additional Considerations:

- During the initial infection with chickenpox, the varicella virus infects nerve cells (usually the spine or cranial nerves). In a re-emergence, the shingle sores will travel down the nerve path, usually on one side of the body.
- Shingles may affect anyone who has previously had chickenpox but generally affects adults over the age of 50.
- In 25-50 percent of shingles cases in adults over the age of 50, chronic nerve pain (post herpetic neuralgia) occurs. The pain usually subsides within 1-3 months but, in a few cases, may last for more than a year.

See also: Rash, Itching – Skin, Headache, Fever.

Influenza (seasonal)

Treatment Goal:

- Assess for more serious health condition
- Prevent spread of infection to others
- Relieve symptoms/discomfort

Possible Causes:

Various strains of influenza virus

History:

- Rapid or abrupt onset of fever and muscle aches, occasionally associated with a dry cough, headache or sore throat
- Recent contact with a person suspected of having influenza
- History of influenza vaccination (current year only)
- Presence of nausea and/or vomiting may occur in children

Assessment:

- Obtain vital signs
- Temperature will be elevated
- Listen to breath sounds

Call Local EMS/911 for:

- Any client experiencing problems breathing
- Any client with confusion or other changes in mental status

Refer to Local Healthcare System:

- Any suspected case of influenza
- Any suspected case of pneumonia
- Any temperature greater than 103° F that does not respond to antipyretic therapy

Treatment:

- All suspected cases of influenza in a shelter environment should be isolated and referred to the local health care system for diagnosis before allowing them back in the shelter.
- Confirmed cases of influenza should be isolated in the isolation care area.
- Encourage client to rest, drink plenty of fluids and avoid exertion until symptoms have resolved.
- Due to the infectious nature of influenza, encourage the client to minimize contact. Keep in isolation area and assess recovery.
- Fever and muscle aches can usually be managed with acetaminophen and/or non-steroidal anti-inflammatory medications (aspirin, ibuprofen), unless contraindicated.
- Children under the age of 18 should never be given aspirin.

Additional Considerations:

- The influenza virus causes an acute febrile illness usually between the months of December and April in the United States. The classic symptom pattern in adults is rapid onset of fever and myalgias (muscle aches) occasionally associated with a dry cough, headache or sore throat. Children may present with other symptoms such as rhinitis (runny nose) or vomiting.
- Many people think that a “cold” is the same as the “flu.” Influenza is an infection that causes high fever, chills and severe muscle aches but rarely a runny nose.
- Influenza kills 30,000-40,000 Americans each year, mostly elderly.
- Vaccination against influenza should be encouraged for all at-risk populations on a yearly basis. Vaccinations are generally offered in the fall.
- Children, older adults and those with chronic illnesses are at higher risk for acquiring influenza.

See also: Back Pain, Congestion, Fever, Headache, Nausea/Vomiting, Neck Pain/Stiffness, Rash, Infection

Measles (Rubeola)

Treatment Goal:

- Prevent spread to others
- Prevent or lessen possibility of complications
- Relieve discomfort

Possible Causes:

Caused by the Rubeola virus

History:

- Onset of symptoms- 2-4 days (runny nose, sore throat, hacking cough and/or red eyes, high fever), 7-10 days, development of rash
- Recent contact with someone presenting with a rash or suspected of having measles

- History of immunization (MMR typically given at age 12-15 months and again at 4-6 years for lifelong immunity)

Assessment:

- Obtain vital signs and document on *Health Record*. Temperature may get as high as 104° F
- Assess skin for red, itchy rash appearing in front of and below the ears and on the neck. After one to two days the rash will spread to the trunk, arms and legs as it fades on the face.
- Assess the mucous membranes inside the mouth for tiny white spots

Refer to Local Healthcare System:

- All suspected cases of measles
- Any case of rash associated with fever

Treatment:

- Measles are highly infectious. Any client suspected of having measles should be isolated from others who do not have immunity.
- There is no particular treatment for measles. Keep the client warm and comfortable and give an antipyretic (ibuprofen or acetaminophen) to help reduce fever, unless contraindicated.
- Watch and health teach regarding complications, which can include otitis media, laryngitis, tracheitis, pneumonia, encephalitis
- Additional Considerations
- Measles rare today due to the MMR (Measles, Mumps, Rubella) vaccine
- Complications more common in immuno-compromised clients
- The measles are spread by either breathing in infected droplets or by touching items contaminated with infected droplets. Measles is infectious from 2-4 days before a rash presents itself until the rash disappears.
- Immunization is recommended for children between 12 and 15 months of age. Immunization is contraindicated for pregnant women or children younger than 12 months.
- A woman who has either had the measles or received vaccination against measles will pass the immunity on to her newborn. The baby will be immune for about the first year of life.

See also: Congestion, Cough, Fever, Rash.

Meningitis

Treatment Goal:

- Early recognition of illness
- Early treatment
- Early isolation to prevent spread to others
- Prevent or reduce complications

Possible Causes:

- Virus or bacteria that cause inflammation of the meninges in the brain, with increased intracranial pressure. Less frequently, meningitis may be caused by a fungal infection.
- Transmission is through mucous secretions of mouth and nose (cough, sneeze).

History:

- Onset and severity of symptoms (fever, headaches, stiff neck, sore throat, rash, nausea and/or vomiting)
- Weakened immune system, autoimmune disease

- Recent head injury
- Seizure activity
- History of splenectomy or kidney failure
- Current medications taken – especially immunosuppressants and/or corticosteroids
- Frequent infections of the nose, middle ear, or sinuses
- Recent bout with pneumonia
- Recent hospitalization
- History of sickle cell disease

Assessment:

- Obtain vital signs
- Temperature may be elevated and/or blood pressure may be low
- Check for photophobia (sensitivity to light)
- Assess for altered mental state, lethargy
- Ask client to try and lower chin to the chest. In people with meningitis this is very painful and may be impossible to perform. Knees may also bend involuntarily.
- Assess skin for presence of red and/or purple splotchy rash

Call Local EMS/911 for:

Any client experiencing a headache or fever associated with photophobia or a stiff neck

Refer to Local Healthcare System:

Any case of rash associated with fever

Treatment:

- All cases of suspected meningitis require diagnosis and treatment at a local health care facility
- If bacterial meningitis has been identified in a shelter resident, the local health department should be notified
- All other residents of the shelter should be watched closely for symptoms of meningitis and/or referred to a local health care facility for possible vaccination or prophylaxis

Additional Considerations:

- Bacterial meningitis occurs most often between the ages of one month and two years of age. Among adults, meningitis is most frequently seen in group settings, i.e.: military barracks or college dormitories
- Children are routinely given vaccination for *Haemophilus influenza*, the most common cause of childhood meningitis. Vaccination is also recommended against *Neisseria meningitis* when an outbreak occurs within a group.
- Viral and bacterial meningitis cause similar symptoms, although the viral form of the disease is generally more mild.
- There is no way to differentiate between viral and bacterial illness from physical symptoms alone
- Bacteria infected person can become seriously ill, very rapidly
- Untreated, can be fatal

See also: Headache, Neck Pain/Stiffness, Fever.

Mumps

Treatment Goal:

- Early recognition of illness
- Early isolation to prevent spread to others
- Assess for more serious health condition
- Prevent or reduce complications

Possible Causes:

Viral infection

History:

- Onset and severity of symptoms (low grade fever, chills, headache, poor appetite, generalized malaise)
- Swelling and tenderness of one or both parotid glands
- Considerable pain, that makes it difficult to chew, speak
- Increased pain with eating and drinking acidic foods
- Recent contact with someone known or suspected of having mumps

Assessment:

- Obtain vital signs. Temperature may get as high as 103-104° F
- Assess for swelling of the salivary glands which can be noted on one or both sides of the face

Refer to Local Healthcare System:

All suspected cases of mumps for definitive diagnosis.

Management and Health Teaching:

- Most cases of mumps resolve without treatment within two weeks
- Isolate the client to prevent the spread of disease to those without immunity

Additional Considerations:

- In children, mumps generally presents itself as swelling of the salivary glands. In some cases, especially in adulthood, mumps is characterized by swelling of the testes, brain and pancreas.
- Although mumps can occur year-round, it is most often seen in late winter or early spring and mostly affects children between the ages of 5 and 15 years.
- Vaccination against mumps is routine in the United States between the ages of 12 and 15 months. Those who have received vaccination or have previously had the mumps have immunity for life.

See also: Headache, Fever.

Noroviruses – “Norwalk-like viruses”

Treatment Goals:

- Reduce symptoms
- Prevent dehydration
- Prevent transmission of virus

Possible Causes:

- Direct contamination of food by a food handler
- Contaminated food liquid items such as salad dressing or cake icing
- Contaminated water – oysters from contaminated water
- Contaminated wells and recreational water

History:

- Noroviruses are highly contagious
- As few as 10 viral particles may be sufficient to infect an individual
- Viral shedding occurs with onset of symptoms and may continue for 2 weeks
- 50% of all food borne outbreaks of gastroenteritis can be attributed to noroviruses

Assessment:

- Obtain vital signs especially fever
- Observe for dehydration, excessive vomiting, watery non-bloody diarrhea

Refer to local Health Care:

- Anyone with pre-existing conditions that are exacerbated by the virus such as diabetics should be referred
 - Children that dehydrate and fluid intake can't be stabilized may need to be re-hydrated
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Skin Infections, Bacterial – Impetigo

Treatment Goal:

- Reduce symptoms
- Prevent spread of infection to others

Possible Causes:

Skin infection caused by *Staphylococcus aureus* or *Streptococcus pyogenes* bacteria. Bacterial infection that is much more common in children than in adults.

History:

- Usually begins with a break in the skin (cut, scratch, blister, burn)
- Recent cold
- Pain or itching at affected area
- Recent sunburn or insect bite

Assessment:

- Obtain vital signs
- Assess skin for scabby, yellow-crusts sores or small blisters filled with yellow pus usually located around the mouth or under the nose

Refer to Local Healthcare System:

- If impetigo covers area larger than 2 inches in diameter
- Any client with a rash associated with fever
- Any client with suspected impetigo that does not begin to resolve after two to three days
- Facial swelling or tenderness

Treatment: Always use standard precautions

- Wash with soap and water several times a day to remove crust. Apply an antibiotic cream to the

affected area.

- Cover area with gauze, taped well away from sores
- Try to prevent client from scratching or touching the area as it may spread to other parts of the body
- Client should be kept away from others and instructed to wash hands frequently as impetigo is highly contagious
- Health teaching points:
 - Keep child's fingernails short and clean.
 - No sharing of towels, washcloths or bath water
 - Adult males should not shave over sores

Additional Considerations:

- Impetigo is common in children and appears mostly on the face, arms and legs
- Bacteria frequently live on the skin without causing infection. Infection may occur when there is a break in the skin (allowing entry of bacteria) or in someone with a weakened immune system.

See also: Rash, Itching – Skin, Burn – Thermal, Bites.

Skin Infections, Fungal – Ringworm, Athlete's Foot, Jock Itch

Treatment Goal:

- Prevent spread to others
- Relieve discomfort

Possible Causes:

Fungal skin infection caused by several different fungi and classified by its location on the body

History:

- Warm, moist climate
- Communal living and/or showering
- Contact with someone known or suspected of having a ringworm infection

Assessment:

- Obtain vital signs and document on *Health Record*
- Ring-shaped, red/pink scaly rash with a clear center, usually with itching
- Athlete's foot-itching, cracking, blistering, peeling of skin between toes and on soles feet
- Jock itch-severe itching, redness, scaly raised areas on skin of groin and upper thighs. May weep, ooze pus or clear fluid

Refer to Local Healthcare System:

- Any suspected fungal skin infection that does not resolve after 10 days of treatment
- Any skin infection or rash associated with fever

Treatment: Always use standard precautions.

- Over-the-counter antifungal creams work well to resolve the infection. Cream should be applied to the affected area twice a day for 10 to 20 days.
- Nail lacquer with an antifungal agent is available for nail fungus – although treatment may take up to a year
- Since the fungus is infectious, close contact with others should be avoided until the infection is gone

- For prevention, keep the skin clean and dry and encourage clients to wash their hands frequently and to wear shower shoes in communal showers or locker rooms

Additional Considerations:

- Ringworm is a fungal infection and does not involve worms but got its name from the ring-shaped patches that develop on the skin.
- Fungal infections of the fingernails and toenails cause discoloration, thickening, cracking and often softening of nails. Difficult to treat

See also: Rash, Itching – Skin.

Skin Infections, Parasitic - Lice

Treatment Goal:

- Prevent potential spread to others
- Relieve symptoms

Possible Causes:

Infestation of lice causing itching of the scalp

History:

- Recent close contact with someone known to have lice
- Intense itching of the head and/or pubic area

Assessment:

- Obtain vital signs and document on *Health Record*
- Wearing gloves and using a tongue-depressor, inspect the client's scalp and hair roots for signs of nits (eggs) or the presence of lice

Refer to Local Healthcare System:

Suspected lice infestation should be referred to confirm diagnosis and to direct treatment

Management:

- The overwhelming majority of cases can be effectively managed with over-the-counter treatments.
- Instruct the client to avoid contact with others until the lice infestation is treated with medicated shampoo (RID, for example) and any remaining nits are removed with a fine-toothed comb. Dispose of the comb after use.
- All furniture, bedding, clothing and cloth items (e.g. stuffed animals) should be sprayed with a product containing the active ingredient permethrin or washed in the hottest water temperature possible.
- Items may also be placed in plastic bags for two weeks to allow the lice to die.
- Check for the presence of lice on all family members, playmates and any potential close contacts.

Points of Interest:

- A lice infestation can be determined by inspecting the scalp and hair root for small white nits (eggs) that are attached to the hair or the insect itself which is small and dark.
- Lice can infest any part of the body with hair

See also: Itching – Skin, Bites.

Skin Infections, Parasitic - Pinworms

Treatment Goal:

- Prevent spread to others
- Relieve discomfort

Possible Causes:

Intestinal roundworms that are spread from person to person by ingestion of roundworm eggs

History:

- Itching of the skin around the anus, more severe at night
- Recent close contact with someone known to have a pinworm infection

Assessment:

- Obtain vital signs
- To be done by parent or guardian:
 - Looking for the presence of white, hair-thin worms on the skin surrounding the anus (one to two hours after the child has gone to sleep) or pick up eggs around the anus with transparent tape (before the child wakes in the morning). The tape should be taken to the doctor's office to assist with diagnosis.

Refer to Local Healthcare System:

- Any suspected case of pinworms for definitive diagnosis and treatment
- Any child who is under the age of 2 with symptoms of pinworms.
- If any client develops fever, abdominal pain, redness, swelling of genital area, or if they report pain when urinating
- If person under treatment for pinworms develops vomiting or pain

Treatment:

Always use standard precautions.

- Prescription medications are available from a local health professional. This should be repeated two weeks after initial treatment.
- Wash all bedding and plush toys, underwear, nightclothes, towels in hot water and detergent. Vacuum the area to help eliminate eggs
- Sanitize toilet and sleeping areas with strong disinfectant
- All members of the family or those who have been in close contact with the infected client should consider treatment as well
- Health teaching point-teach importance of frequent and thorough hand washing, especially after using toilet and before meals. Keep children's fingernails short and clean.
- Morning showers and daily changes of pajamas and underwear to help prevent re-infection

Additional Considerations:

- Pinworms are the most common childhood parasitic infection in the United States
- Pinworms live in the lower region of the intestine and leave the body to lay their eggs around the anus at night
- The eggs are very sticky and can be transferred to bed sheets, toys, etc., that can then infect another child (or re-infect the original carrier) by oral ingestion
- Eggs can survive on clothing and bedding for days

- Children who suck their thumb are at higher risk of acquiring pinworms
- Generally, if one child in the family is infected, any other child between 2 and 10 should be treated as well

See also: Itching – Skin.

Skin Infections, Parasitic – Scabies

Treatment Goal:

- Prevent spread to others
- Relieve symptoms

Possible Causes:

Scabies is caused by the itch mite *Sarcoptes scabiei* that burrows under the skin. This causes an allergic reaction, itches intensely and is easily spread from person to person through physical contact.

History:

- Intense itching of the skin this is usually worse at night
- Recent exposure to someone with known or suspected infection with scabies

Assessment:

- Obtain vital signs
- Assess the skin for tiny bumps which may or may not have a thin red line (burrow) associated with the bump. These can be located anywhere on the body except the face.
- Check folds of skin on fingers, toes, wrists, underarms and groin

Refer to Local Healthcare System:

- Any client who does not respond to over-the-counter treatment or has a weakened immune system
- For Prescription medication if OTC not readily available

Treatment: Always use standard precautions

- The client should be instructed to apply a topical cream containing five percent permethrin to the skin at night and wash it off in the morning. A second treatment should be performed one week later. Anyone who has been in close physical contact with the infected individual should be treated as well.
- Mites do not live for long on inanimate objects – laundering of clothing and bed sheets in hot water will effectively at destroy mites

Additional Considerations:

- Itching may last for up to two weeks after successful treatment due to an allergic reaction to the mite bodies, which remain in the skin for awhile
- Children may not attend school until treatment is completed

See also: Itching – Skin, Rash.

Tuberculosis

Treatment Goal:

- Prevent spread to others
- Prevent injury to client

Possible Causes:

Tuberculosis is caused by a highly infectious airborne bacterium known as *Mycobacterium tuberculosis*.

History:

- Onset of symptoms (night sweats, cough for more than two weeks, blood-tinged sputum, fever)
- Generalized malaise
- Decreased appetite and resultant weight loss
- Diagnosed and treated tuberculosis
- Medications currently taking to treat the illness
- Available medications with client

Assessment:

- Obtain vital signs
- Client may complain of a longstanding intermittent fever
- Contact Public Health for guidance

Refer to Local Healthcare System:

- All suspected cases of tuberculosis for definitive diagnosis and treatment
- Any client currently in treatment for TB but who does not know what their medication is, or have it with them

Treatment:

- Tuberculosis is treated with multiple antibiotics taken over a long period of time, usually six months or longer
- Frequently, those with tuberculosis are required to participate in Directly Observed Therapy (DOT) in which a health care worker observes the individual as they take their medicine. This result in improved drug compliance and fewer cases of recurrence.
- Since active tuberculosis is highly infectious, those clients who are exhibiting symptoms of tuberculosis should be isolated until diagnosis by a local healthcare provider can be made and follow local public health guidance for respiratory isolation.
- Only clients with active disease are considered infectious

Additional Considerations:

- Individuals with a positive PPD test but showing no sign of active disease (common among health care workers) are welcome in Red Cross facilities
- Individuals who are currently on antibiotic therapy for tuberculosis are also welcome as long as they are no longer showing signs of active disease (cough, fever, night sweats, weight loss)
- Most people are no longer infectious after two weeks of treatment, although antibiotics should continue to be taken until told otherwise by their health care professional
- A chest X-ray may be needed to identify some suspected cases, or for those who have only recently had a positive PPD
- Illness due to tuberculosis usually occurs long after initial exposure to the bacterium. Symptoms present themselves over time instead of as part of an acute episode.
- Worldwide, there are approximately eight million new cases and three million deaths due to tuberculosis each year.
- Nearly one-third of the world's population is believed to be carriers of the disease in a dormant

state, with 90-95 percent of these individuals never experiencing active disease.

- Tuberculosis is spread from one person to another by bacteria in the air. Breathing, coughing or sneezing causes bacteria to hang in the air for hours. Anyone breathing in this air is at risk of developing tuberculosis.

See also: Cough, Fever.

V. Procedures

Use of an Automated External Defibrillator (AED)

(Notify National Headquarters when AEDs are used)

ADULT:

- When a cardiac arrest occurs, an AED should be used as soon as it is available and ready to use. Most public buildings are equipped with AED'S
- If the AED advises that a shock is needed, the responder should follow protocols to provide one shock followed by 5 cycles (about 2 minutes) of CPR
- Analyze the heart rhythm
- If at any time, you notice an obvious sign of life, stop CPR and monitor airway, breathing, and circulation (ABCs). Administer emergency oxygen if available and you are trained to do so.

CHILD:

- While the incidence of cardiac arrest in children is relatively low compared with adults, cardiac arrest resulting from V-fib does happen to young children. Most cardiac arrests in children are not sudden.
- Possible causes of cardiac arrest in children are – airway and breathing problems, traumatic injuries or accidents, a hard blow to the chest, congenital heart disease.
- AEDs equipped with pediatric AED pads are cable of delivering levels of energy to children between 1 and 8 years old or weighing less than 55 pounds. Use pediatric AED pads and/or equipment when available. If pediatric equipment is not available, an AED designed for adults may be used on a child. ALWAYS FOLLOW LOCAL PROTOCOLS AND MANUFACTURER'S INSTRUCTIONS.
- After a shock is delivered or if no shock is indicated give 5 cycles (about 2 minutes) of CPR before analyzing the heart rhythm again. IF, at any time you notice obvious signs of life, stop CPR and monitor the airway, breathing and circulation (ABCs). Administer emergency oxygen if available and you are trained to do so.

AED Precautions:

- Do not touch the victim while defibrillating. You or someone else could be shocked.
- Before shocking a victim with an AED, make sure that no one is touching or is in contact with the victim or the resuscitation equipment
- Do not touch the victim while the AED is analyzing. Touching or moving the victim may affect the analysis.
- Do not use alcohol to wipe the victim's chest dry. Alcohol is flammable.
- Do not defibrillate someone when around flammable or combustible materials such as gasoline or free-flowing oxygen
- Do not use an AED in a moving vehicle. Movement may affect the analysis.
- Do not use an AED on a victim who is in contact with water. Move the victim away from the water, swimming pools, puddles, or out of the rain before defibrillating.
- Do not use an AED and/or pads designed for adults on a child under age 8 or less than 55 pounds, unless pediatric pads specific to the device are not available. Local protocols may differ on this and should be followed.
- Do not use pediatric pads on an adult, as they may not deliver enough energy for defibrillation.
- Do not use an AED on a victim wearing a nitroglycerin, nicotine or other patch on the chest. With a gloved hand, remove any patches from the chest before defibrillating.
- Do not use a mobile phone or radio within 6 feet of the AED-this may interrupt analysis.

AEDs Special Situations

AEDs Around Water

- If the victim was removed from the water, be sure there are no puddles of water around you, the victim or the AED.
- Remove wet clothing for proper pad placement if necessary. Dry the victim's chest and attach the AED.
- If it is raining, ensure that the victim is as dry as possible and sheltered from the rain
- Wipe the victim's chest dry but minimize delays to defibrillation
- AEDs are very safe, even in rain and snow, when all precautions and manufacturer's operating instructions are followed

AEDs and Implantable Devices

Sometimes people may have a pacemaker implanted for a weak heart or irregular rhythm. These small implantable devices are sometimes located in the area below the right collarbone and a small lump might be felt under the skin. Sometimes the pacemaker is placed somewhere else. Others may have an implantable cardioverter-defibrillator (ICD), a miniature version of an AED, which acts to automatically recognize and restore abnormal heart rhythms. When locating this do not place the defibrillator pad directly over the device. This may interfere with the delivery of the shock. Adjust pad placement and continue to follow the established protocol. If you are not sure, use the AED if needed. It will not harm the victim or the rescuer.

AED Use for Hypothermia

Some people who have experienced hypothermia have been resuscitated successfully, even after prolonged exposure. It will take longer for you to do your check or assessment of a victim suffering from hypothermia because you may have to look for movement and check breathing and a pulse for up to 30-45 seconds. Do not delay CPR or defibrillation to rewarm the victim

- Check for signs of life and initiate CPR
- Protect the victim from further heat loss
- Remove wet garments
- Do not defibrillate in water
- Do not shake a hypothermia victim unnecessarily, as this could result in ventricular fibrillation

AED Use for Trauma

If a victim is in cardiac arrest caused by traumatic injuries, an AED may still be used. Defibrillation should be administered according to local protocols.

AED Use with Chest Hair

Lots of hair on the chest can prevent good pad-to-skin contact. Since the time to first shock is critical, attach the pads and analyze as soon as possible. Press firmly on the pads to attach them to the victim's chest.

If you get a "check pads" message from the AED, remove the pads and replace with new ones. The pad adhesive will pull out some of the chest hair, which may solve the problem. If you continue to get "check pads" message, remove the pads, shave the victim's chest and add new pads to the chest. A safety surgical razor should be included in the AED kit. Be careful not to cut the victim while shaving.

AED Maintenance:

Follow the manufacturer's specific recommendations for maintenance, checking that:

- batteries are charged with fully charged backup packs
- expiration dates are current on defibrillator pads
- correct replacement pads are available
- AED is in proper working order

Use of an Epinephrine Auto Injector (EPIPEN):

After determining a person is having a severe allergic reaction, assist with prescribed medication (epinephrine auto-injector), and use disposable gloves and other personal protective equipment. Follow these steps:

- Verify person's name
- Review directions and expiration date
- Grasp the auto-injector firmly and remove safety cap
- At a 90 degree angle, inject medication and hold firmly for 10 seconds
- Continue to monitor airway, breathing and circulation
- Give used auto-injector to EMS personnel
- Notify national headquarters of event

Use of an Inhaler

After determining a person is having an asthma attack, obtain consent, and assist with prescribed medication (inhaler). Follow these steps:

- Verify person's name
- Review directions and expiration date
- Shake inhaler and remove cap (if extension or spacer tube is available, attach and use appropriately)
- Have person breathe out and place lips around mouthpiece
- Quickly press down on inhaler canister while person inhales deeply.
NOTE: if possible have person self-administer the medication
- Have person hold breath for count of 10
- Exhale and rinse out mouth with water
- Note time administered and monitor airway, breathing and circulation
- Document the incident on the Health Status Record and the Incident Report Form
- Notify national headquarters of event

VI. Appendices

Appendix 1 – Over-the-Counter Medications—Uses and Contradictions

For all medications, check for client allergies, contraindications and manufacturer’s recommended dosage.

Acetaminophen (Tylenol)			
Therapeutic Class	Indications	Dosages	Contraindications
Analgesic, antipyretic	Mild to moderate pain caused by headache, backache, minor arthritic, muscle pain, toothache, common cold, menstrual cramps; fever.	Adults: 325-650mg PO every four to six hours, PRN Children: see manufacturer’s recommendations or check with physician.	Hypersensitivity to other drugs. Use cautiously in clients with anemia, liver/kidney disease, the elderly. Pregnant or breastfeeding clients, and children younger than 2 years can safely take Tylenol

Asprin			
Therapeutic Class	Indications	Dosages	Contraindications
Analgesic, antipyretic, anticoagulant	Mild to moderate pain caused by headache, toothache, arthritis, common cold, flu, muscle aches, menstrual cramps; fever; reduce the risk of heart attack and/or mini stroke (TIA).	Adult: (325mg tablets) one to two tablets PO every four hours, PRN. Children: Check manufacturers labeling. Children under 18 should not be given aspirin due to the risk of developing Reyes syndrome.	Hypersensitivity to other drugs or to NSAIDs. Asthma, ulcers, kidney/liver disease, bleeding problems or stomach complaints. Pregnancy, children under the age of 18.

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Ibuprofen (Motrin, Advil, Nuprin)			
Therapeutic Class	Indications	Dosages	Contraindications
Analgesic, antipyretic, anti-inflammatory	Arthritis; mild to moderate pain; menstrual cramps; fever reduction; migraine/tension headaches.	Adult: 400mg PO every four hours, PRN. Children: see manufacturer's label.	Hypersensitivity to other drugs and NSAIDs. Pregnancy. Use cautiously in elderly clients; breastfeeding clients; and those with cardiovascular, kidney/liver, GI disease, asthma or chronic alcohol use.

Diphenhydramine (Benadryl)			
Therapeutic Class	Indications	Dosages	Contraindications
Antihistamine	Relieves symptoms of seasonal allergies (hay fever) and the common cold: runny nose, sneezing, watery eyes, scratchy throat, etc.	Adults: one to two pills PO every four to six hours, PRN. Children six to twelve years: one pill PO every four to six hours, PO. Not to be used in children under 6 years, unless prescribed by a physician.	Glaucoma enlarged prostate, breathing problems such as emphysema or chronic bronchitis.

Loperamide Hydrochloride (Imodium)			
Therapeutic Class	Indications	Dosages	Contraindications
Antidiarrheal	Controls the symptoms of diarrhea, including Traveler's diarrhea.	Adults: two caplets PO after first loose stool, one caplet PO after each subsequent loose stool – not to exceed four caplets per 24 hour period. Children nine to eleven years: one caplet PO after first loose stool, one-half caplet PO after each subsequent loose stool, not to exceed three caplets per 24 hour period.	Black or bloody stool, fever, mucous in stool, pregnancy, liver disease, antibiotic use.

Pseudoephedrine (Sudafed)			
Therapeutic Class	Indications	Dosages	Contraindications
Decongestant	Temporary relief of stuffy head/sinuses associated with cold, hay fever or sinus inflammation.	Adult: two tablets PO every four to six hours, PO. Not to exceed eight tablets in a 24 hour period. Children six to eleven years: one tablet PO every four to six hours, PO. Not to exceed four tablets in a 24 hour period. Not for use in children under 6 years	Use of MAO-inhibitors, high blood pressure, heart disease, diabetes, thyroid disease, enlarged prostate.

*Nursing Spectrum Drug Handbook. May 30, 2006. www.nursesdrughandbook.com

*Physician’s Desk Reference. 2006.

http://www.pdrhealth.com/drug_info/otcdrugprofiles/drugs/fgotc036.shtml

Appendix 2 – Vital Signs – Normal Values

	Blood Pressure (mmHg)	Heart Rate (beats per min.)	Respiratory Rate (breaths per min.)	Temperature
Adults and Children >10 years	Systolic: <120 Diastolic: <80	60-80 (at rest)	12-18	97.8-99.1° F
Children 3-10 years	Systolic: 80-110	70-110	18-24	97.8-99.1° F
Children 1-3 years	Systolic: 80-100	80-120	20-30	97.8-99.1° F
6 months to 1 year	Systolic: 80-100	90-120	25-40	97.8-99.1° F
Newborn	Systolic: 60-80	100-160	30-60	97.8-99.1° F

Appendix 3 – Household Equivalents

Household	Metric
1 teaspoon (tsp)	5 milliliters (ml)
1 tablespoon (tbs)	15 milliliters (ml)
1 ounce (oz)	30 milliliters (ml)
2 tablespoons (tbs)	30 milliliters (ml)
1 ounce (oz)	30 grams (g)
1 pound (lb)	454 gram (g)
2.2 pound (lb)	1 kilogram (kg)
1 inch (in)	2.54 centimeters (cm)

Appendix 4 – Metric Conversions of Weight, Volume and Length

Unit	Non-metric to Metric	Metric to Non-metric
Weight	1 pound (lb) = 16 ounces (oz) = 0.454 kilogram (kg)	1 kilogram = 2.2 pounds (lb)
	1 ounce (oz) = 28.35 grams (g)	1 gram = 0.035 ounce (oz)
Volume	1 gallon (gal) = 4 quarts (qt) = 3.785 liters (L)	1 liter = 1.057 quarts (qt)
	1 quart = 2 pints (pt) = 0.946 liter (L)	
	1 pint = 16 fluid ounces (fl oz) = 0.473 liter	
	1 cup = 8 fluid ounces (fl oz) = 16 tablespoons (tbs)	
	1 fluid ounce = 29.573 milliliters (mL)	
	1 tablespoon (tbs) = 1/2 fluid ounce = 3 teaspoons (tsp)	
Length	1 mile (mi) = 1,760 yards (yd) = 1.609 kilometers (km)	1 kilometer = 0.62 mile (mi)
	1 yard = 3 feet (ft) = 0.914 meter (m)	1 meter = 39.37 inches (in)
	1 foot = 12 inches (in) = 30.48 centimeters (cm)	1 centimeter = 0.39 inch (in)
	1 inch = 2.54 centimeters (cm)	1 millimeter (mm) = 0.039 inch (in)







Excerpt taken from the online Merck Manual

Appendix 5 – Spanish Medical Terminology

Subject	Spanish	English
Parts of the Body	Cabeza	Head
	Cuello	Neck
	Braso	Arm
	Mano	Hand
	Pecho	Chest
	Espalda	Back
	Estomago	Stomach
	Pierna	Leg
	Pie	Foot
Common Phrases	Tienes dolor?	Do you have pain?
	Es un dolor sordo o punzante?	Is the pain dull or stabbing?
	Cuando comenzo?	When did it start?
	Yo quiero medir sus muestras vitales.	I want to measure your vital signs.
	Ha tinedo este problema antes?	Have you had this problem before?
	Que hizo al respecto?	What have you done for it?
	Quales medecinas estas tomando?	What medications do you take?
	Tu tienes alergias?	Do you have any allergies?
	Hay alguna otra persona en su trabajo o en su casa que tenga los mismos sintomas?	Does anyone else at work or in your home have the same symptoms?
	Tienes seguro de salud?	Do you have health insurance?
Tienes un doctor?	Do you have a doctor?	

Vital Signs Terminology	Temperatura	Temperature
	Pulso	Pulse
	Respiraciones	Respirations
	Presion de la sangre	Blood pressure

Appendix 6 – Pain Rating Scale

TRANSLATIONS OF WONG-BAKER FACES PAIN RATING SCALE®						
						
0-5 coding	0	1	2	3	4	5
0-10 coding	0	2	4	6	8	10
ENGLISH	No hurt	Hurts little bit	Hurts little more	Hurts even more	Hurts whole lot	Hurts worst
SPANISH	No duele	Duele un poco	Duele un poco más	Duele mucho	Duele mucho más	Duele el máximo
FRENCH	Pas mal	Un petit peu mal	Un peu plus mal	Encore plus mal	Très mal	Très très mal
ITALIAN	Non fa male	Fa male un poco	Fa male un po di piu	Fa male ancora di piu	Fa molto male	Fa maggiormente male
PORTUGUESE	Não doi	Doi um pouco	Doi um pouco mais	Doi muito	Doi muito mais	Doi o máximo
BOSNIAN	Ne boli	Boli samo malo	Boli malo više	Boli još više	Boli puno	Boli najviše
VIETNAMESE	Không đau	Hơi đau	Đau hơn chút	Đau nhiều hơn	Đau rất nhiều	Đau quá đỗi
CHINESE [†]	無痛	微痛	較痛	更痛	很痛	劇痛
GREEK	Δεν Πονάει	Πονάει Λιγο	Πονάει Λιγο Πιο Πολυ	Πονάει Πολυ	Πονάει Πιο Πολυ	Πονάει Παρα Πολυ
ROMANIAN	No doare	Doare puțin	Doare un pic mai mult	Doare și mai mult	Doare foarte tare	Doare cel mai mult

Explain to the person that each face is for a person who has no pain (hurt) or some, or a lot of pain. Face 0 doesn't hurt at all. Face 2 hurts just a little bit. Face 4 hurts a little more. Face 6 hurts even more. Face 8 hurts a whole lot. Face 10 hurts as much as you can imagine, although you don't have to be crying to have this worst pain. Ask the person to choose the face that best describes how much pain he has.

This form is available for download at <http://www.wongbakerfaces.org>



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