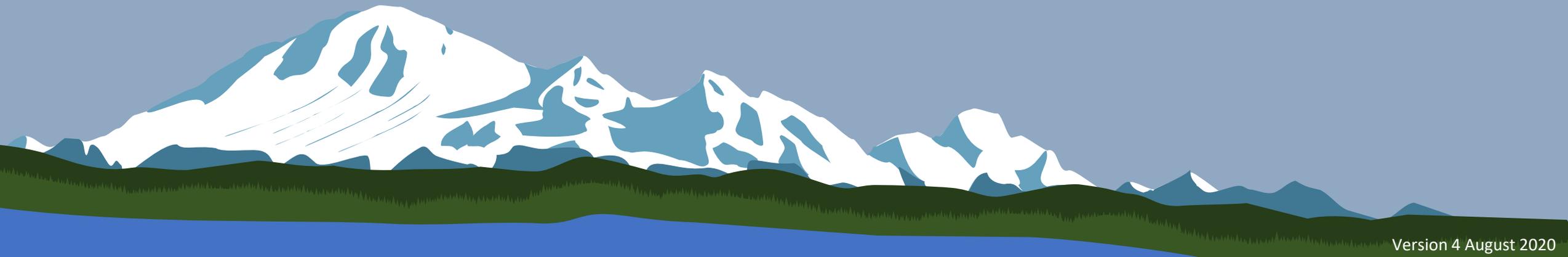
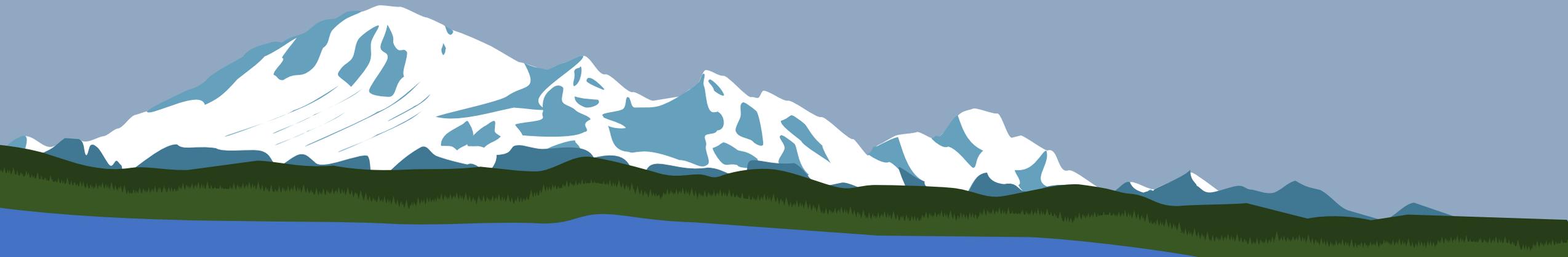


Hiking Merit Badge



Index

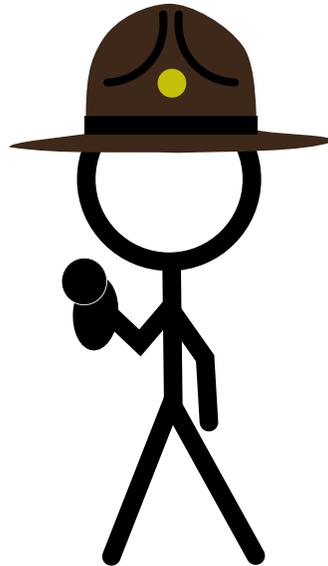
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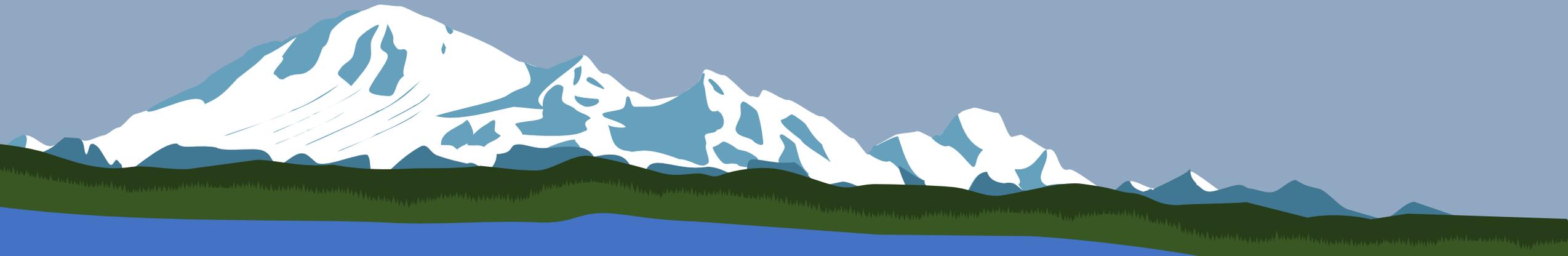
Disclaimer

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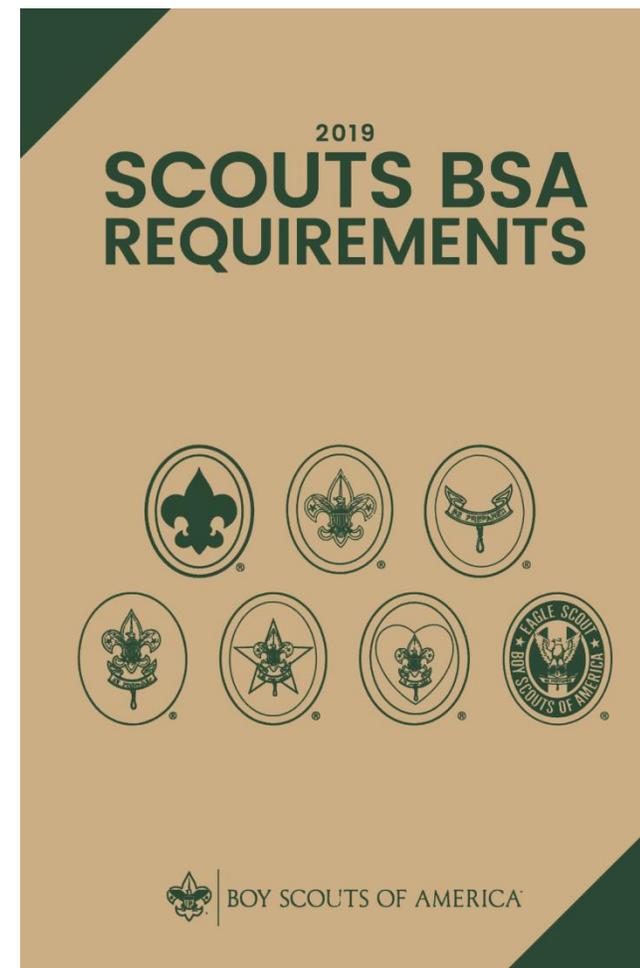
Merit Badge Requirements



Requirements

Requirements

- Merit Badge requirements are taken from:
2019 Scouts BSA™ Requirements Book



Requirements

Requirements

1. Do the following:
 - a. Explain to your counselor the most likely hazards you may encounter while hiking, and what you should do to anticipate, help prevent, mitigate, and respond to these hazards.
 - b. Show that you know first aid for injuries or illnesses that could occur while hiking, including hypothermia, frostbite, dehydration, heat exhaustion, heatstroke, sunburn, hyperventilation, altitude sickness, sprained ankle, blisters, insect stings, tick bites, and snakebite.
2. Explain and, where possible, show the points of good hiking practices including proper outdoor ethics, hiking safety in the daytime and at night, courtesy to others, choice of footwear, and proper care of feet and footwear.

SCOUTS BSA
REQUIREMENTS



Requirements

Requirements

3. Explain how hiking is an aerobic activity. Develop a plan for conditioning yourself for 10-mile hikes, and describe how you will increase your fitness for longer hikes.

4. Take the five following hikes, each on a different day, and each of continuous miles.

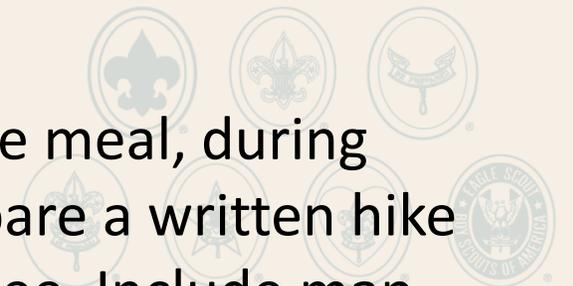
These hikes **MUST** be taken in the following order:

- One 5-mile hike
- Three 10-mile hikes
- One 15-mile hike

You may stop for as many short rest periods as needed, as well as one meal, during each hike, but not for an extended period (example: overnight). Prepare a written hike plan before each hike and share it with your Scoutmaster or a designee. Include map routes, a clothing and equipment list, and a list of items for a trail lunch. *

* The required hikes for this badge may be used in fulfilling hiking requirements for rank advancement. However, these hikes cannot be used to fulfill requirements of other merit badges.

2019
SCOUTS BSA
REQUIREMENTS



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Requirements

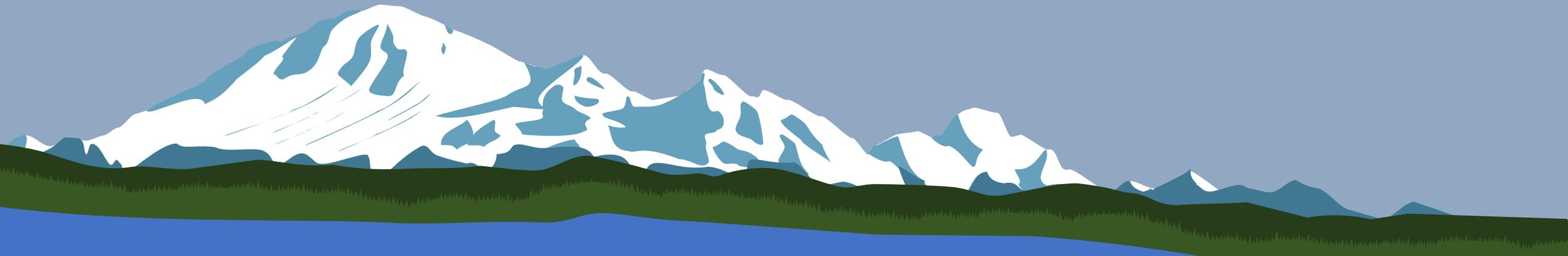
Requirements

5. Take a hike of 20 continuous miles in one day following a hike plan you have prepared. You may stop for as many short rest periods as needed, as well as one meal, but not for an extended period (example: overnight).*
6. After each of the hikes (or during each hike if on one continuous "trek") in requirements 4 and 5, write a short reflection of your experience. Give dates and descriptions of routes covered, the weather, and any interesting things you saw. It may include something you learned about yourself, about the outdoors, or about others you were hiking with. Share this with your merit badge counselor.



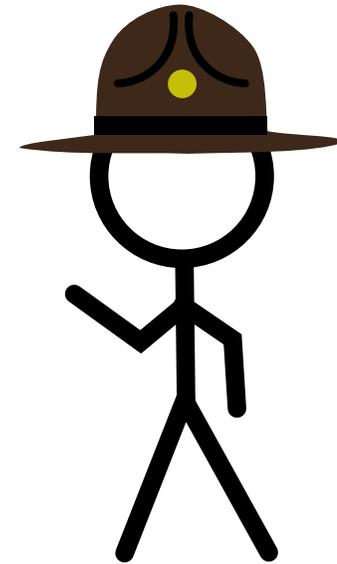


Merit Badge Intro



Merit Badge Intro

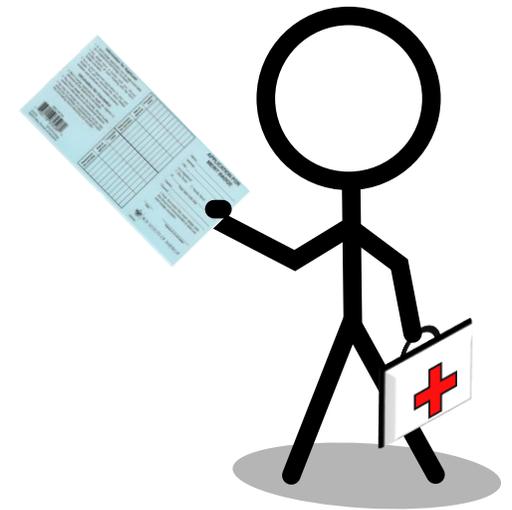
Instructor Introduction



Merit Badge Intro

Needed for Course

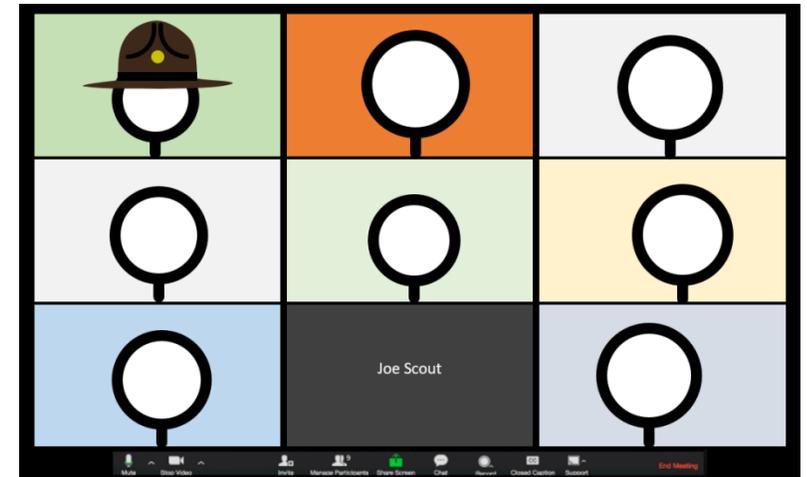
- Merit Badge Blue Card filled out and signed by your Scoutmaster
 - or other virtual agreement
- Merit Badge Pamphlet
- Scout Uniform
- A positive Scouting focus and attitude



Merit Badge Intro

Virtual Meetings

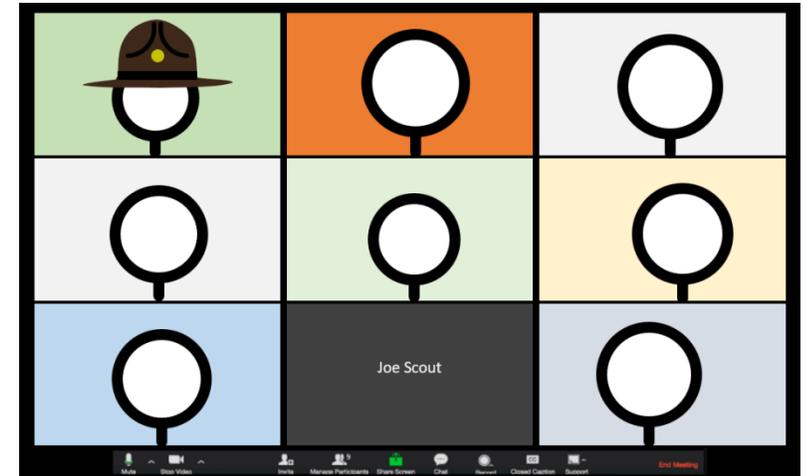
- Use your **REAL Name** and **Troop Number** if you want credit
This is how we take attendance
- MUTE yourself unless speaking to the group
- Please turn your video on so we can see you
- No Chat SPAMMING
- If you need to go pee, go
- If something isn't working, please let us know!



Merit Badge Intro

Virtual Meetings

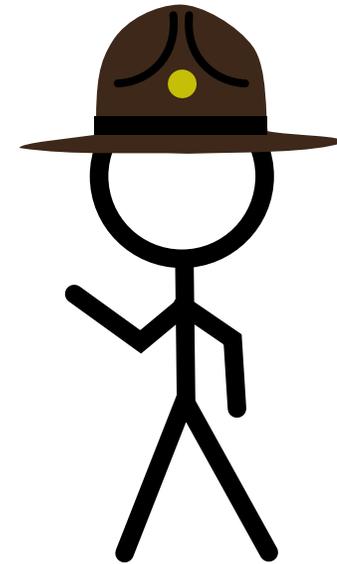
- We can't do ALL the requirements virtually
- Option 1 – Partial Completion
- Option 2 – Completion – need proof
- Please send completed homework **AFTER** the final class
- Tell us who we should CC about completion



Merit Badge Intro

Course Overview

- We will cover most of the requirements for this Merit Badge in class
- We need proof that you completed these requirements
 - Please turn in a completed [Workbook](#) if possible
This makes is easier on the counselor
 - If you can't complete a [Workbook](#), please contact your councilor for alternatives



Merit Badge Intro

What is Hiking?

Hiking for fun took off in a big way in the late 1800s and early 1900s.

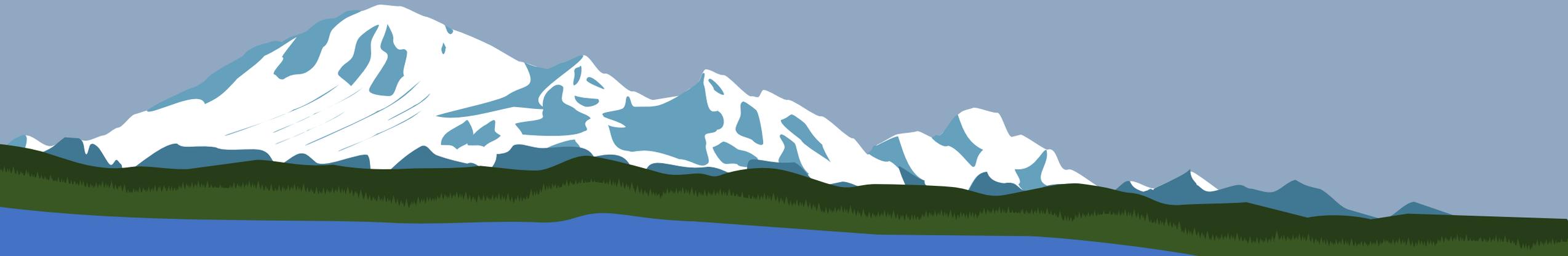
Hiking clubs encouraged people to get out and walk.

Long-distance hikers made their way from the Atlantic Ocean to the Pacific Ocean.

Construction of the Appalachian Trail, the Pacific Crest Trail, Continental Divide Trail, and hundreds of other routes provided the public with pathways to walk on for a day, for a week, or even for months at a time.



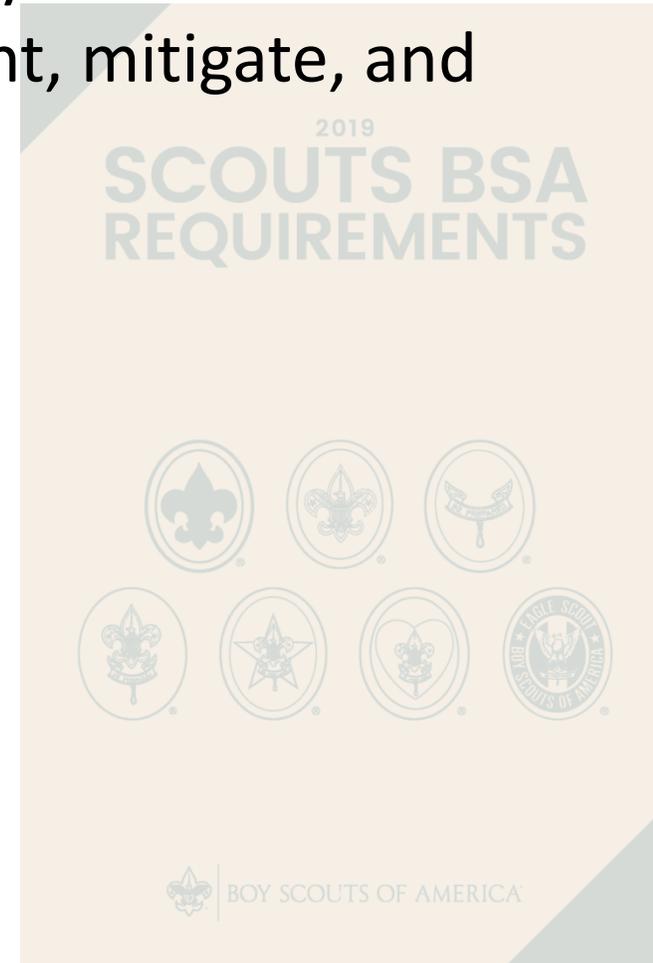
Hazards



Hazards

Requirement 1a - Hazards

Explain to your counselor the most likely hazards you may encounter while hiking, and what you should do to anticipate, help prevent, mitigate, and respond to these hazards.



Hazards

Hazards

- Environmental
- Injuries
- Flora
- Fauna

Hazards

Hazards - Environmental

- **Cold Temperatures** come with increased risk of Cold Injuries
 - Discussed in First-Aid Section
 - Planning for proper clothing and shelter will help prevent injuries
 - Wear synthetic clothing – this doesn't retain very much water
 - Don't wear cotton in the cold – it holds water close to your body
 - Dress in layers – this make it easy to adjust insulation

Hazards

Hazards - Environmental

- **Hot Temperatures** come with the risk of Heat Injuries
 - Discussed in First-Aid Section
 - Balancing of work load is vital
 - Pushing through the heat is dangerous
 - Know when to take a brake or when to stop an activity
 - Hydration is vital in hot environments
 - Make sure you are staying hydrated
 - Plan for water stops as needed
 - Covering exposed skin will keep you cooler when exposed to the hot sun
 - Shelter selection helps reduce risk of injury

Hazards

Hazards – Environmental – Rain

- Rain, even in the tropics, increases the risk of hypothermia
- Be prepared to possible storms
- Have rain gear readily available
- If the storm is really bad, consider setting up shelters
- Help others in crew get into shelter and get dry

Hazards

Hazards – Environmental – Snow

- Snow is fine, but it melts
- Melted snow is dangerous for those who are unprepared
- Pack the proper gear if subfreezing temps are anticipated

Hazards

Hazards – Environmental – Lighting

- Lighting is deadly
- “When Lighting Roars, Go Indoors”
- Tents do NOT protect you from lighting
- Goal:
 - Get into grounded building
 - Get into metal hardtop vehicle
 - If these options not available
 - Get off high ground
 - Open areas



Hazards

Hazards – Injuries

- Safe activities should be selected
- Use appropriate safety gear and supervision
- Follow safety guidelines
- Know how to treat injuries

Hazards

Hazards – Flora

- Know about potential plant hazards in area
- Contact poisoning is a concern
 - Poison Oak
 - Poison Ivy
- Know of any poisonous plants that may be eaten
 - Many poisonous berries look very inviting
 - Know how to identify poisonous plants
 - Don't consume or touch them

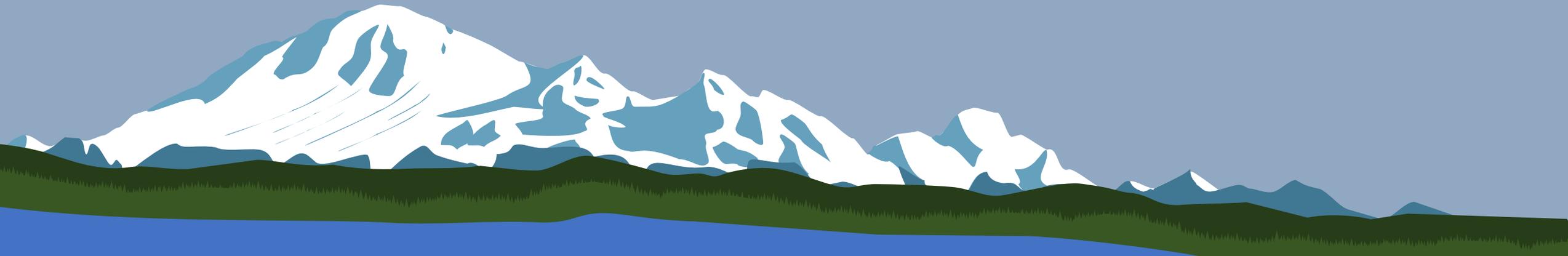
Hazards

Hazards – Fauna

- Know of hazardous animal life in your area
- Some animals will attack
 - Don't approach animals
 - Know what actions to take with each animal hazard
- Some bugs bite
 - Discussed in First-Aid section
 - Wear clothing that covers your skin and use insect repellent
- Venomous Snakes and other animals may be in your area
 - Know how to identify them
 - Avoid them
 - Know how to treat envenomation



First Aid



First Aid

Requirement 1b - First Aid

Show that you know first aid for injuries or illnesses that could occur while hiking, including:

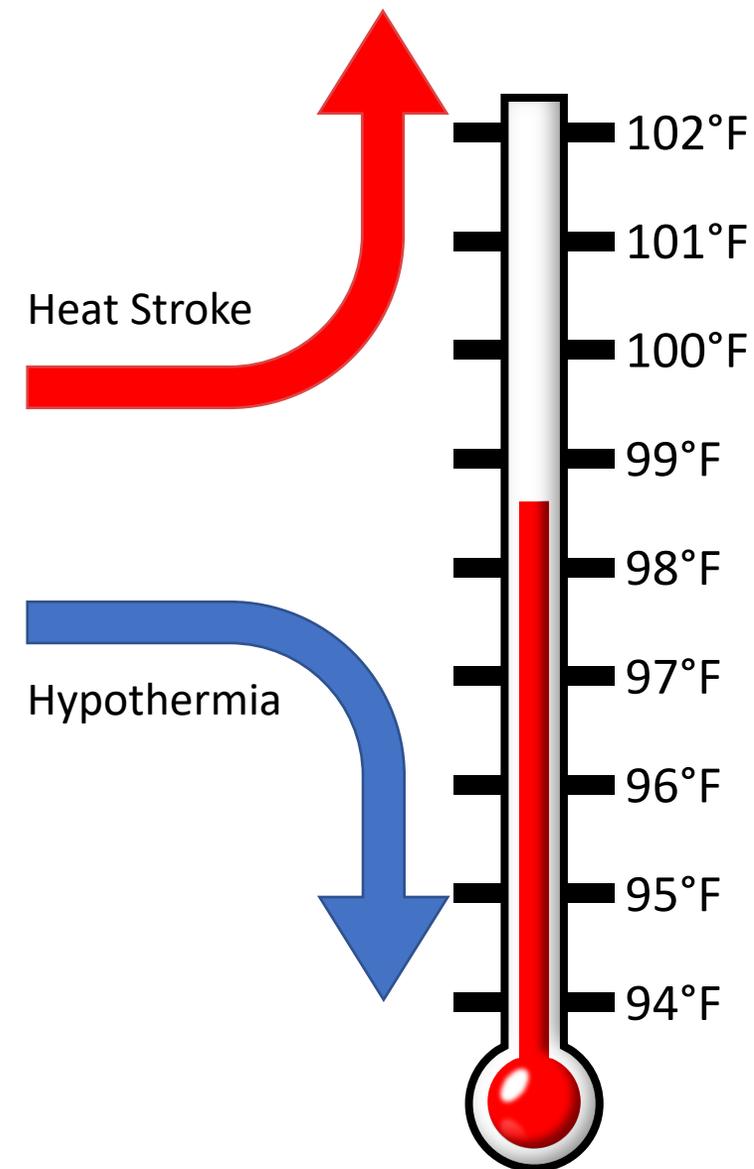
- Hypothermia
- Frostbite
- Dehydration
- Heat exhaustion
- Heatstroke
- Sunburn
- Hyperventilation
- Altitude sickness
- Sprained ankle
- Blisters
- Insect stings
- Tick bites
- Snakebite



Cold Weather Injuries

Body Temperature

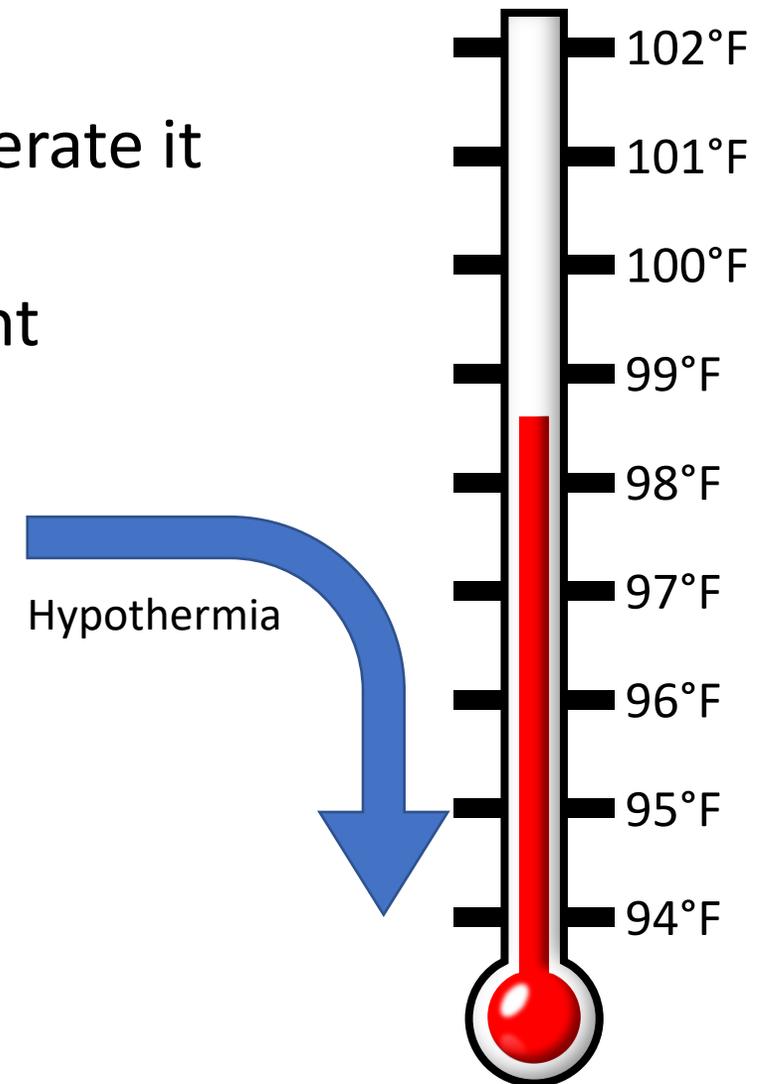
- The human body operates best around 98.6°F
- If body loses heat faster than it can generate it, it will fail to function
- If body overheats and is unable to cool itself, it will fail to function



Cold Weather Injuries

Hypothermia

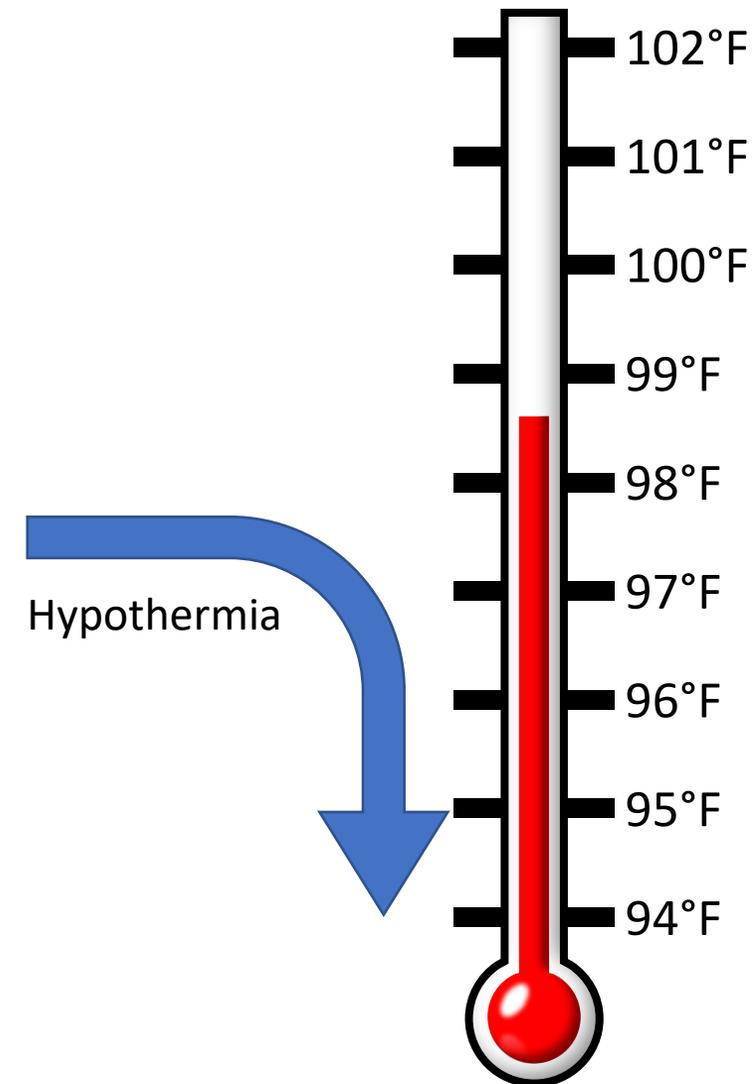
- Occurs when body loses heat faster than it can generate it
- Danger if inadequately dressed for cold environment



Cold Weather Injuries

Hypothermia

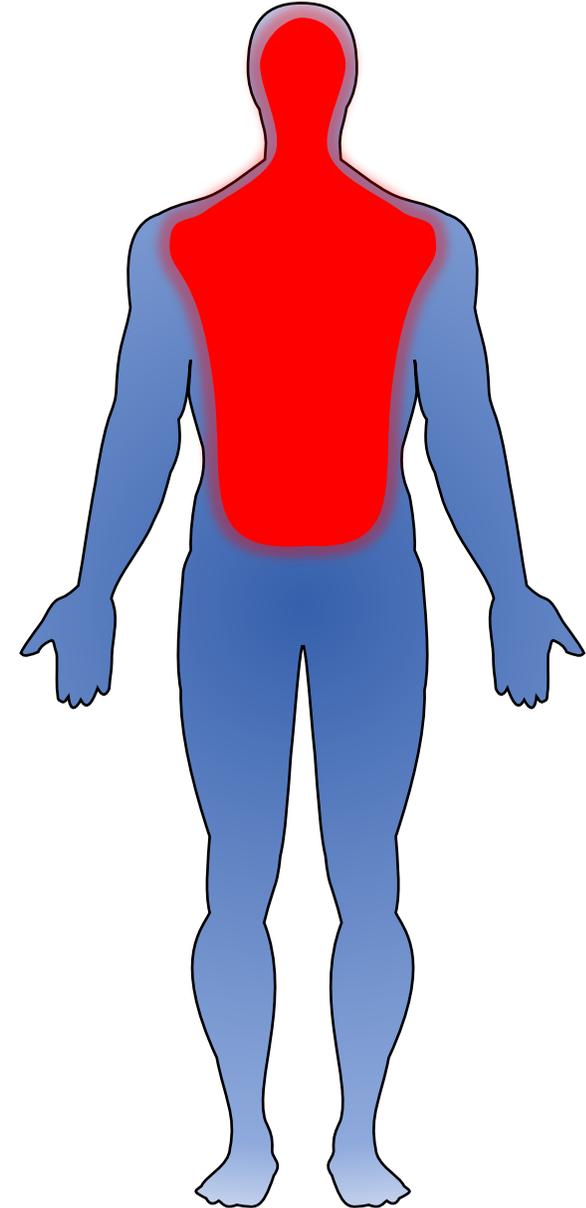
- Danger compounded by:
 - Rain
 - Wind
 - Hunger
 - Exhaustion
 - Dehydration
- Being wet and cold is a dangerous combination



Cold Weather Injuries

Hypothermia – Symptoms

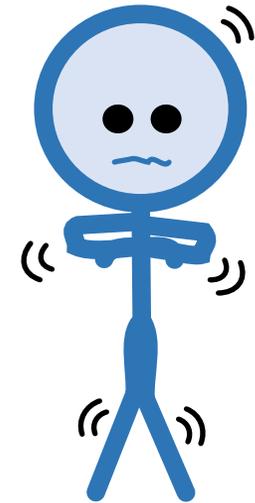
- Numbness
- Fatigue
- Irritability
- Slurred speech
- Uncontrollable shivering
- Poor judgement or decision making



Cold Weather Injuries

Hypothermia – First-Aid

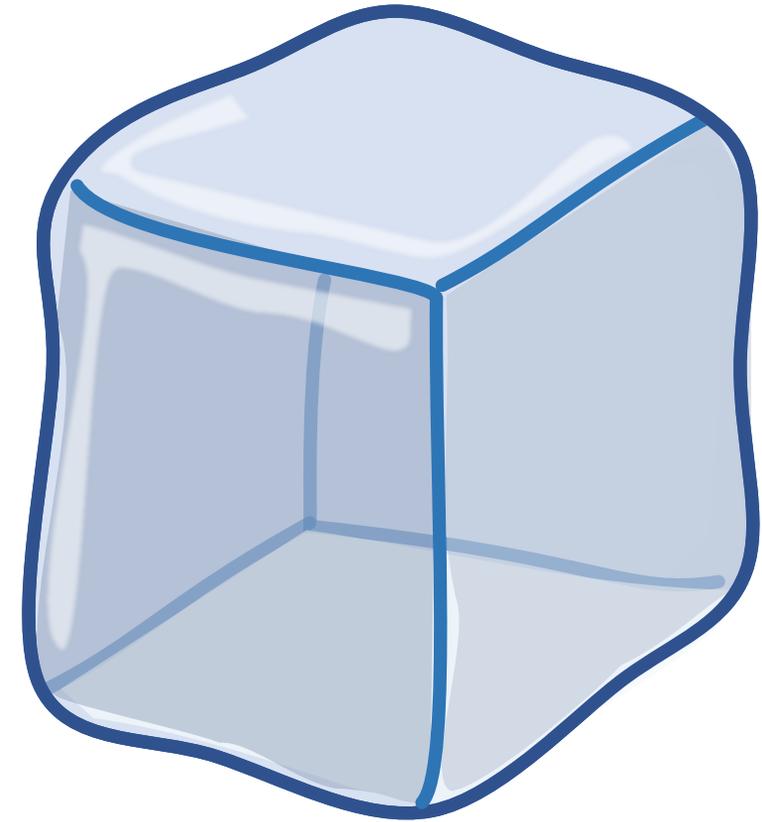
- Get the victim's body warm again!
 - Move to building or tent
 - Remove wet clothing
 - Dry off
 - Warm dry clothes and/or blankets
 - Warm, sweet liquids if conscious
 - Warm water in water bottles, wrapped in towel and place in armpits
 - Observe
- **NEVER Immerse in Warm/Hot Water** – this can be lethal!



Cold Weather Injuries

Frostbite

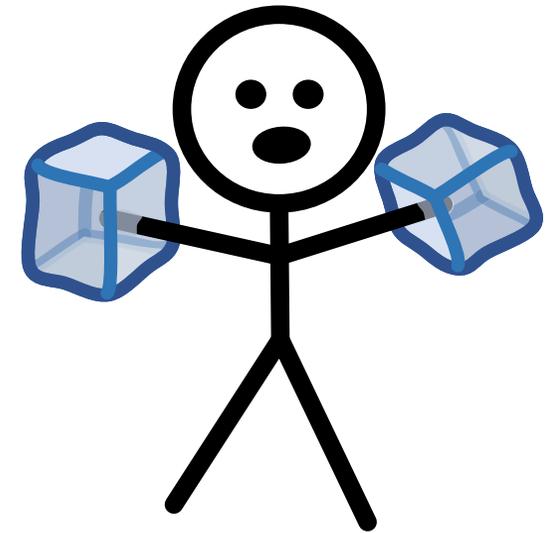
- Frostbite is when skin and tissues freeze and form ice crystals
- Exposed areas at high risk:
 - Ears
 - Nose
 - Cheeks
 - Fingers and hands
 - Toes and feet



Cold Weather Injuries

Frostbite

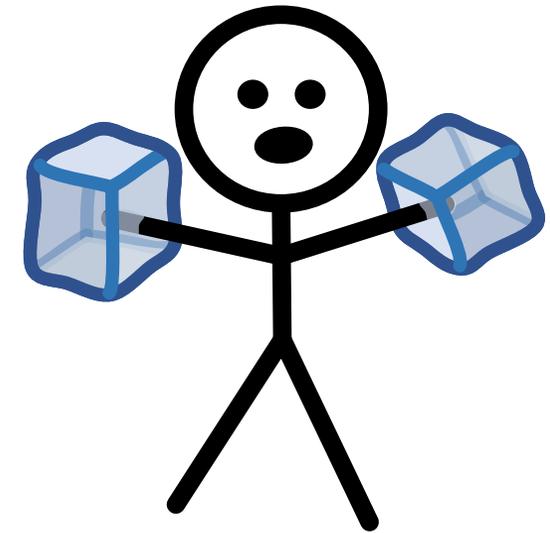
- With continuous exposure, frostbite can freeze deeper tissue
- This causes significant damage and cuts off blood circulation
 - Can lead to:
 - Tissue death
 - Gangrene



Cold Weather Injuries

Frostbite – Symptoms

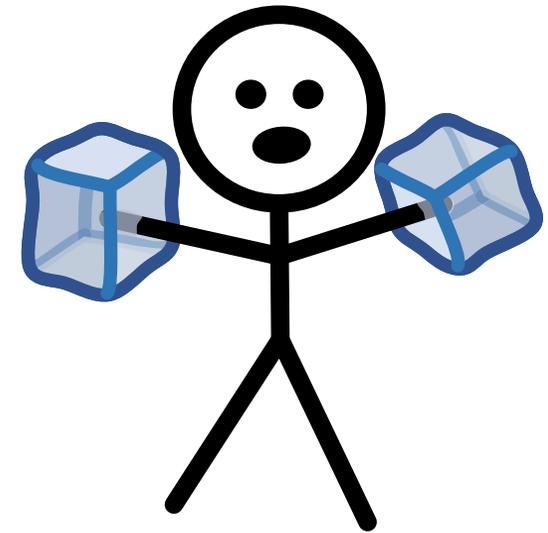
- Victim may **Feel**:
 - Pain then numbness in effected body part
 - May not notice anything



Cold Weather Injuries

Frostbite – Symptoms

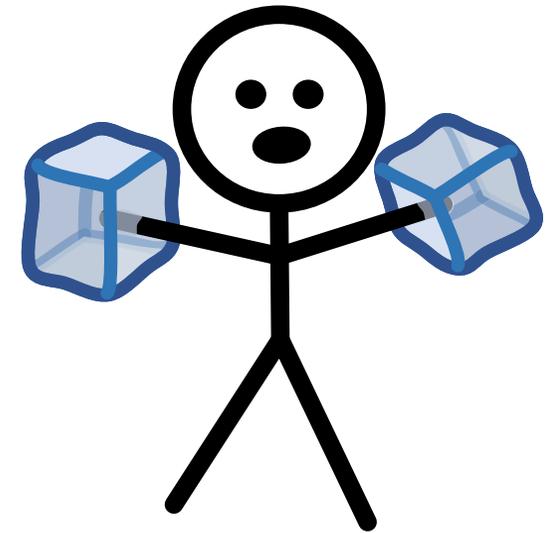
- **May See:**
 - Grayish-white patches on skin
 - Blisters or dark skin suggest severe stages of frostbite



Cold Weather Injuries

Frostbite – First-Aid

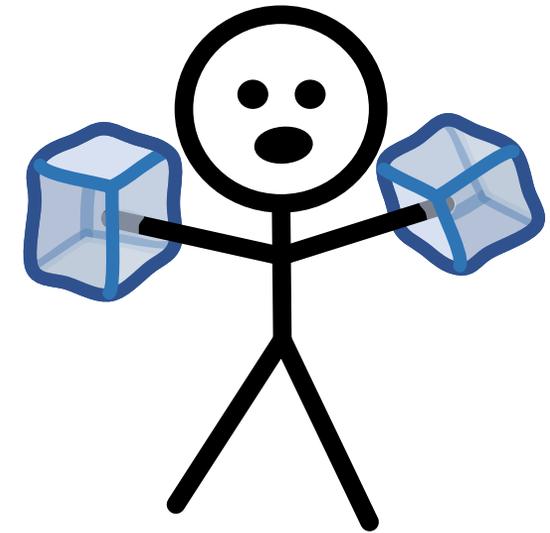
- Best treatment is to **AVOID Getting It** – it is generally preventable
- If you suspect frostbite:
 - Remove wet clothing
 - Wrap injured area in dry blanket
 - Get victim to medical care as soon as possible



Cold Weather Injuries

Frostbite – First-Aid

- Rewarming is an option
 - **Do NOT** rewarm if there is risk of refreeze! This is BAD!
 - Place affected area in warm (100-105°F) water
 - Allow affected area to regain color and warmth
 - Dry off and bandage loosely with dry dressing between digits



Dehydration

Dehydration

- The body is made up of 70% water
- Proper hydration is required for basic body functions
- Dehydration increases the risk of both cold and heat injuries
- Cold and heat both increase the risk of Dehydration



Dehydration

Dehydration

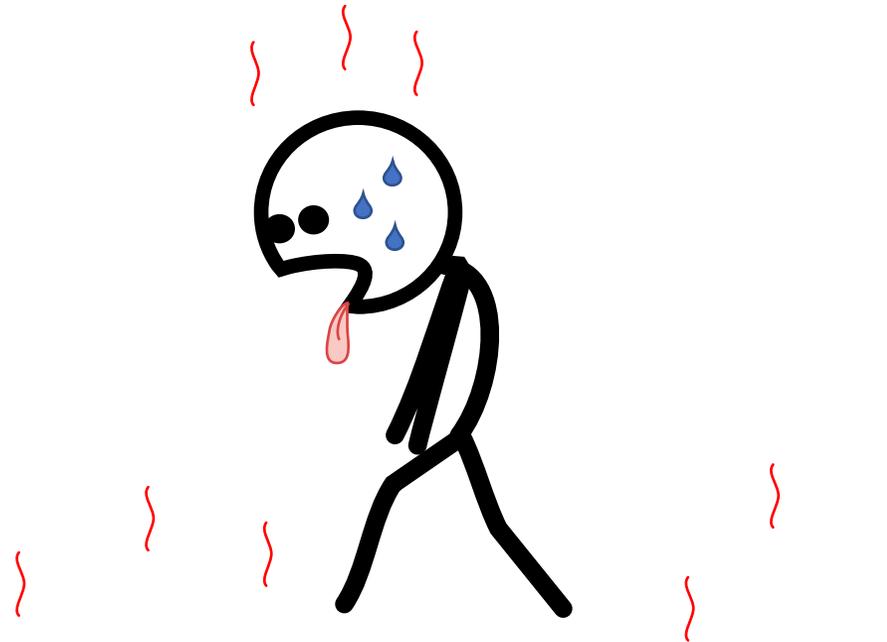
- Water is lost via:
 - Breathing
 - Sweating
 - Digestion
 - Urination



Dehydration

Dehydration – Symptoms

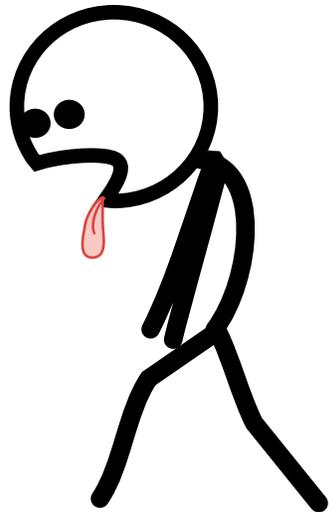
- Signals of **Mild** dehydration
 - Fatigue
 - Increased thirst
 - Dry lips
 - Dark yellow urine



Dehydration

Dehydration – Symptoms

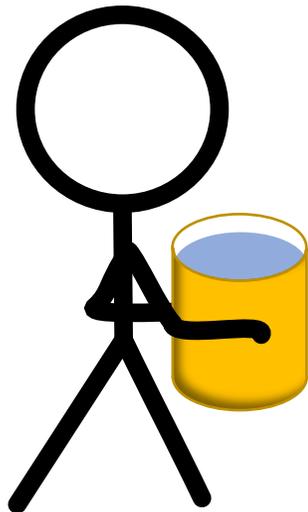
- Signals of **Moderate and Severe** dehydration
 - Dry mouth with little saliva
 - Dry skin
 - Weakness
 - Dizziness
 - Confusion
 - Nausea
 - Fainting
 - Muscle cramps
 - Loss of appetite
 - Decreased sweating
 - Decreased urine production
 - Less frequent urine
 - Dark brown urine



Dehydration

Dehydration – First-Aid

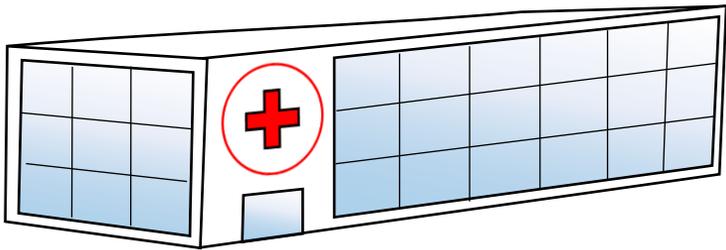
- For **Mild** Dehydration:
 - Drink plenty of water or sports drinks
 - Drink 1-2 quart/liters over 2-4 hours
 - Rest for 24 hours and continue to hydrate
 - Avoid excessive physical activity
 - May take 36 hours to replace lost fluids



Dehydration

Dehydration – First-Aid

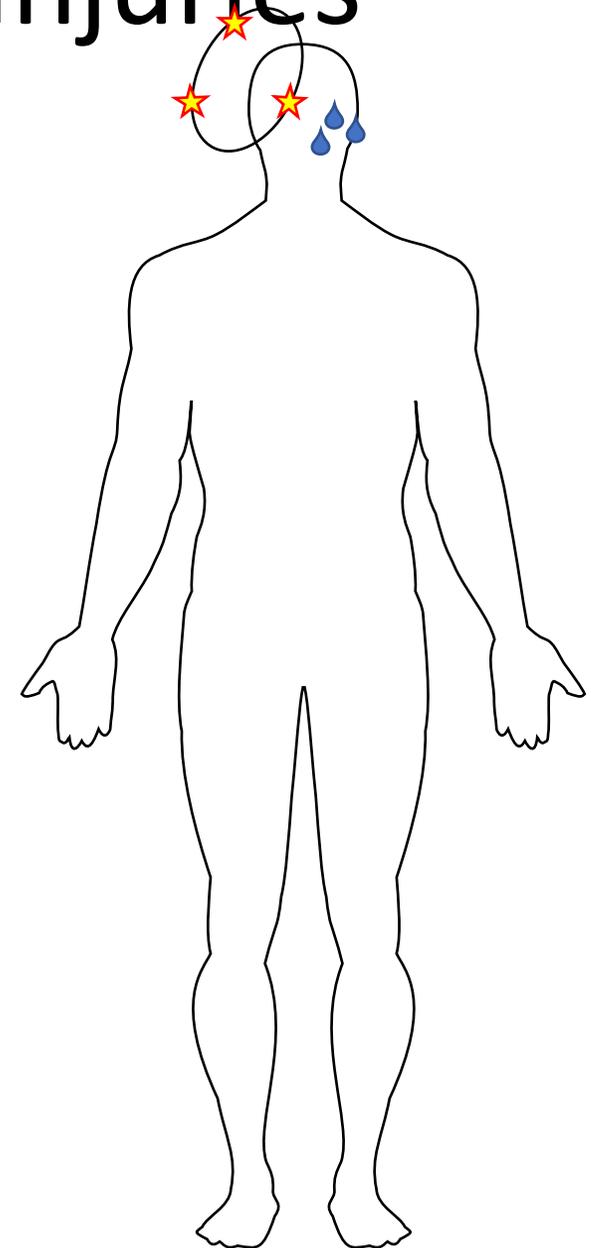
- **Moderate/Severe** dehydration requires Emergency Care
 - Needs to be treated in hospital
 - Needs IV fluids



Cold & Heat Conditions & Injuries

Heat Exhaustion

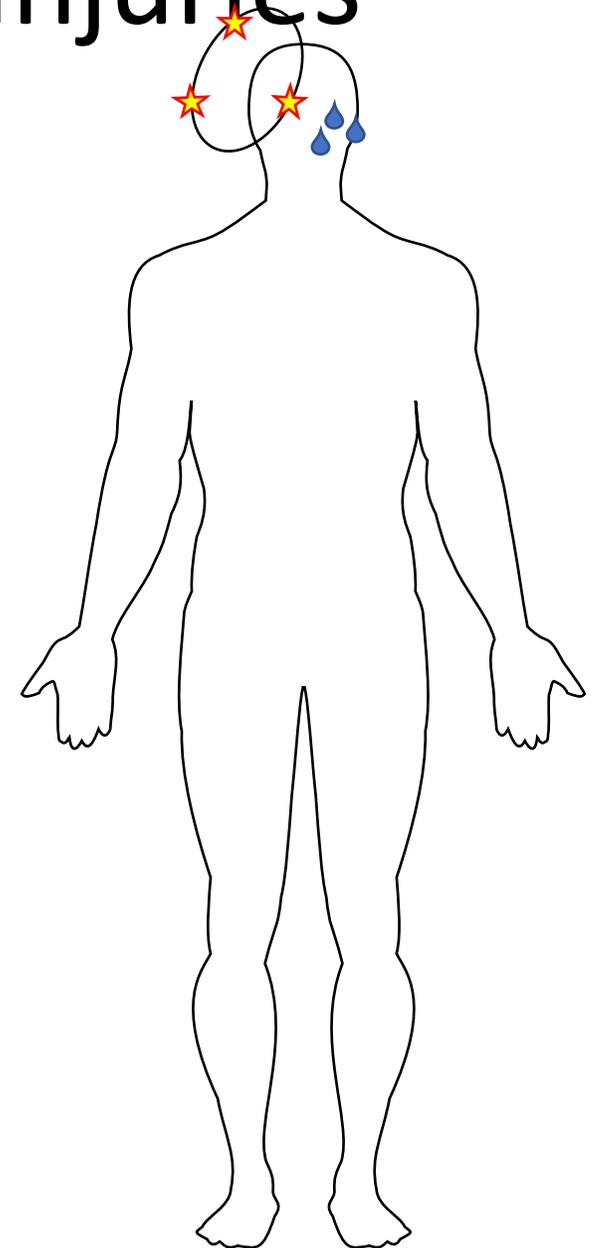
- Brought on by warm weather
- Often associated with dehydration or inadequate acclimation to heat
- Common during outdoor activities in hot environments



Cold & Heat Conditions & Injuries

Heat Exhaustion – Symptoms

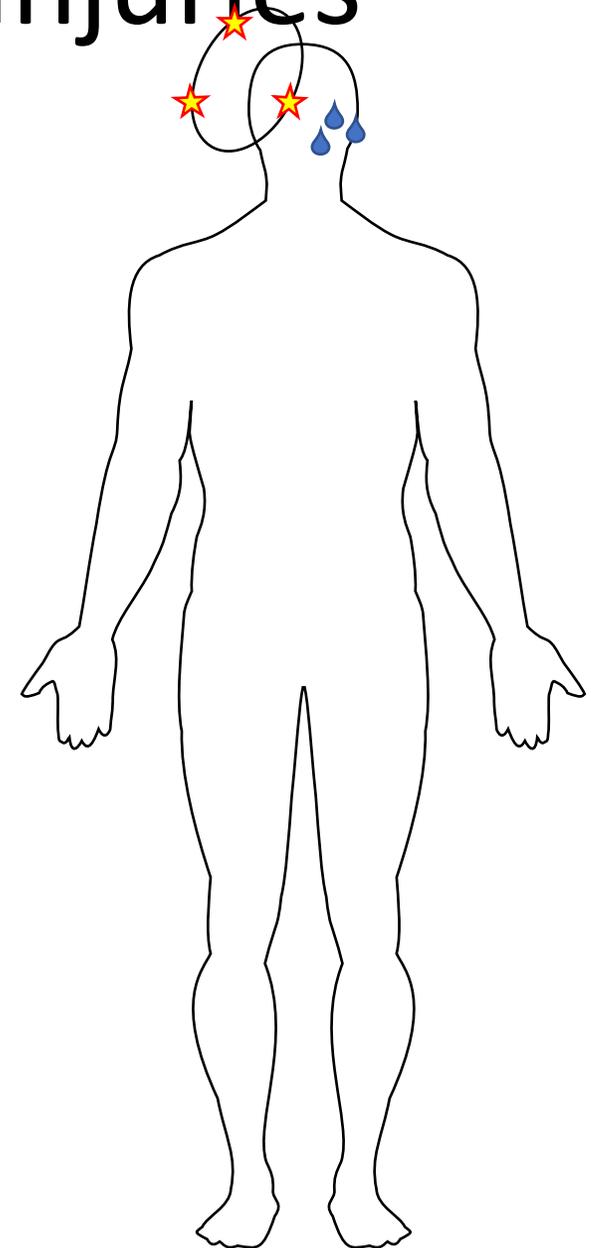
- Symptoms of Heat Exhaustion include:
 - Severe lack of energy
 - General weakness
 - Headache
 - Nausea
 - Faintness
 - Sweating
 - Cool, pale, moist skin
 - Rapid pulse



Cold & Heat Conditions & Injuries

Heat Exhaustion – First-Aid

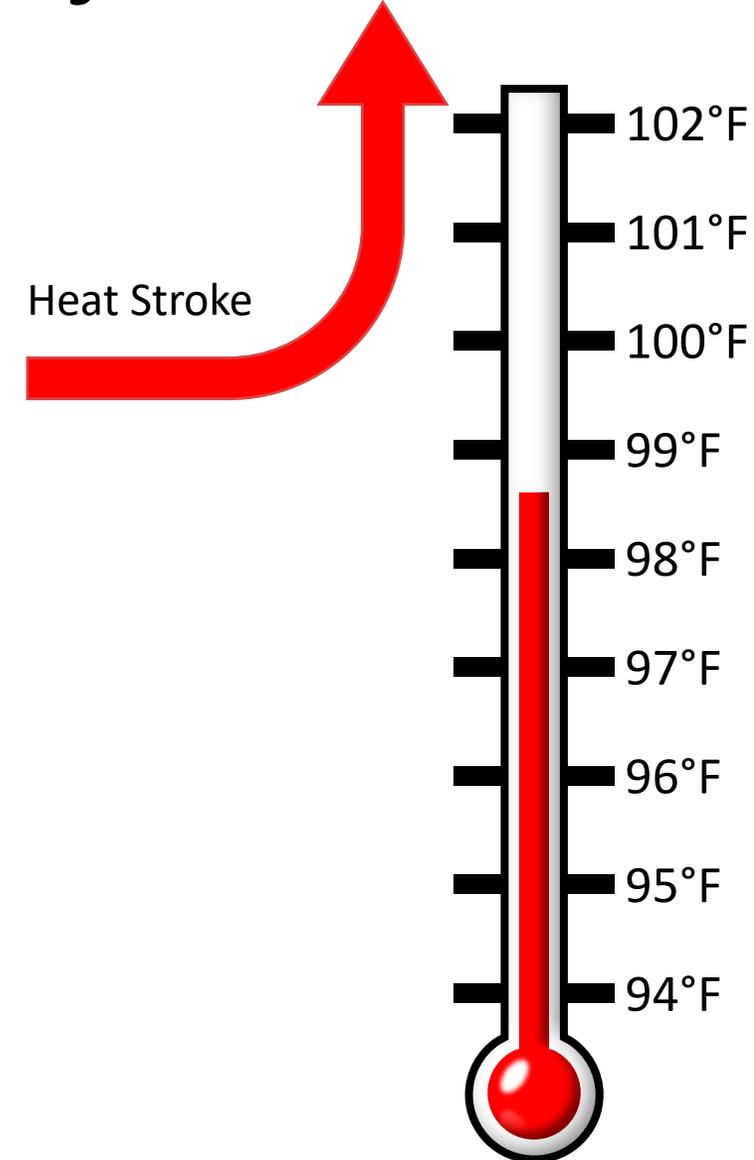
- First-Aid includes:
 - Get victim in Shade
 - Encourage to drink fluids
 - Apply cool, wet towels or cloths to the skin
 - Wet victim's clothing with cool water and fan
 - Raising legs can help them feel better
- Victim should feel better in two or three hours
 - Take it easy the rest of the day



Cold & Heat Conditions & Injuries

Heat Stroke

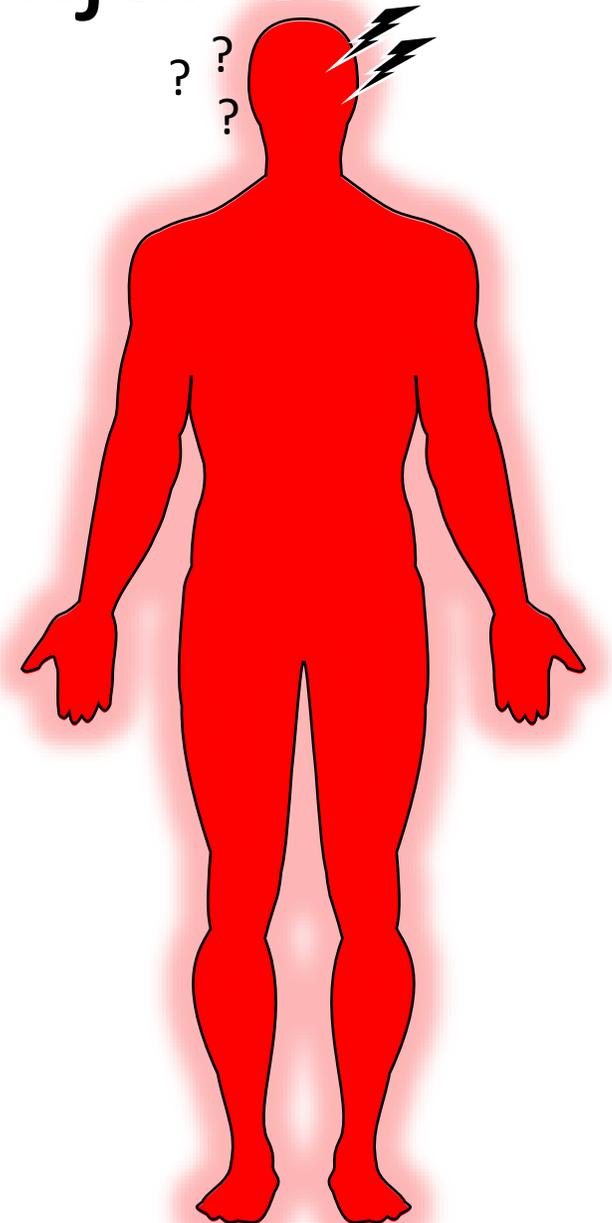
- Body overheats to the point of being life-threatening (105°F)
- Body loses ability to cool itself
- May occur with over-exertion in hot weather
- Also occurs with elderly in hot climates



Cold & Heat Conditions & Injuries

Heat Stroke - Symptoms

- Symptoms include:
 - Hot sweaty (but sometimes dry) skin
 - Confusion
 - **Disorientation**
 - Rapid pulse
 - Shallow breathing
 - Vomiting
 - Seizures



Irritability, Ataxia (balance problems), or Confusion are hallmark signs of Heat Stroke

Heat Exhaustion

Faint or dizzy

Excessive Sweating



Cool, pale, clammy skin

Nausea or vomiting

Rapid, weak pulse

Muscle cramps

Heat Stroke

Throbbing Headache

No Sweating

Red, hot dry skin

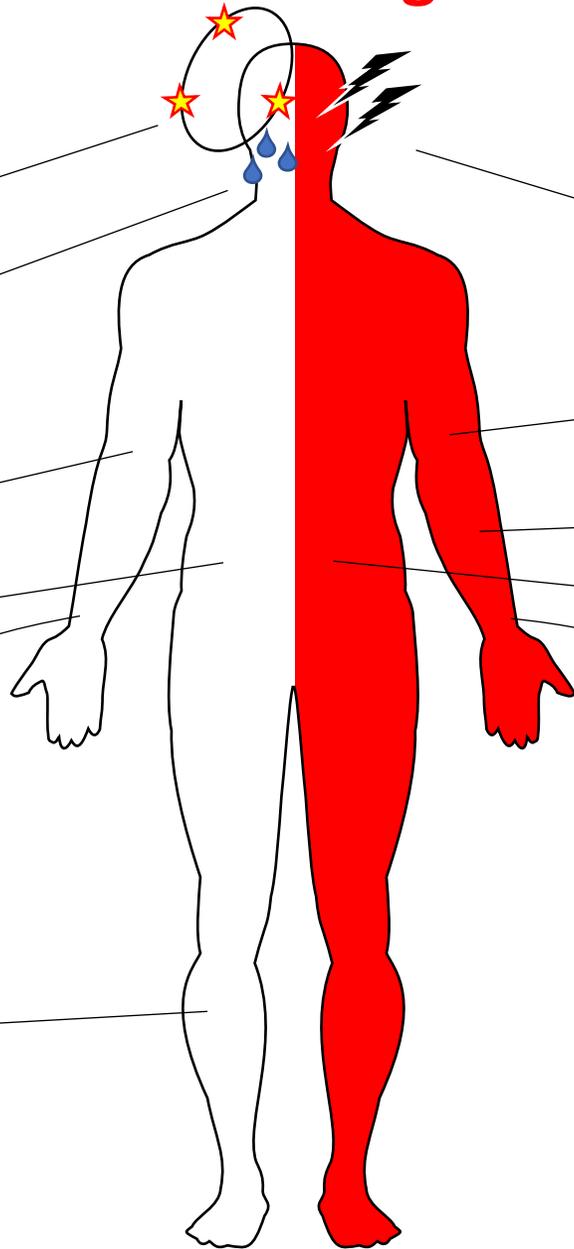


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Nausea or vomiting

Rapid, strong pulse

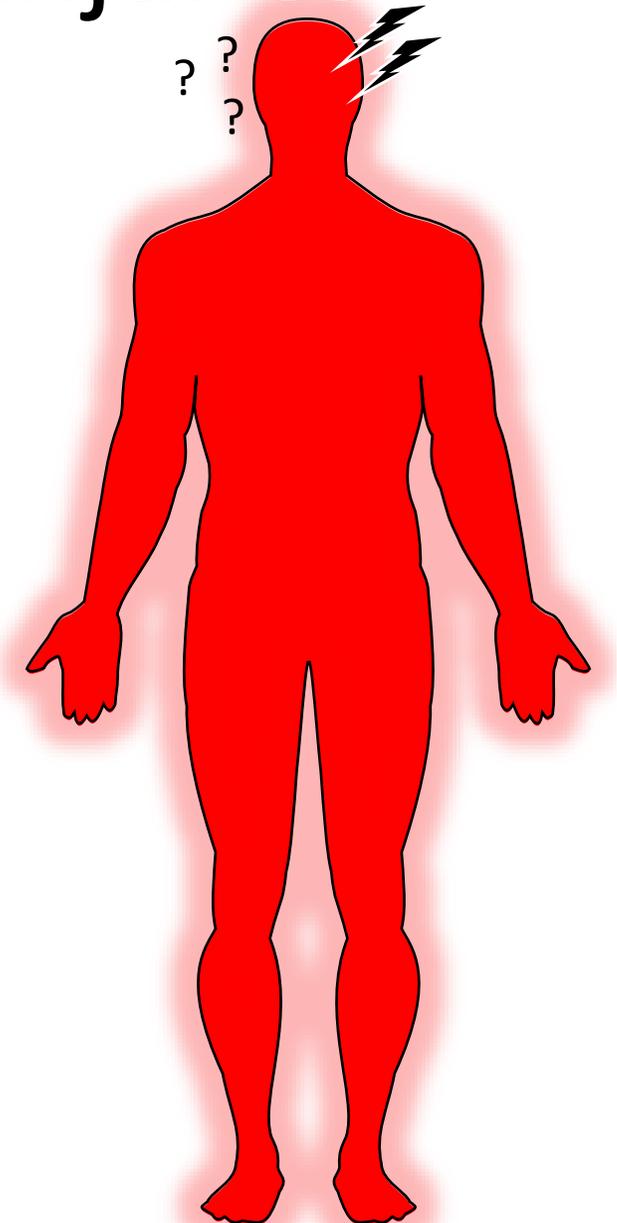
May lose consciousness or have seizures



Cold & Heat Conditions & Injuries

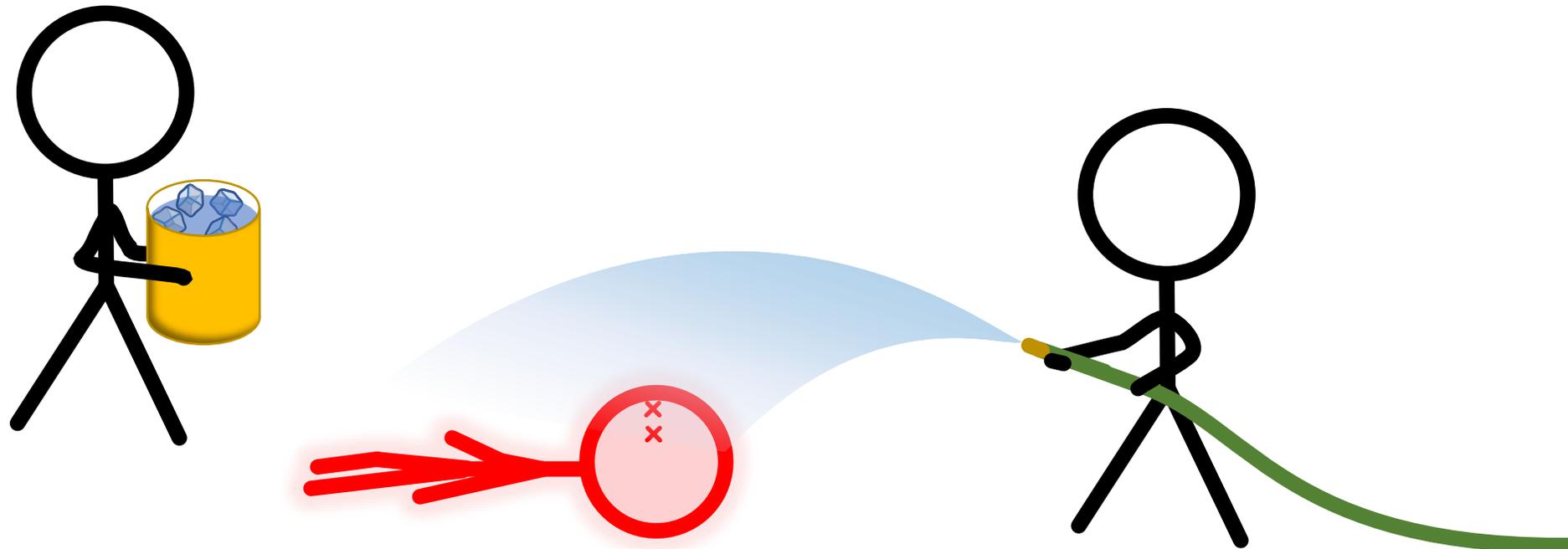
Heat Stroke – First-Aid

- This is **LIFE-THREATENING**
- Cool immediately!
- Call 911! Do it NOW!
- Cooling includes:
 - Immersion or spray of cold water
 - Ice packs wrapped in cloth in armpits and skin
 - Fanning
 - AC



Heat Injuries

Heat Stroke – First-Aid

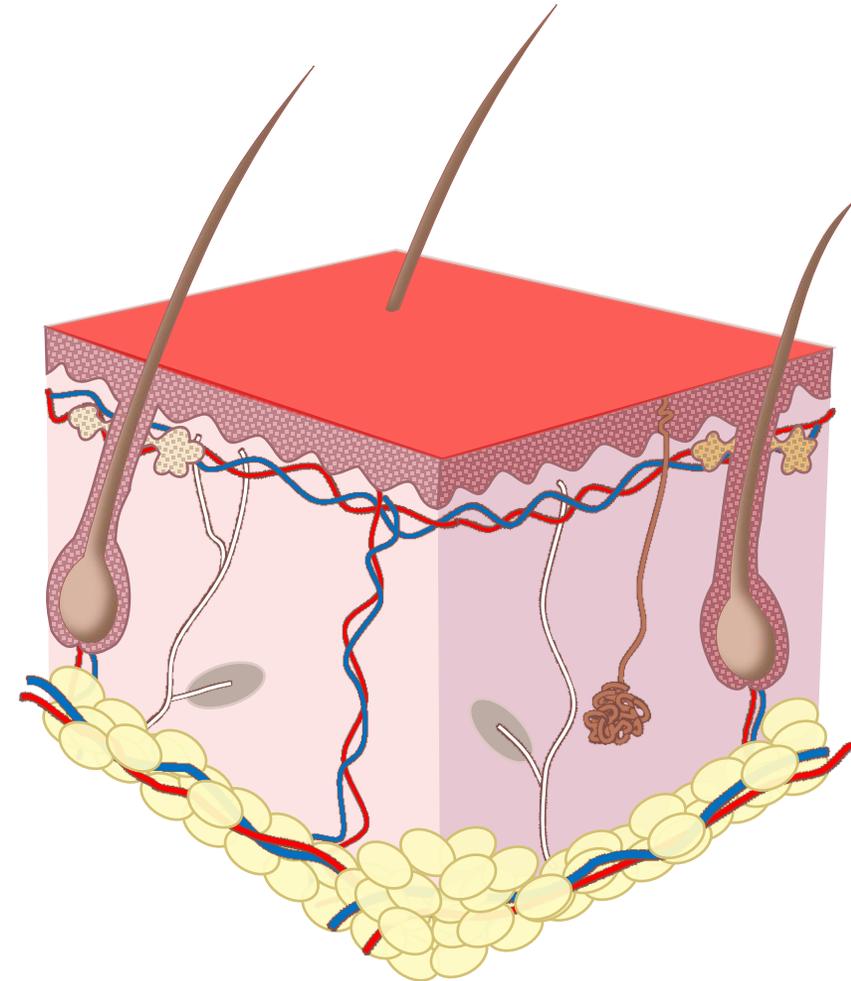
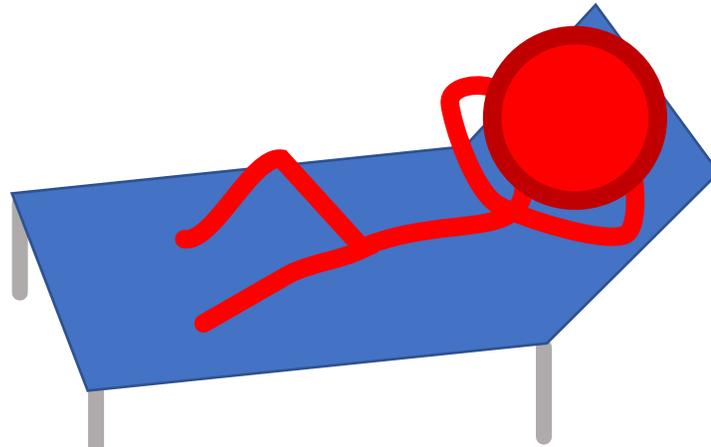




Sun Burns

Burns – Severity – 1st Degree Sunburn

- Only affects the outer most layer of skin
- **Symptoms**
 - Painful
 - Reddened skin



Sun Burns

Burns – Severity – 1st Degree Sunburn

- **First-Aid**
 - Generally does not require medical treatment unless
 - Covers more than 20% body surface

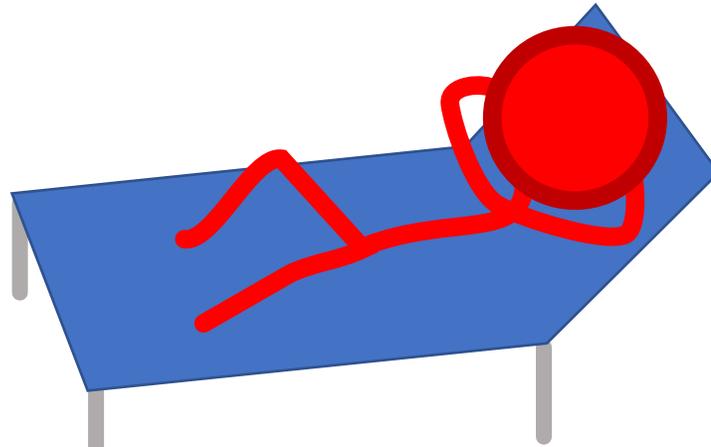
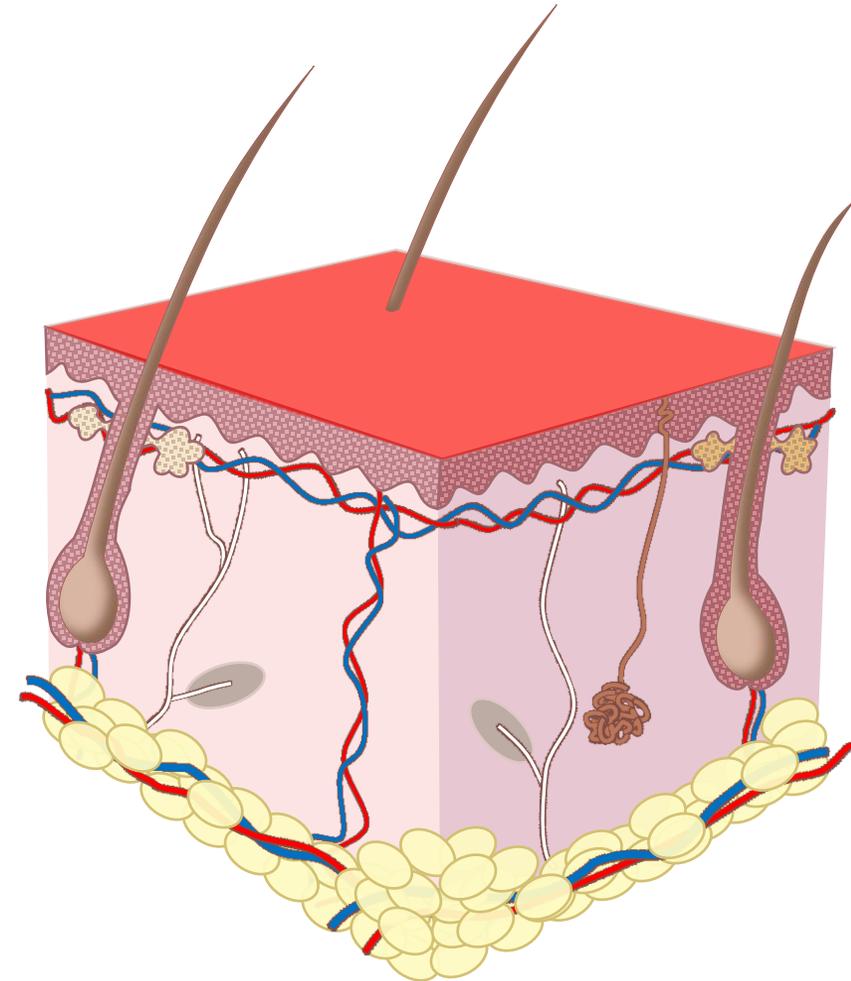


Image Source: U.S. Army Medical Department Center and School Fort Sam Houston, TX 78234-6100 Wound Care Subcourse MD0576



2019 First-Aid Merit Badge Pamphlet Page 56

Sun Burns

Burns – Severity – 1st Degree Sunburn

- **First-Aid**
 - Best Treatment
 - Avoidance and prevention
 - Cover exposed skin

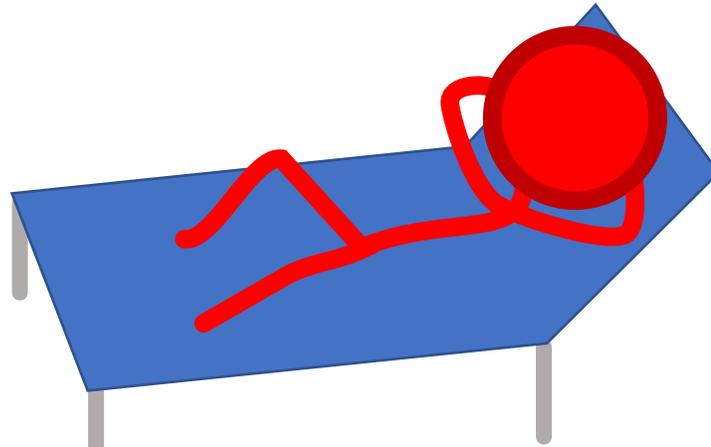
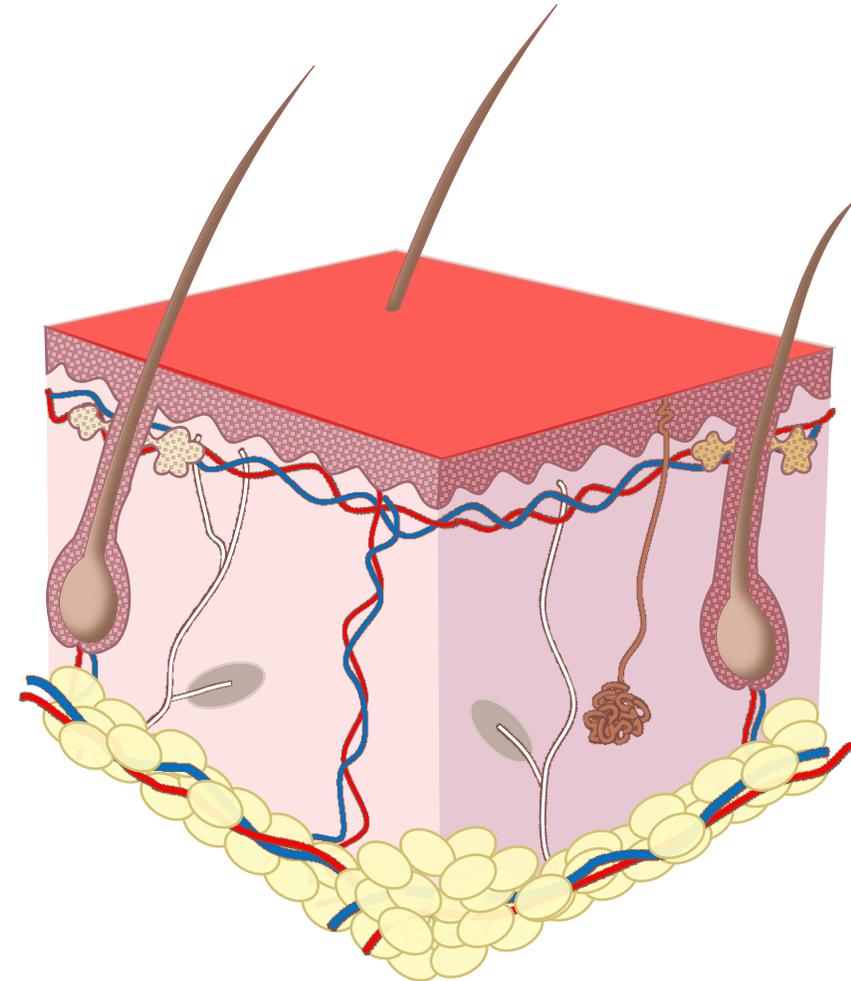


Image Source: U.S. Army Medical Department Center and School Fort Sam Houston, TX 78234-6100 Wound Care Subcourse MD0576

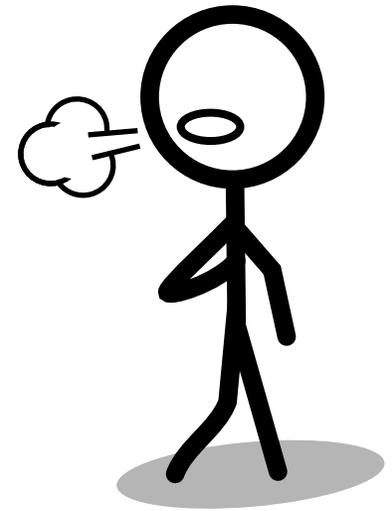


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Hyperventilation

Hyperventilation

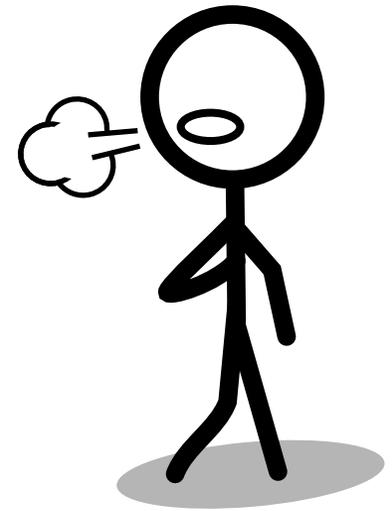
- Hyperventilating is when your body breathes at a very fast rate



Hyperventilation

Hyperventilation

- **Involuntary Hyperventilation** can be caused by:
 - Severe pain
 - Infection
 - Severe bleeding
 - Heart attack
 - Cold water immersion
 - Diabetic coma
 - Poisoning
 - Conditions such as anxiety attacks





Hyperventilation

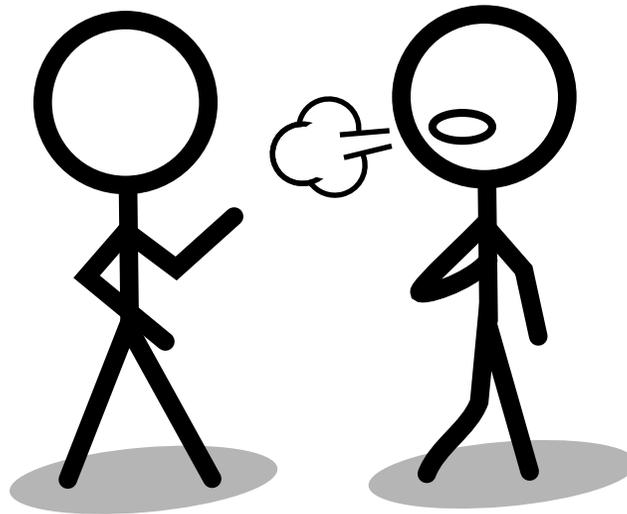
Hyperventilation

- **Voluntary Hyperventilation** is when you intentionally breathe fast
- Blunts breathing reflex
 - Causing you to pass out
- Very dangerous
 - If done while swimming, it can result in drowning

Hyperventilation

Hyperventilation

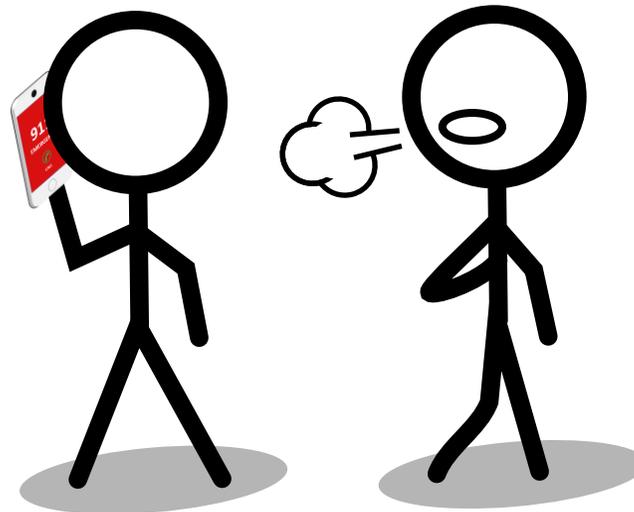
- **First-Aid**
 - If hyperventilation is caused by anxiety, calming may help
 - If possible, remove cause of anxiety
 - Get victim to relax and slow their own breathing



Hyperventilation

Hyperventilation

- **First-Aid**
 - If calming efforts are ineffective, IMMEDIATE medical care is needed
 - Contact EMS and/or evac victim



Altitude Illness

Altitude Illness – Intro

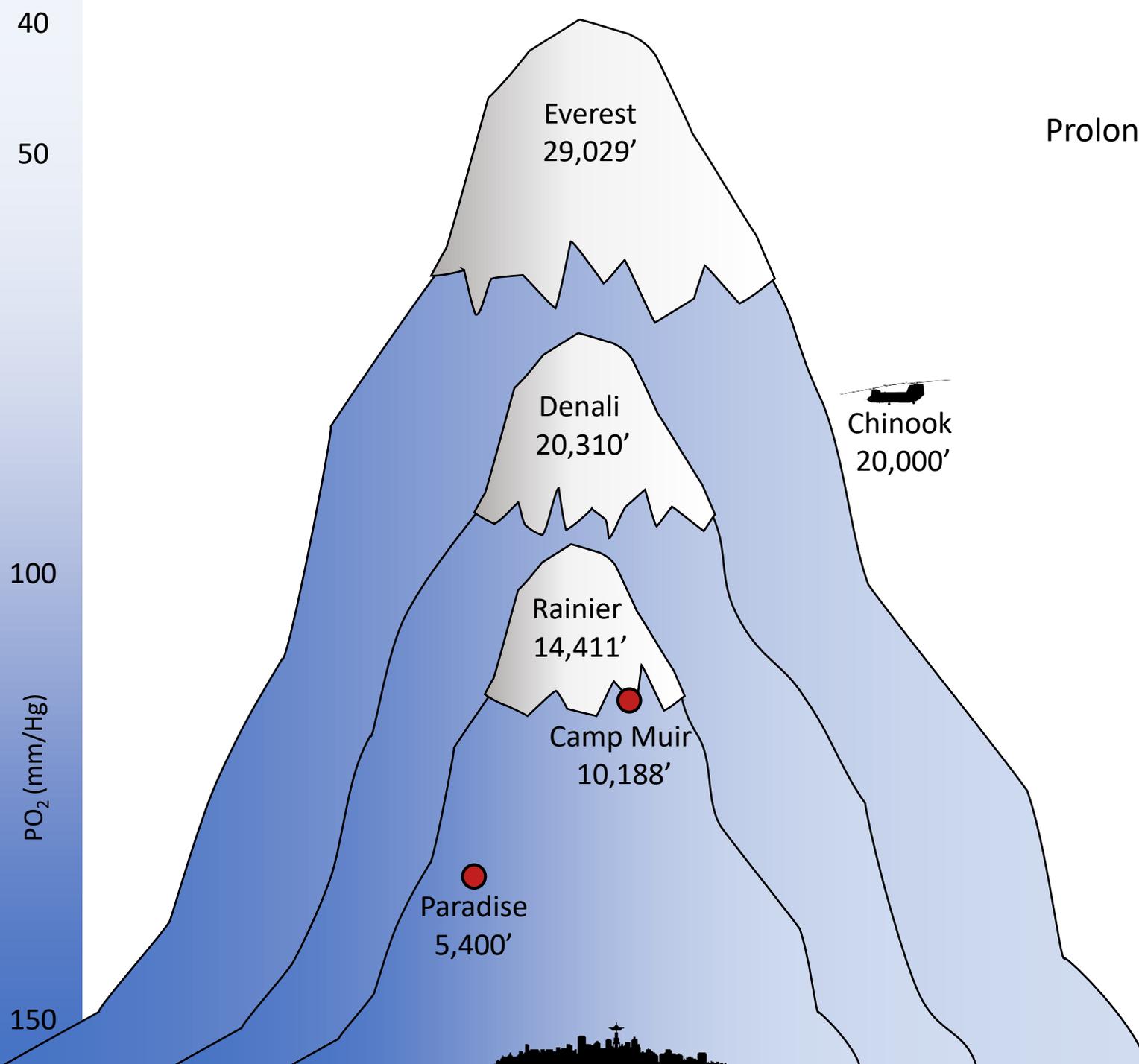
- At high altitude, climbers encounter hypobaric hypoxia
- The higher you ascend, the thinner the air becomes
- Your body can compensate for higher elevations, but this takes time
- As you ascend and as you work your body, you will eventually reach a point where there just isn't enough oxygen in the air to fuel your brain

- Physical fitness is **NOT** an indicator of how well you will acclimatize
- It's all about the genetic lottery

Altitude Illness

Altitude Illness

- High Altitude Illness comes in 3 basic flavors:
 - Acute Mountain Sickness (AMS)
 - High Altitude Cerebral Edema (HACE)
 - High Altitude Pulmonary Edema (HAPE)



Death Zone > 26,000'
 Acclimation considered ∅ possible
 Prolonged exposure ∅ O₂ = Coma then Death



Blood O₂ Saturation

Extreme Altitude > 18,000'
 1/3 hallucinate > 24,000'
 MRI changes > 23,000'
 Memory retrieval impaired
 Abrupt ascent = High-Altitude Illness



58-75%

Very High Altitude > 11,500'
 Learning and spatial memory impaired
 Severe High-Altitude Illness common
 Abrupt ascent dangerous



75-85%

High Altitude > 4,900'
 Psychomotor impairment
 Complex reaction time slows
 AMS and HACE possible
 Aircraft pressurized to ~5,000-8,000'



90+%

Image Idea From: Wilson MH, Newman S, Imray CH. [The cerebral effects of ascent to high altitudes. Lancet Neurol. 2009 Feb;8\(2\):175-91.](#)

Hackett, PH, Roach, RC. High-Altitude Medicine. In: Wilderness Medicine, 5th ed, Auerbach, PS (Ed), Mosby, Philadelphia 2007 [UpToDate](#)

Altitude Illness

Altitude Illness – Symptoms

- Depending on what you have, symptoms vary
 - Headache
 - Lightheadedness
 - Nausea
 - Feeling Ill
 - Fatigue
 - Breathing issues

Altitude Illness

Altitude Illness – Treatment

You **Must HALT Ascent!**

Do NOT sleep at a higher altitude until symptoms resolve

Ascent, especially sleeping at higher altitude, places you are risk of HACE

Altitude Illness

Altitude Illness – Treatment

Descend

Descend

Descend

Altitude Illness

Altitude Illness – Treatment

- Descending to a lower altitude early will generally reverse symptoms
- Delay in descent can result in severe medical problems or death

Sprains and Strains



Sprains and Strains

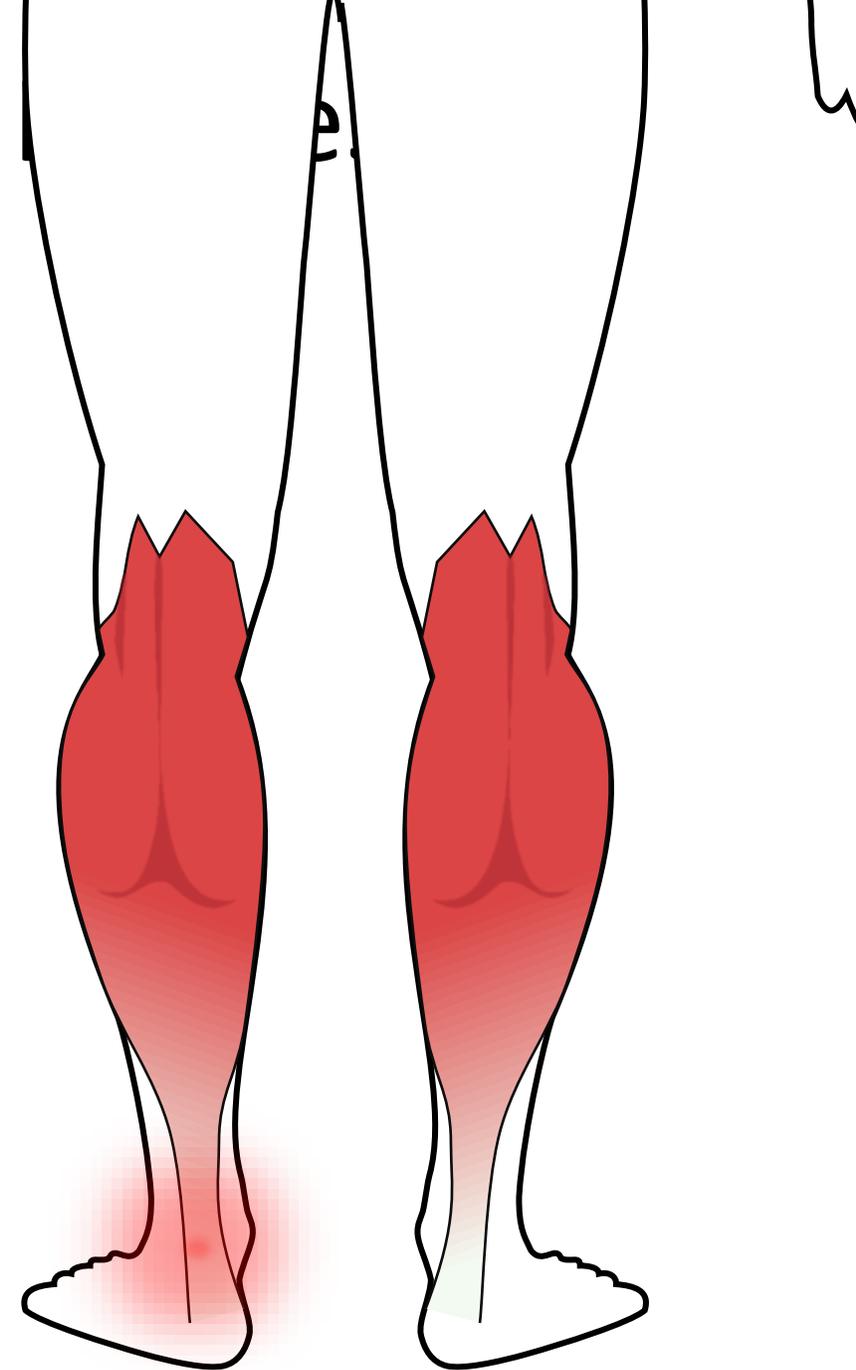
- **Sprains** are overstretched ligaments
 - bands that connect joints
 - Ankles
 - Wrists



Muscle, Joint and Bone

Sprains and Strains

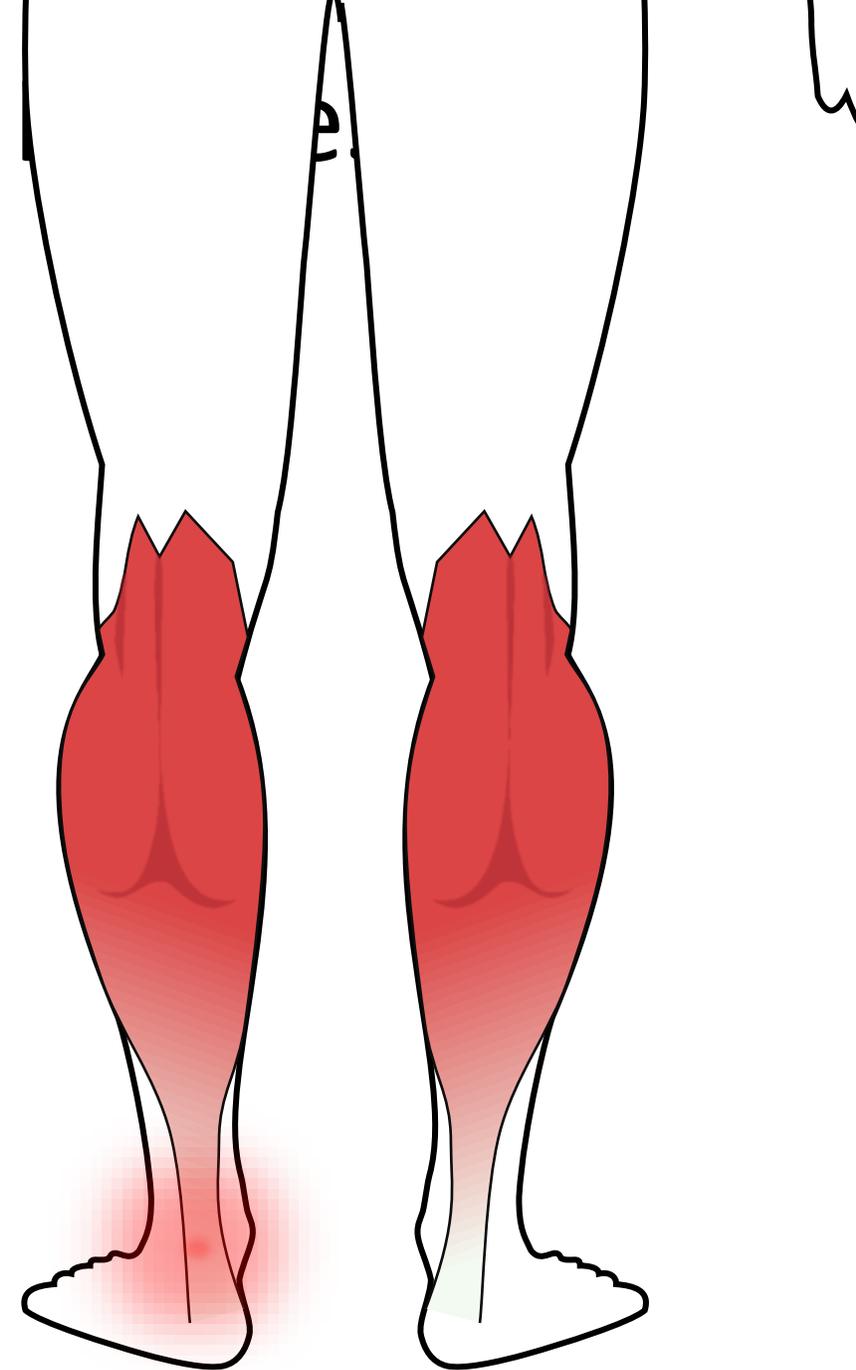
- **Strains** are overstretched tendons
 - bands that connect muscles
 - Lower back is a common site



Muscle, Joint and Bone

Sprains and Strains

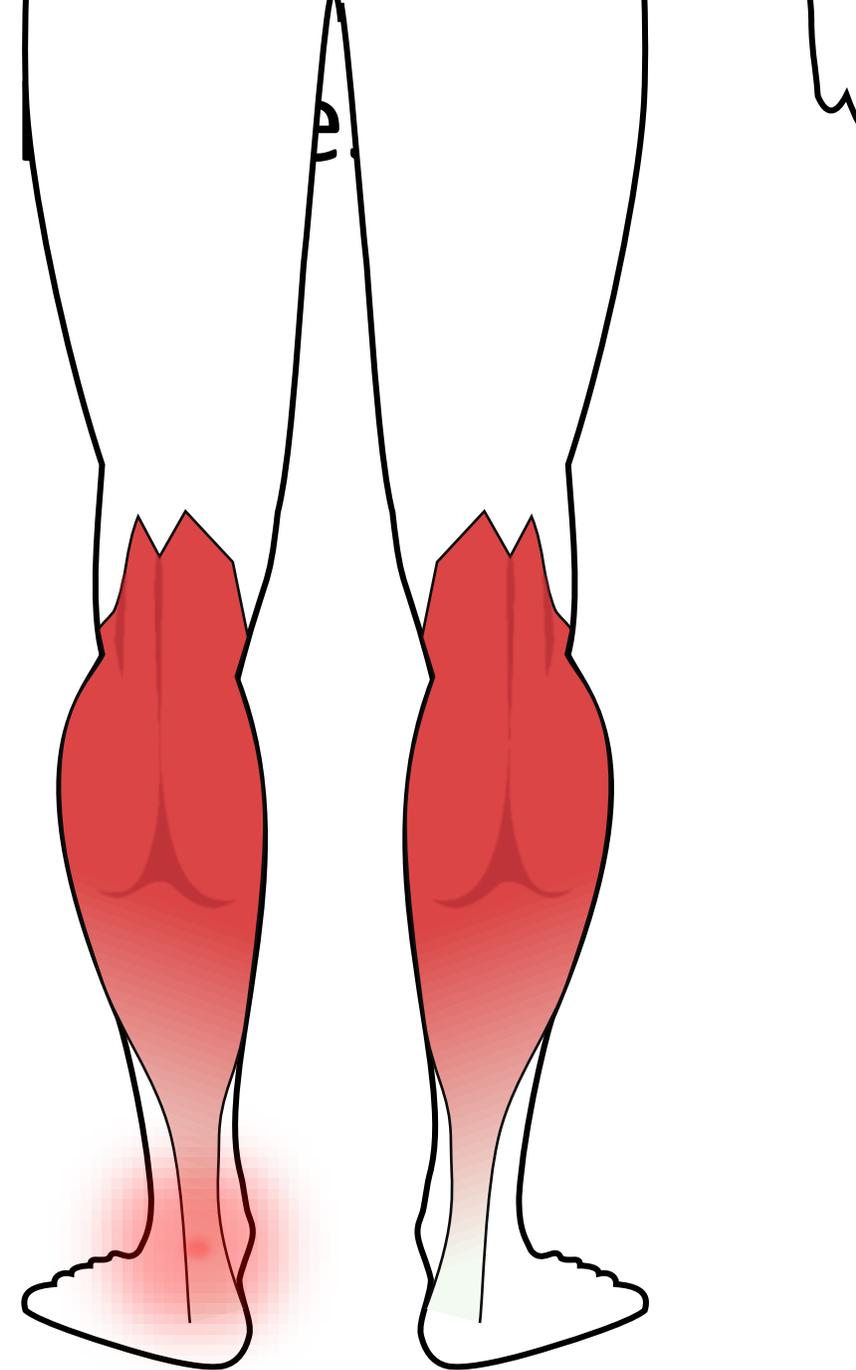
- Sprains and Strains are different
- but treated the same
- Minor injuries may only result in temporary mild discomfort
- More serious injuries may be disabling and may even need surgery



Muscle, Joint and Bone

Sprains and Strains

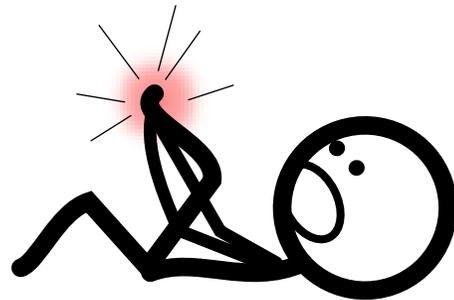
- **Prevention**
 - Avoid over twisting joints
 - Avoid over lifting



Muscle, Joint and Bone Injuries

Sprains and Strains

- **First-Aid**
 - Assume that any joint injury may also include a fracture
 - Take weight off the injured joint



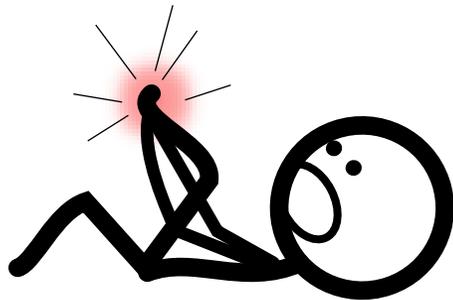
Muscle, Joint and Bone Injuries

Sprains and Strains

- **First-Aid**

- **RICE:**

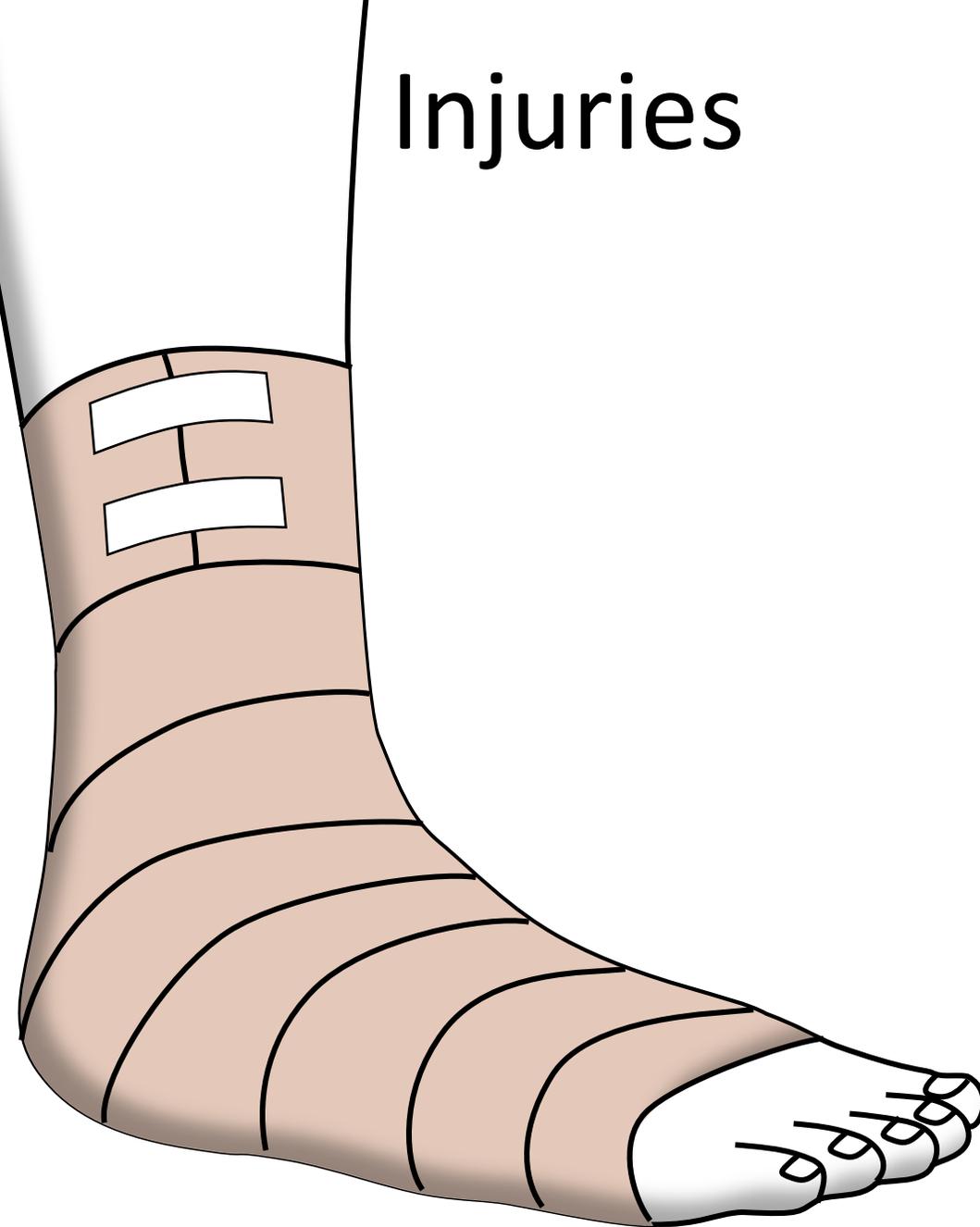
R	Rest	Stop or minimize use of joint
I	Ice	Use ice 20 minutes and repeat throughout day
C	Compression	Elastic bandage to reduce swelling
E	Elevation	Elevate injured area above level of heart if possible



Muscle, Joint and Injuries

Wrapping the Ankle

Demo or [Video](#)





Fast-food for lunch?



Bites and Stings

Bites of Ticks

- Tick bites are irritating and can transmit diseases



Bites and Stings

Bites of Ticks

- **Prevention**
 - Wear pants and long-sleeved shirts in tick infested areas
 - Button up collar
 - Tuck pants in boots or socks



Bites and Stings

Bites of Ticks

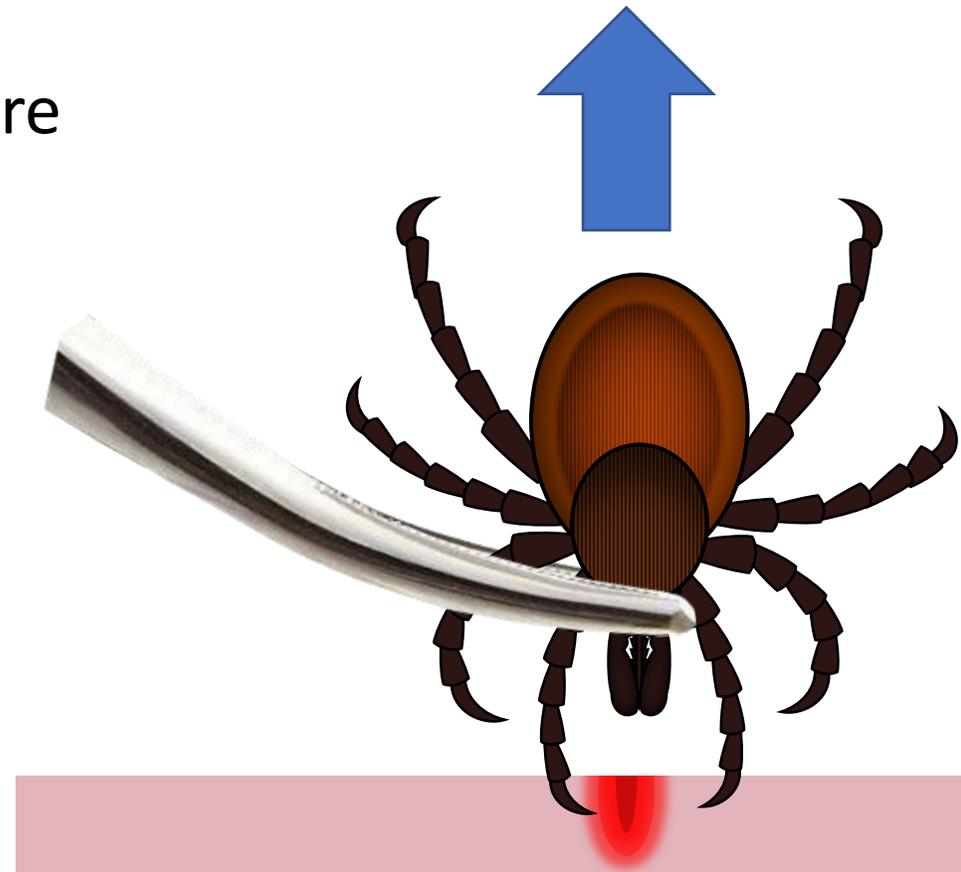
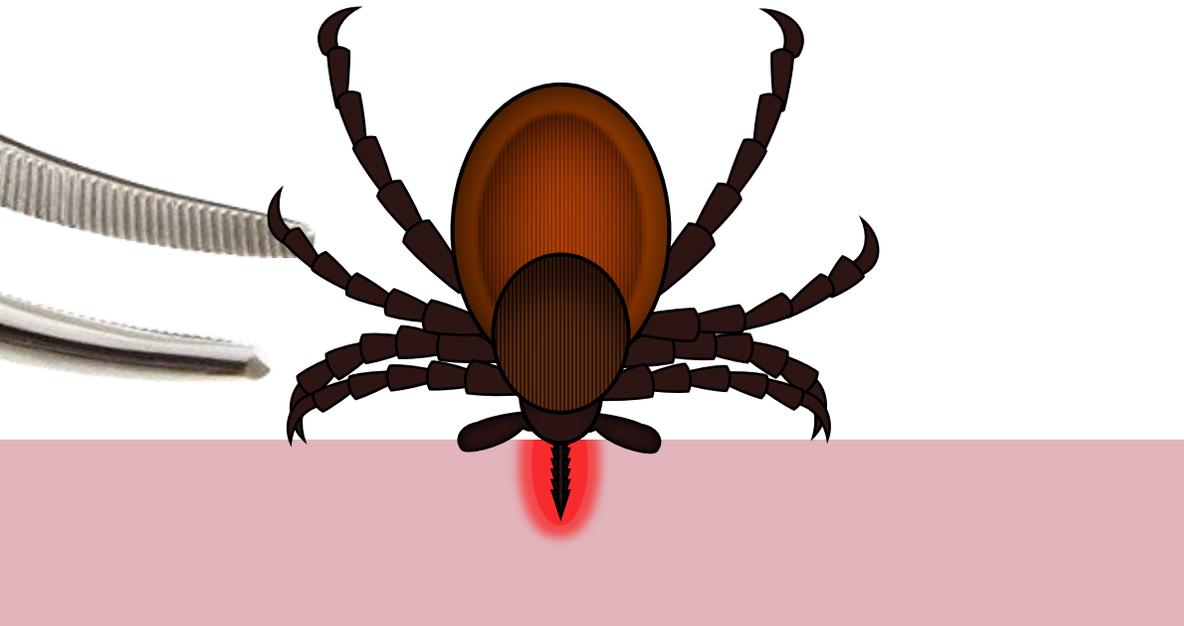
- **First-Aid**
 - Inspect self daily
 - Remove ticks as soon as you find them
 - Wash wound with soap and water
 - Seek medical care if you become sick or develop a rash after bite

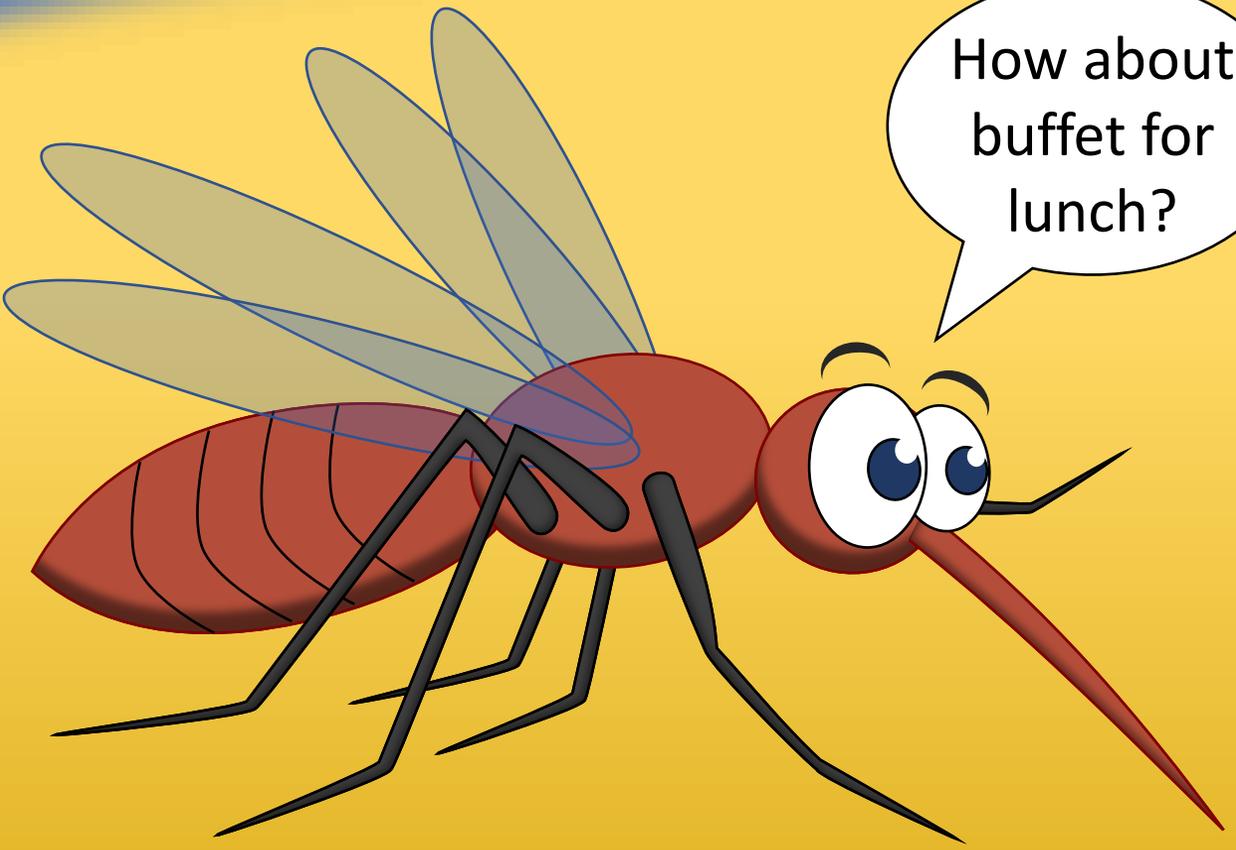


Bites and Stings

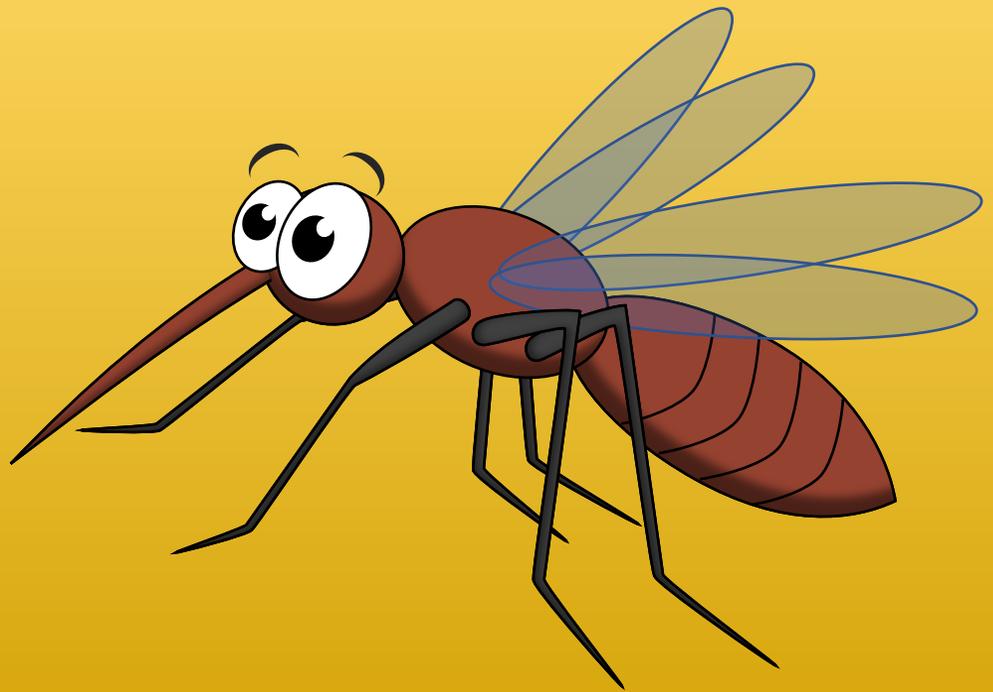
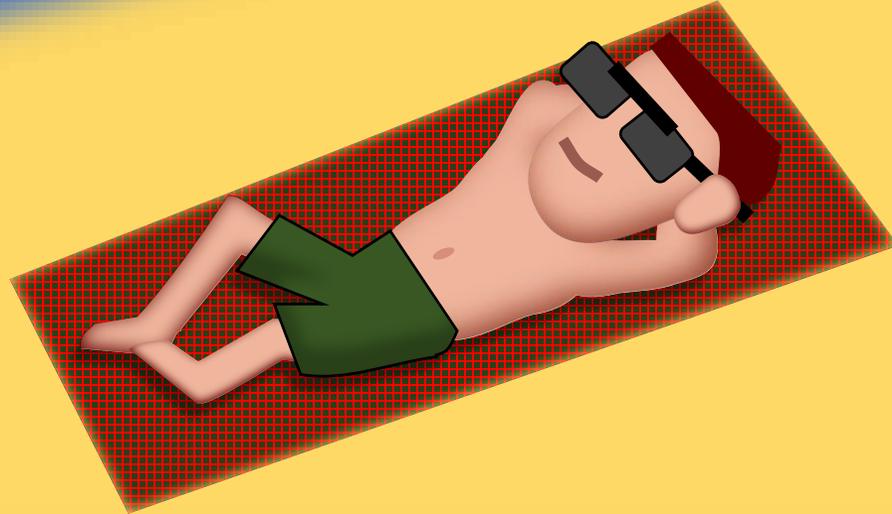
Ticks – Removal – Tweezers

- Use fine-tipped tweezers to grasp the tick close to the skin's surface
- Don't squeeze body
- Pull upward with steady, even pressure
- Don't twist or jerk the tick or the mouth-parts may break off





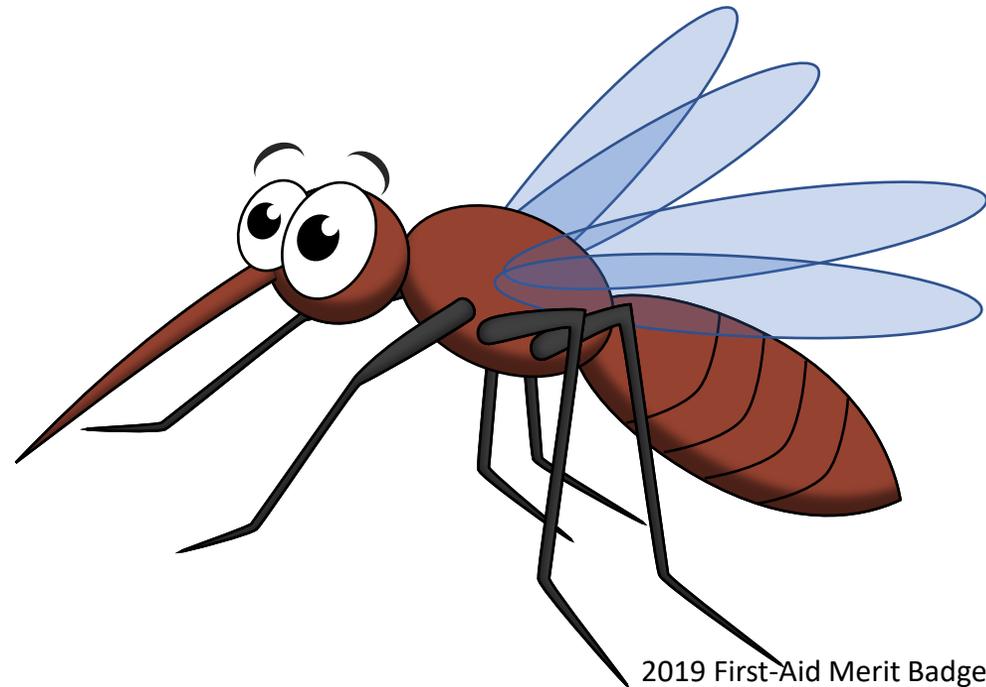
How about buffet for lunch?



Bites and Stings

Bites or Stings of Insects & Things with > 4 Legs

- Bites can itch and irritate
- Some bug bites include venom which cause other problems





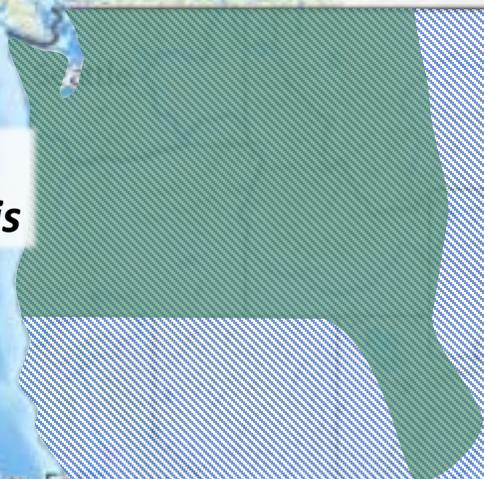
Fire Ants in the US





Dangerous Spiders in the US

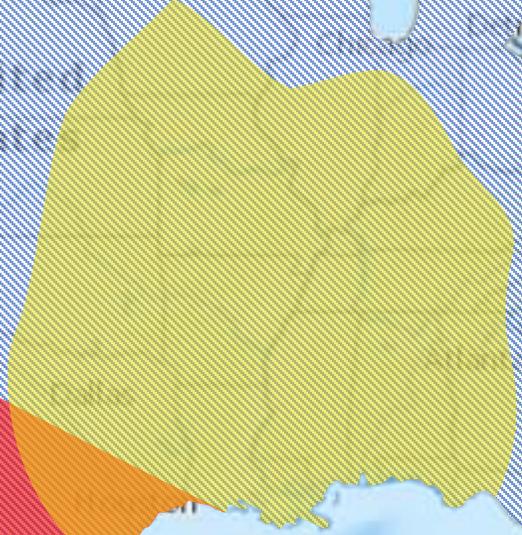
Hobo Spiders
Tegenaria agrestis



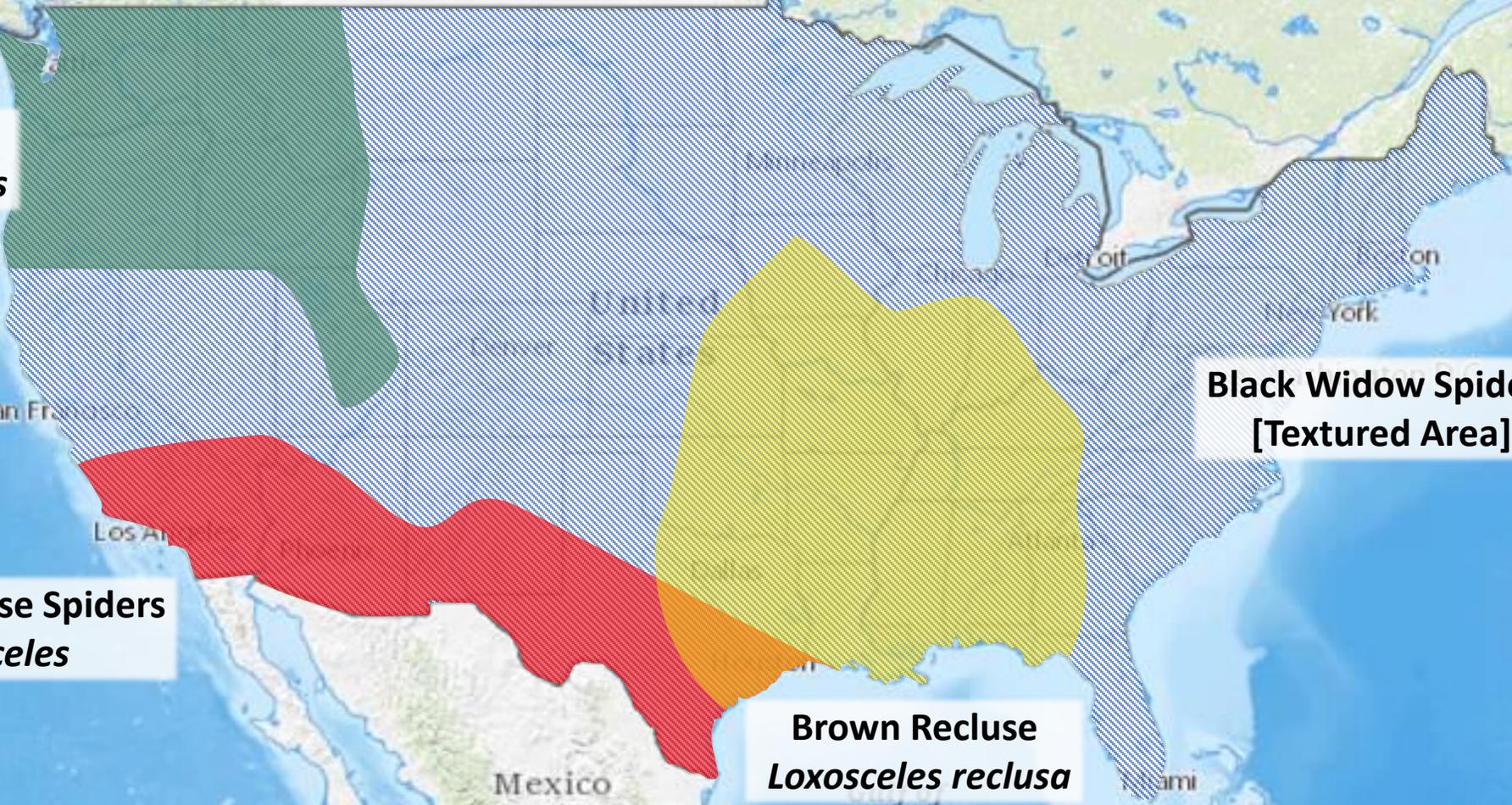
Other Recluse Spiders
Loxosceles



Brown Recluse
Loxosceles reclusa

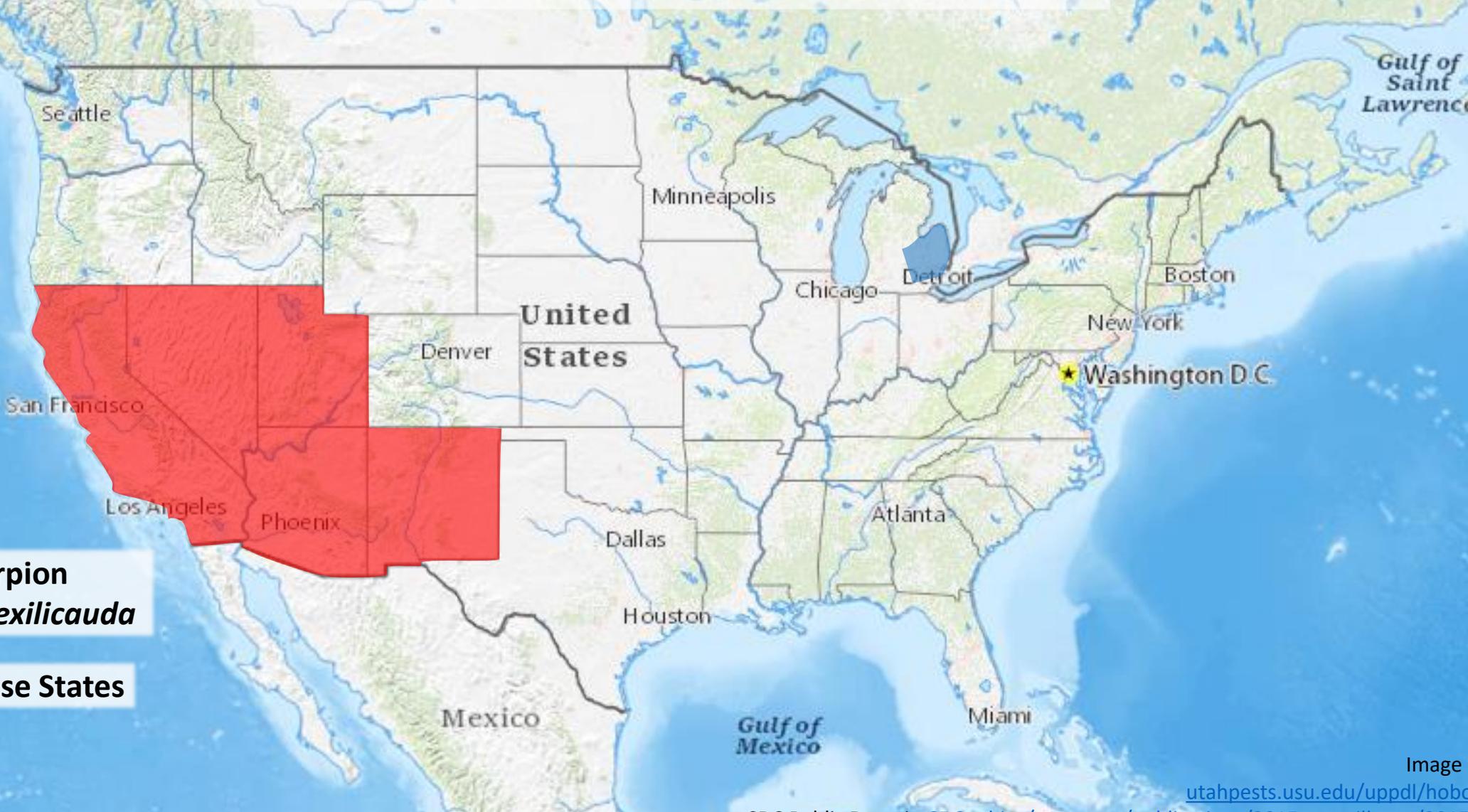


Black Widow Spiders
[Textured Area]





Bark Scorpion in the US

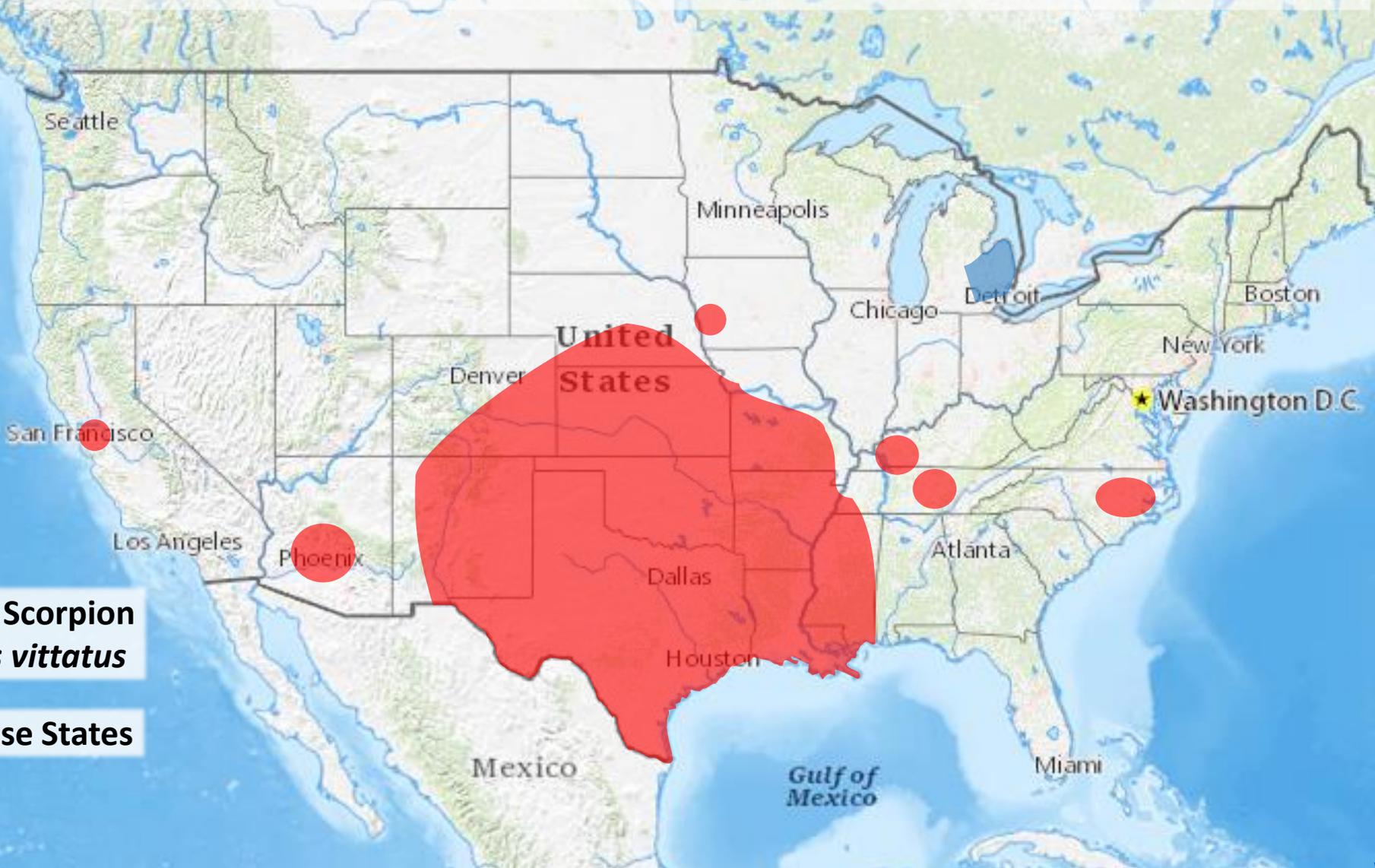


Bark Scorpion
Centruroides exilicauda

Found in these States



Stripped Bark Scorpion in the US



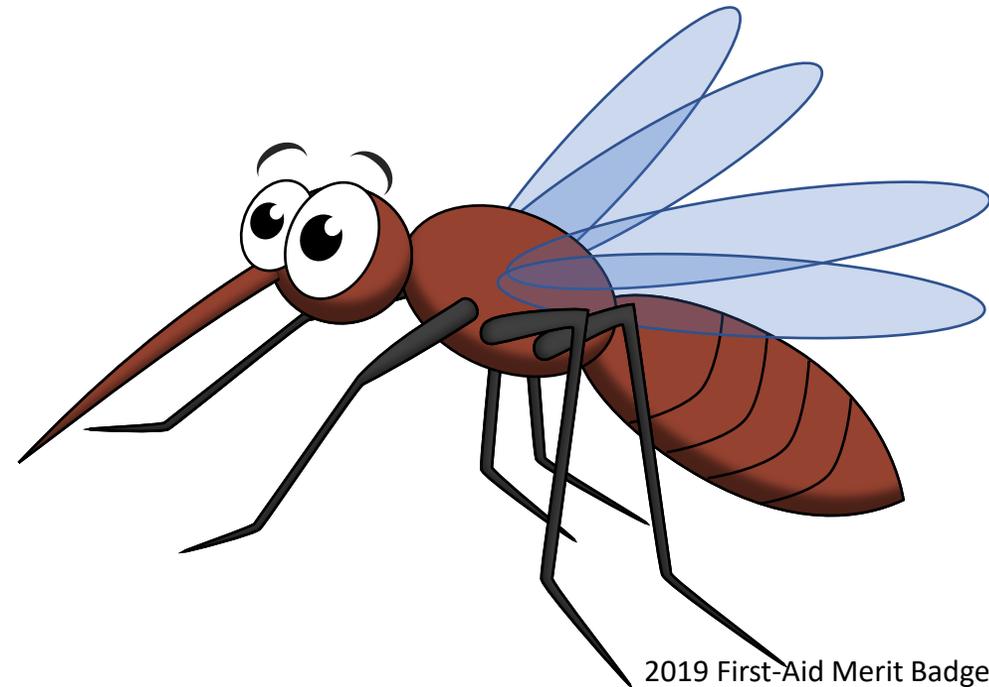
Striped Bark Scorpion
Centruroides vittatus

Found in these States

Bites and Stings

Bites or Stings of Insects & Things with > 4 Legs

- **First-Aid**
 - Wash area with soap and water
 - Watch and treat for Anaphylaxis (discussed later)
 - Avoid scratching bite area
 - Seek medical attention if:
 - Become ill
 - Difficulty breathing
 - Severe pain and swelling



Bites and Stings

Bites or Stings of Insects - Bees

- Bees leave a venom sac behind
- Wasps and hornets can inject venom multiple times
- All REALLY hurt!





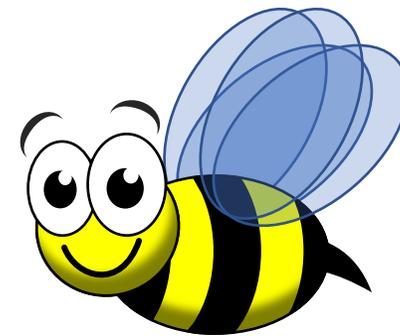
Africanized Honey Bees in the US



Bites and Stings

Bites or Stings of Insects - Bees

- **First-Aid**
 - If stinger is left behind, brush off with flat-surfaced object
 - Wash area with soap and water
 - Watch and treat for Anaphylaxis (discussed later)
 - An ice pack is nice



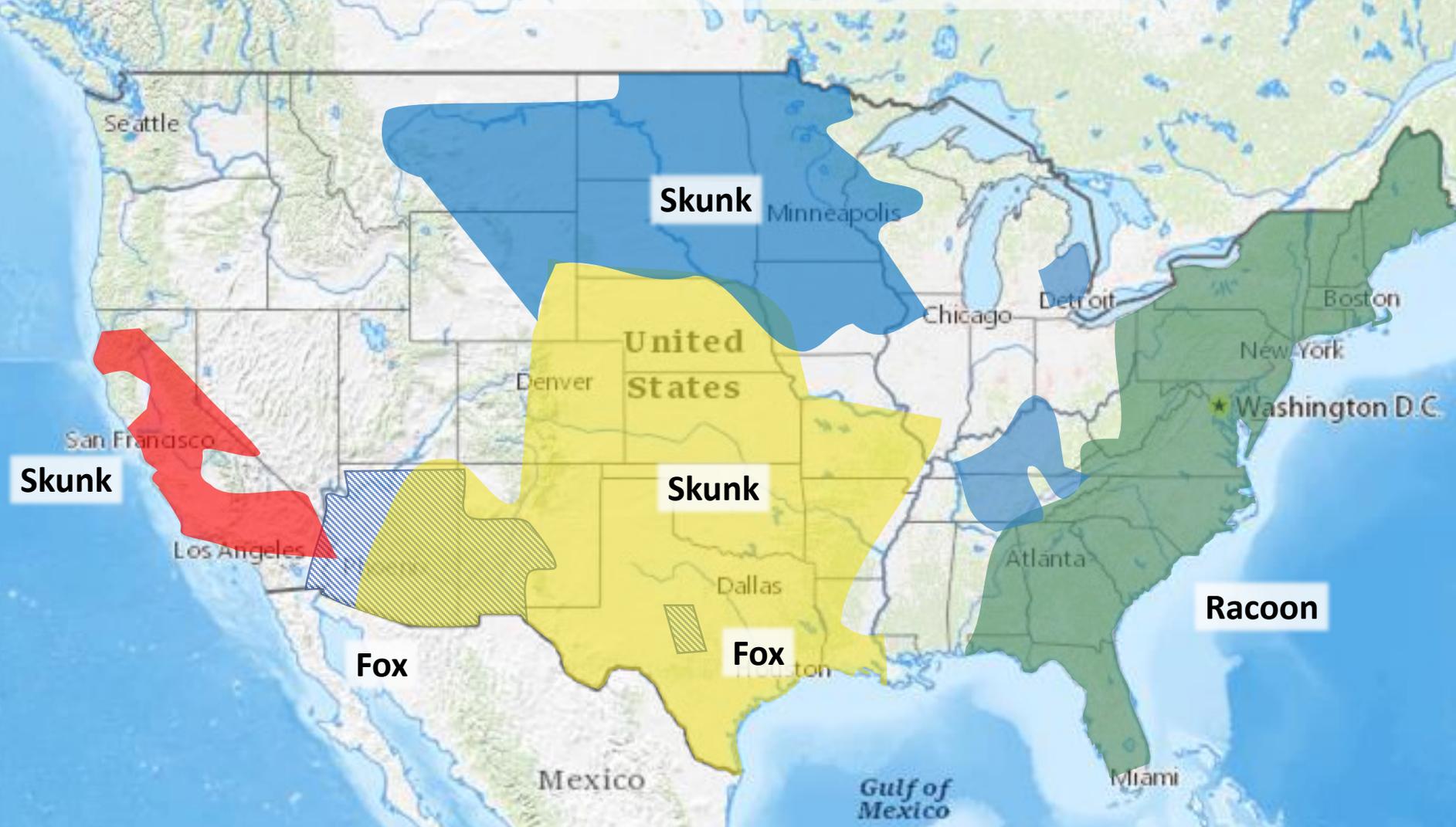
Bites and Stings

Bite of a Suspected Rabid Animal

- Any bite from an animal will place you at risk of infection
- Some mammals carry Rabies – a lethal disease
- Unprovoked attacks from mammals suggests Rabies



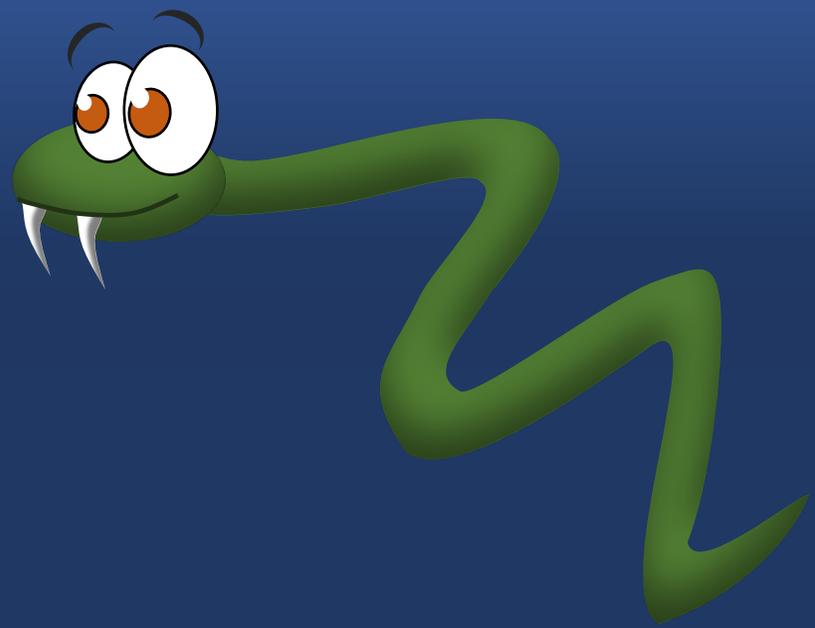
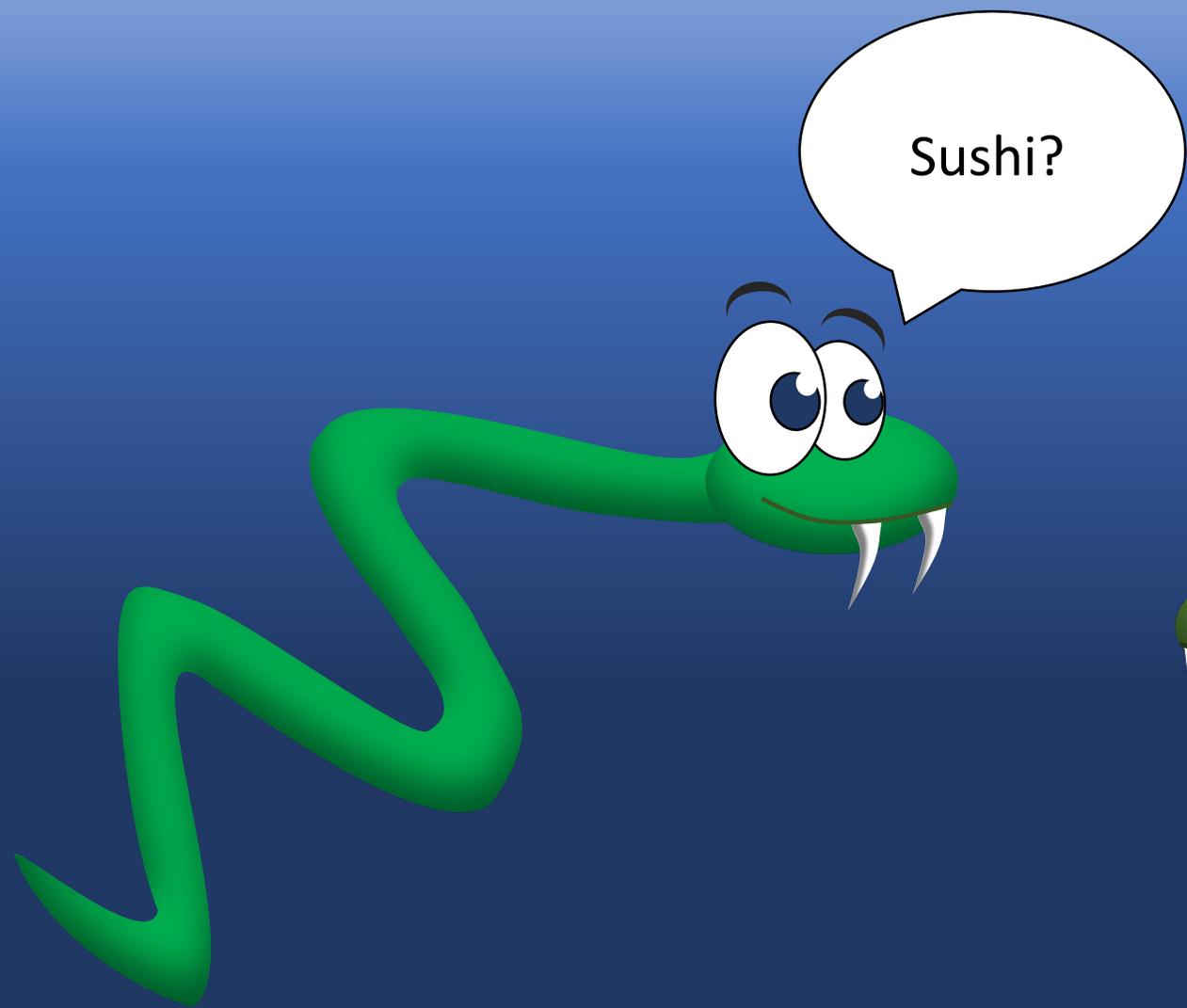
Rabies in the US



Bites and Stings

Bite of a Suspected Rabid Animal

- **First-Aid**
 - Animal needs to be tested for Rabies
 - Report animal bites to police, rangers or animal control
 - Don't try to catch animal yourself, you'll just get bit
 - Scrub area with soap and water for 5 minutes
 - Cover with sterile dressing and bandage
 - Seek medical care to determine if Rabies treatment is needed



Bites and Stings

Venomous Snakebite

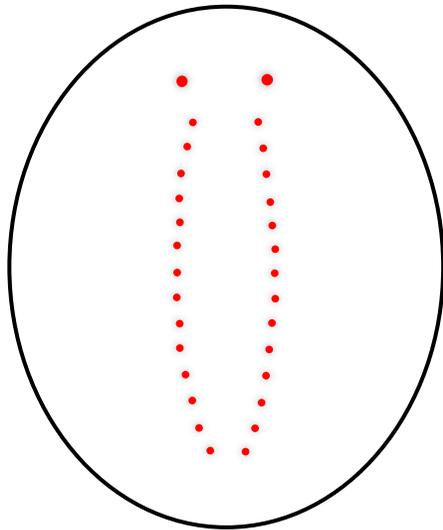
- Venomous snakes in the US come in three basic forms:
 - Pit Vipers
 - Coral Snakes
 - Exotic pet snakes



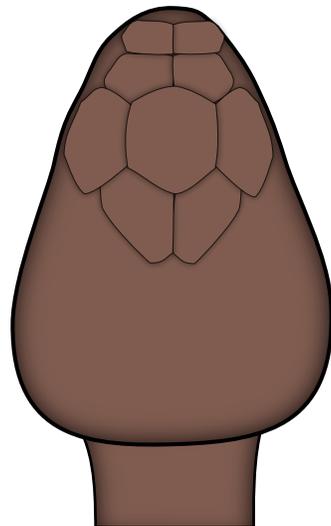
Bites and Stings

Venomous Snakebite – Pit Vipers

- Pit Vipers include:
 - Rattlesnakes
 - Copperheads
 - Cottonmouths



Bite Pattern



Triangular
Head

commons.wikimedia.org Cottonmouth

commons.wikimedia.org Copperhead

commons.wikimedia.org Crotalus cerastes

Image Source: NAVEDTRA 14295 Hospital Corpsman

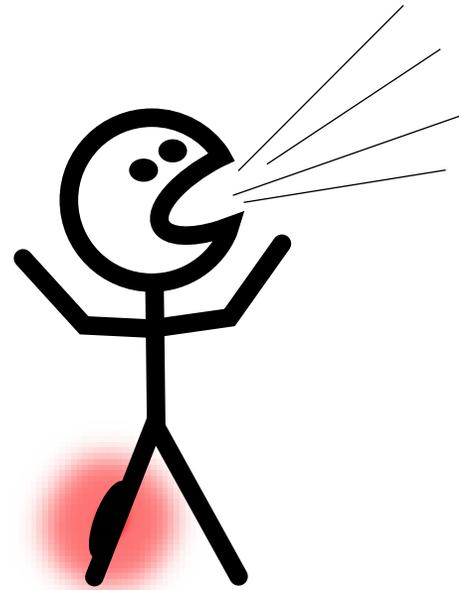
FM 21-11 1988 First Aid

2019 First-Aid Merit Badge Pamphlet Page 77

Bites and Stings

Venomous Snakebite – Pit Vipers

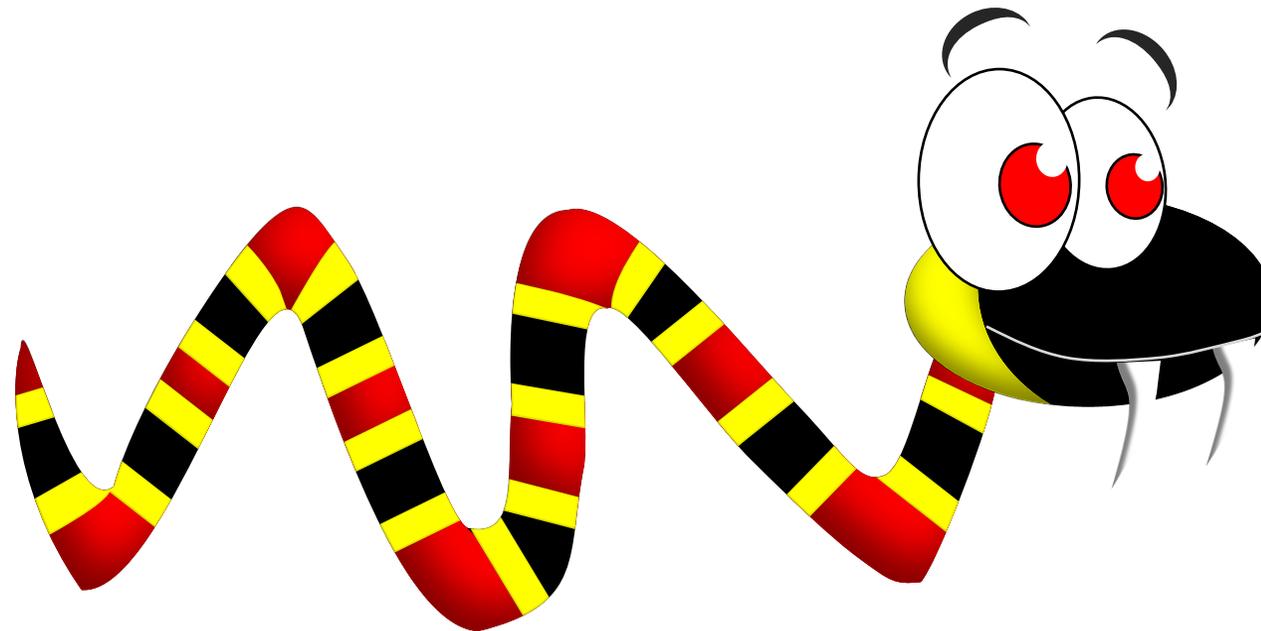
- They inject high volumes of venom that can cause:
 - Extreme pain
 - Swelling
 - Skin discoloration
 - Shock – deadly if not treated



Bites and Stings

Venomous Snakebite – Coral Snake

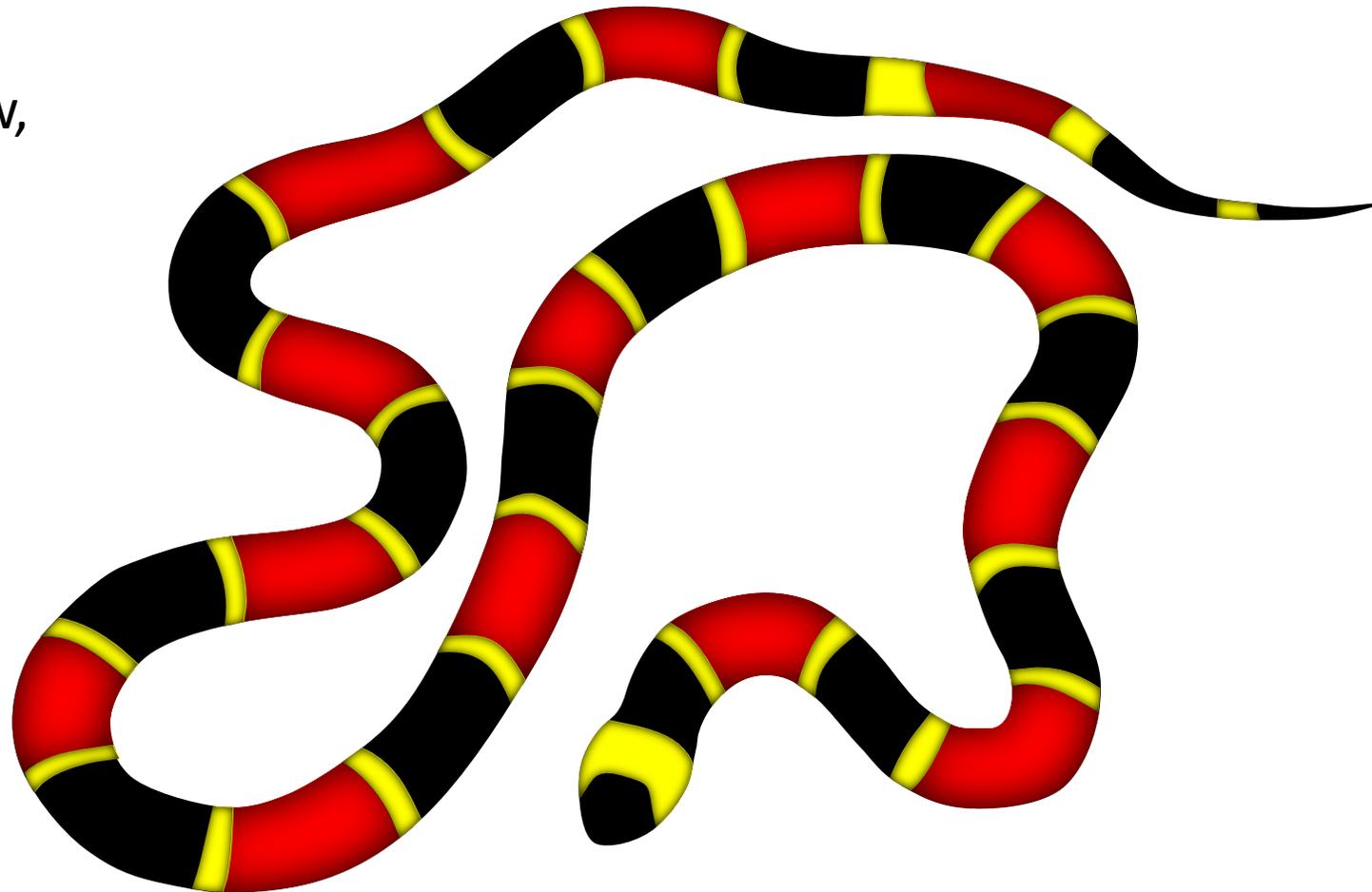
- Coral Snakes are different from Pit Vipers
 - Look very different
 - Smaller with small round head
 - Very colorful – Red, Black and Yellow bands



Bites and Stings

Venomous Snakes – Coral Snakes

Red Touch Yellow,
Kills a Fellow



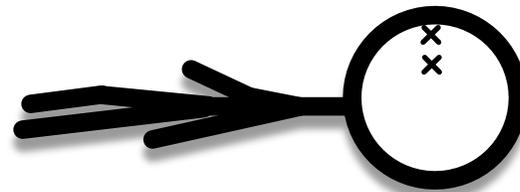
Red Touch Black,
Friend of Jack
(US only!)

Color intensity and banding patterns are variable, even in the US.
In other parts of the Americas, colors can be reversed (red bands adjacent to black bands)!

Bites and Stings

Venomous Snakebite – Coral Snake

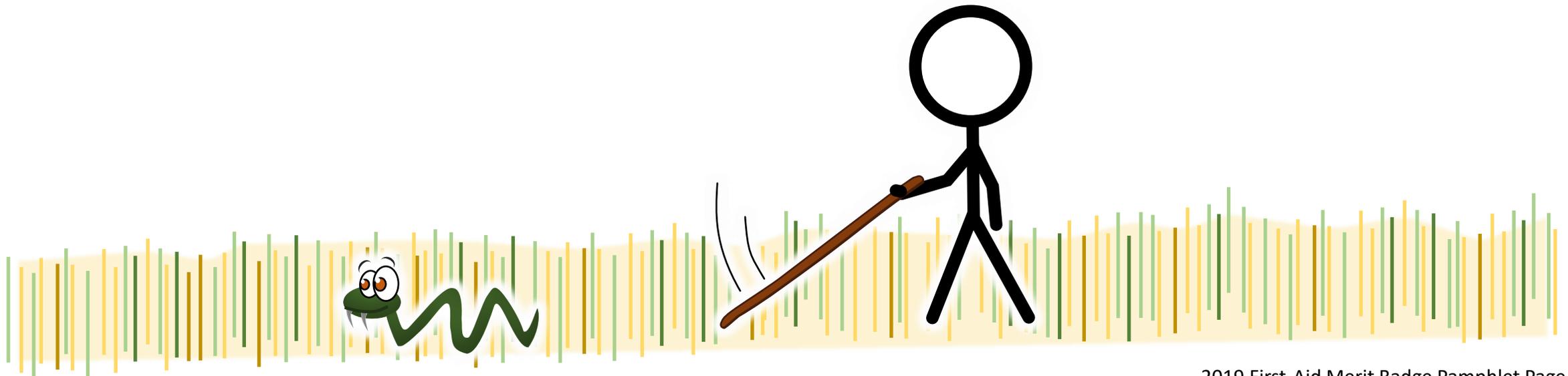
- Coral Snakes are different from Pit Vipers
 - Inject a very different venom
 - Slows physical and mental reactions
 - Sleepiness
 - Nausea
 - Shortness of breath
 - Convulsions
 - Shock
 - Coma



Bites and Stings

Venomous Snakebite – Avoidance

- It is better to avoid getting bitten than to deal with a bite
 - Use hiking stick to poke stones and brush ahead of you
 - Watch hands as you collect firewood or climb over rocks



Bites and Stings

Venomous Snakebite – First-Aid

- Basics of Snakebite First-Aid

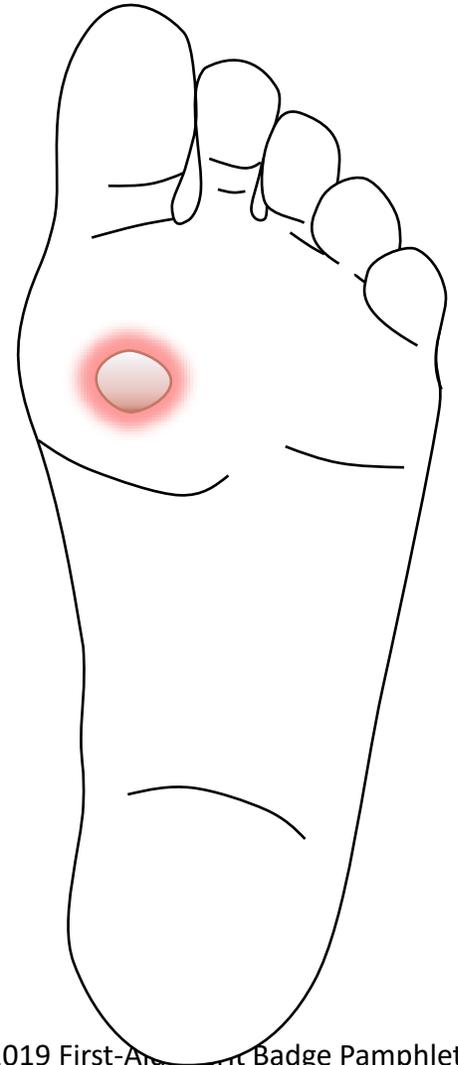
- Step 1** Get victim to hospital AS SOON AS POSSIBLE
Victim may need antivenom
- Step 2** Remove rings and constrictive jewelry
- Step 3** If you are forced to wait for medical care to arrive
the go ahead and wash the wound
- Step 4** Have victim lie down
Position injured area below level of heart
Keep victim calm
- Step 5** Treat for shock



Minor Wounds and Injuries

Blisters on the Hand and Foot

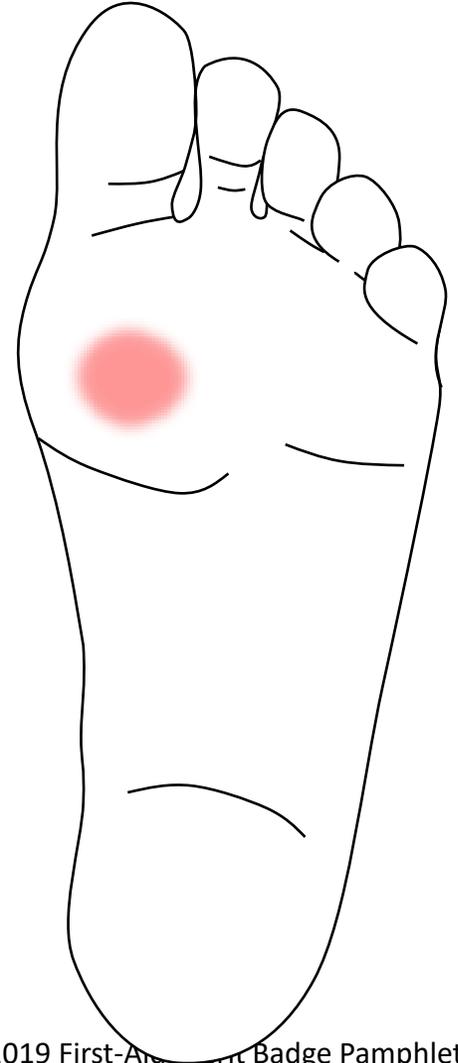
- Often referred to as “Friction Blisters”
- Blisters may form on hands if doing heavy or repetitive work
- Foot blisters are a common backpacking injury



Minor Wounds and Injuries

Blisters on the Hand and Foot – Hot Spot

- **Hot Spot** – tender area before blister begins to form
 - Stop immediately!
 - Treat this before it becomes a blister



Minor Wounds and Injuries

Blisters on the Hand and Foot – Hot Spot

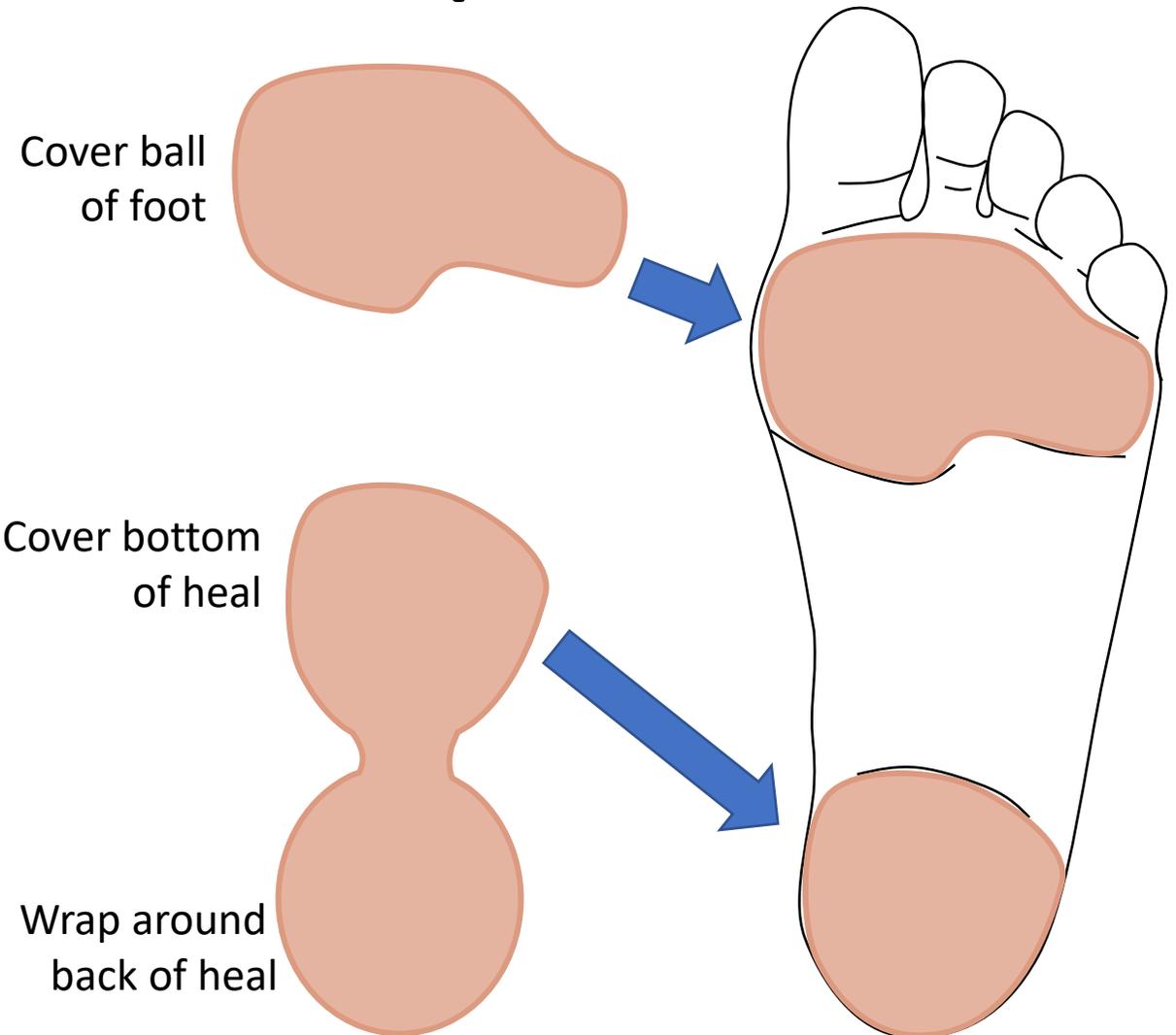
- **Hot Spot First-Aid**

Know your feet

Know your Hot Spots

Moleskin **BEFORE**
and prevent blisters

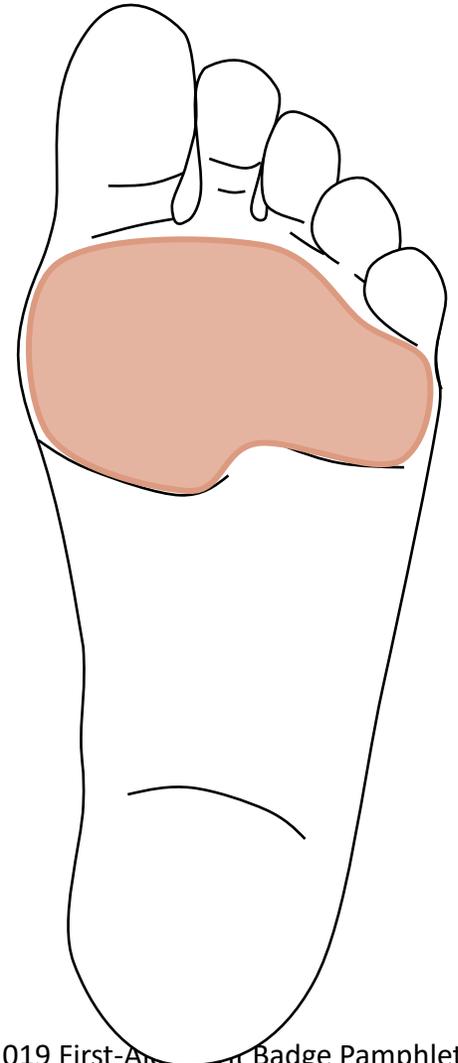
No Wrinkles!



Minor Wounds and Injuries

Blisters on the Hand and Foot

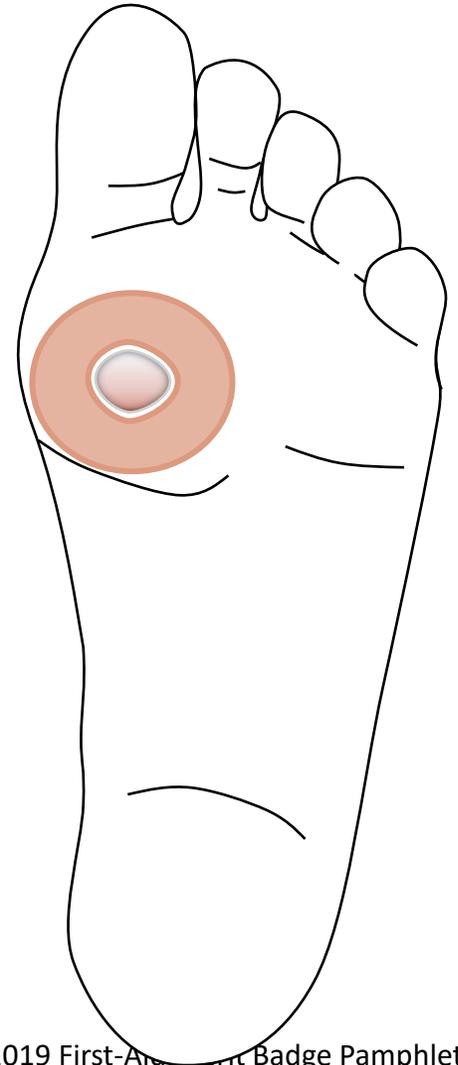
- **Prevention - Hand**
 - Wear gloves when working
- **Prevention - Foot**
 - Wear shoes or boots that fit
 - Change socks if become wet or sweaty
 - Treat Hot Spots early



Minor Wounds and Injuries

Blisters on the Hand and Foot

- **First-Aid**
 - Moleskin donut around blister
 - This reduces pressure on blister
 - Special blister products can help
 - SecondSkin
 - Blist-O-Ban





Minor Wounds and Injuries

Blisters on the Hand and Foot - Special

- **Expanding Blister**
 - If you must continue to walk with a blister, it may expand or rupture
 - At times, it will be better to preemptively drain it
 - This needs to be done as cleanly as possible
 - There is still a risk of infection as drainage creates an entrance through the skin

Minor Wounds and Injuries

Blisters – Drainage

- Clean, Decompress and Dress

Clean Area

- Soap and water is fine
- Betadine is better
- Wipe with alcohol

Sterilize Needle

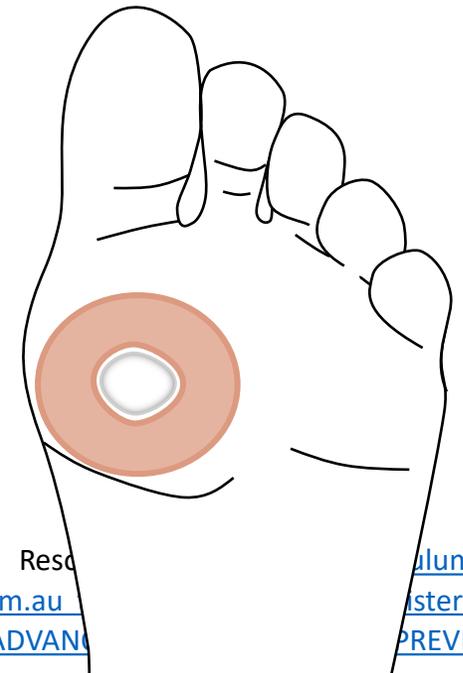
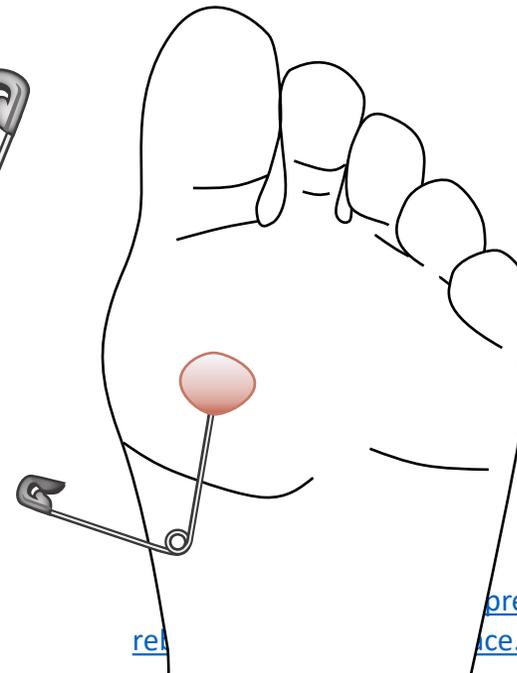
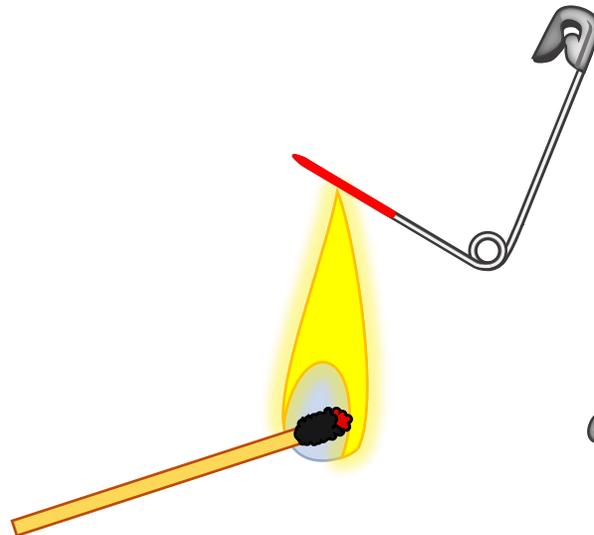
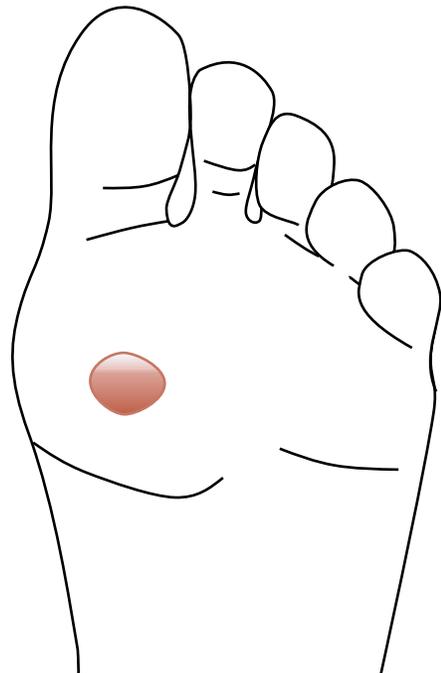
- Heat until red
(and allow to cool)
- or Use rubbing alcohol

Pierce Blister

- Pierce base of blister
- Make one or more holes
- Avoid Cutting with knife

Cover Blister

- Ideally first use Paper Tape
- then Tincture of Benzoin
- then Moleskin or Flex Tape

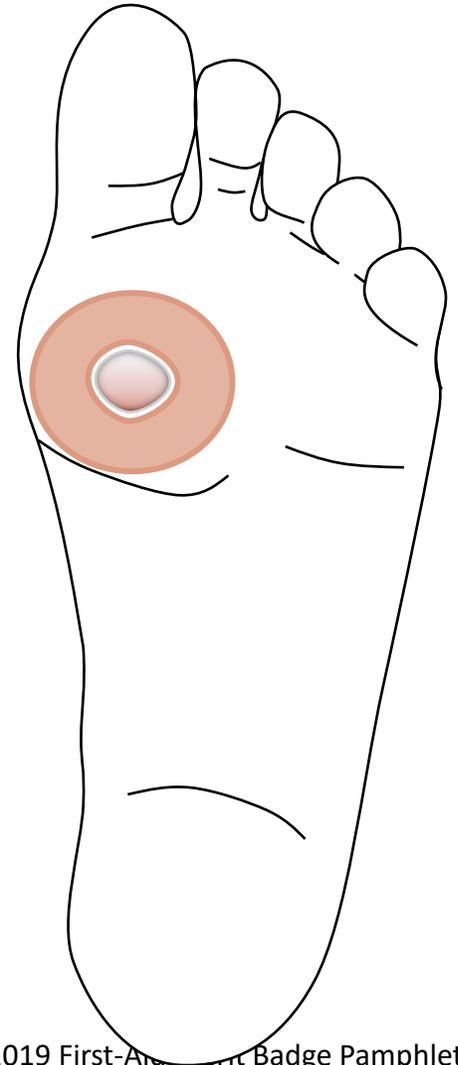




Minor Wounds and Injuries

Blisters on the Hand and Foot - Special

- **Ruptured Blisters**
 - Blisters should be kept intact if possible
 - Ruptured blisters are at high risk of infections
 - **First-Aid** – keep them clean and treat as a cut





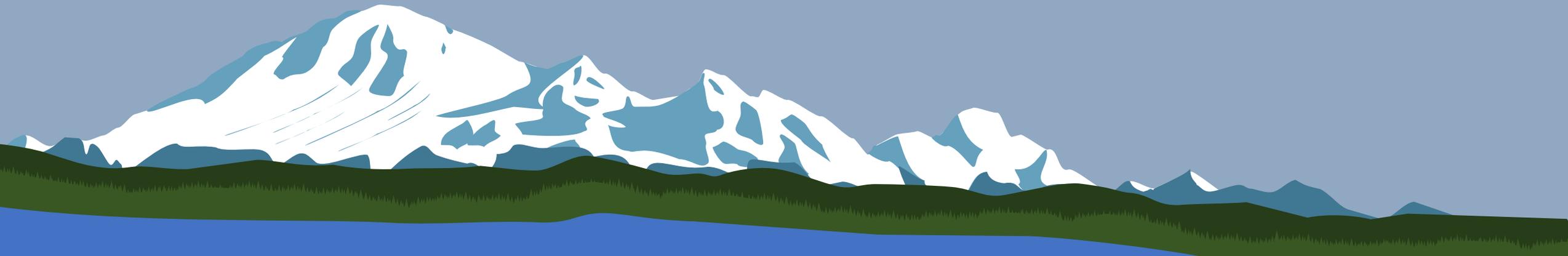
Minor Wounds and Injuries

Blisters on the Hand and Foot - Special

- **Blister or open wound of foot and Diabetes**
 - People with diabetes are at risk of severe complications
 - They should follow up with a medical provider if they have a wound on their foot



Hiking Philosophy

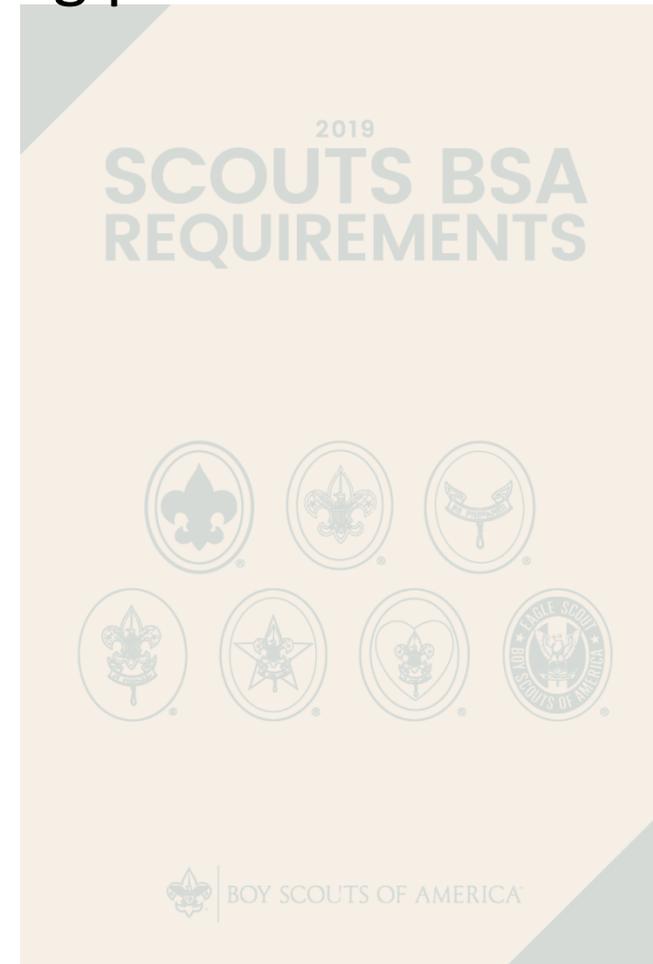


Hiking Philosophy

Requirement 2- Good Hiking Practices

Explain and, where possible, show the points of good hiking practices including:

- Proper outdoor ethics
- Hiking safety in the daytime and at night
- Courtesy to others
- Choice of footwear
- Proper care of feet and footwear



Hiking Philosophy

Good Hiking Practices - Leave No Trace

- Plan Ahead and Prepare
- Travel and Camp on Durable Surfaces
- Dispose of Waste Properly
- Leave What You Find
- Minimize Campfire Impacts
- Respect Wildlife
- Be Considerate of Other Visitors



Leave No Trace

Leave No Trace - Plan Ahead and Prepare

- Plan Ahead and Prepare
 - Know the regulations and special concerns of area
 - Prepare for weather extremes, hazards and emergencies
 - Avoid high use times
 - Travel in small groups when possible



Leave No Trace

Leave No Trace - Travel and Camp on Durable Surfaces

- Travel and Camp on Durable Surfaces
 - Walk single file on durable surfaces
 - Trails
 - Rock
 - Dry grass
 - Snow
 - Choose campsite carefully
 - Ideally on a designated campsite
 - Don't camp on vegetation – you will kill it
 - 200 feet away from water



Leave No Trace

Leave No Trace - Dispose of Waste Properly

- Dispose of Waste Properly
 - Pack it in, pack it out
 - Wash site should be 200 feet or more from streams or water
 - Human waste need to be buried or packed out
 - Check with land management agency first for requirements
 - Urinate away from trails and campsites
 - Urinate on rocks instead of plants
 - Don't urinate in small bodies of water
 - Animals will tear up plants to get to salts in urine



Leave No Trace

Leave No Trace - Leave What You Find

- Leave What You Find
 - Rocks
 - Leaves
 - Flowers
 - Bird's nest
 - Archaeological and cultural finds such as arrowheads
- Feel free to pack out trash



Leave No Trace

Leave No Trace - Minimize Campfire Impacts

- Minimize Campfire Impacts
 - Avoid leaving burn scars and evidence of fire
 - Avoid having a campfire if possible
 - Don't leave partially burned debris
 - Burn wood that is as thick as wrist or smaller
 - Burn to ashes
 - After ashes are cooled, spread them out
 - If you don't completely burn your fire to ashes – put it out
 - Pour on water
 - Stir
 - Feel with hand
 - If hot, repeat



Leave No Trace

Leave No Trace - Respect Wildlife

- Respect Wildlife
 - Only observe animals from a distance
 - Don't feed animals
 - Try not to disturb animals
 - It's their home
 - They are trying to survive



Leave No Trace

Leave No Trace - Be Considerate of Other Visitors

- Be Considerate of Other Visitors
 - Be nice
 - Yield to those going uphill
 - Yield to horse
 - Don't make noise

Hiking Philosophy

Good Hiking Practices – Hiking Safety – Day

- Be aware of hazards and how to reduce risk
- Set a pace that is comfortable for the slowest member of your group
- Stay in good shape so you are ready for the physical demands of a trek
- Know where you are going and what to expect
- Adjust clothing layers to match changing weather conditions
- Wear proper footwear
- Drink plenty of water
- Take care of gear

Hiking Philosophy

Good Hiking Practices – Hiking Safety – Night

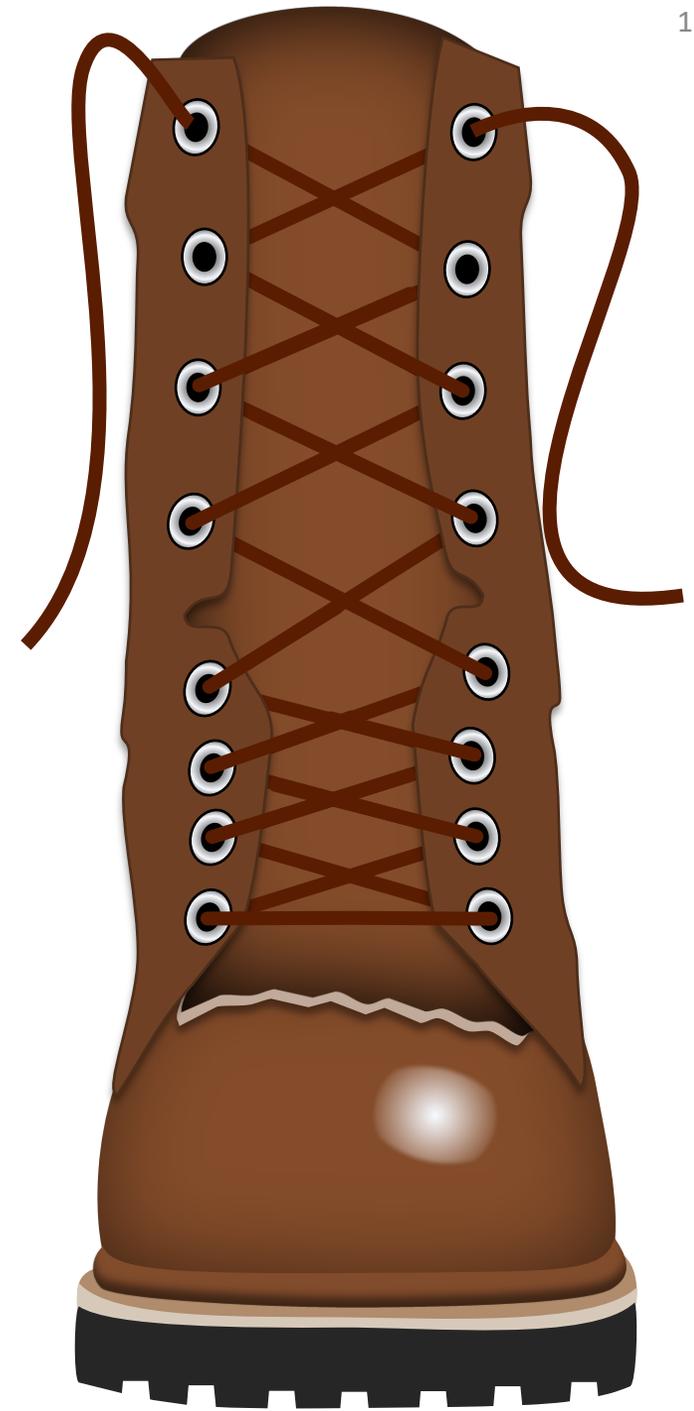
- Night hiking can be fun when you are properly prepared
- Use extra care to stay on your route
- Keep the members of your group together

- If caught out after dark and cannot safely continue
 - It may be best to stop for the night
 - You should be prepared for an overnight stay

Hiking Philosophy

Good Hiking Practices – Footwear

- This is hugely important!



Hiking Philosophy

Good Hiking Practices – Footwear – Fit

- Footwear MUST FIT!
- If a shoe doesn't fit, you will get blisters or worse
- The FIT:
 - No slip in heel when walking
 - Wiggle room for toes in shoe
 - Feet should not slide in shoe
 - Must be broken in
- Testing shoe fit:
 - Try on with hiking socks
 - Walk around store floor and ideally uneven terrain

Hiking Philosophy

Good Hiking Practices – Footwear – Type

- If they truly fit, that's the most important thing
- Next comes type:

Sandals

Poor choice
Risk of puncture or other injury to foot

Trail Runners

Basically running shoes with trail sole
Great option

Hiking boots

Little extra protection to ankle and from puddles
Probably more than needed for hiking

Mountaineering Boots

More protection against rocks when climbing
Heavier than what you need

Winter Boots

Great for deep snow
Too heavy and hot for general use

Military or Logging Boots

Great protection if breaking trail or logging
Way too heavy for general use

Hiking Philosophy

Good Hiking Practices – Footwear – Socks

- Quality socks can have a huge impact on how your feet do
- Choose:
 - High density wool sock designed for backpacking
 - Quality synthetic sock designed for backpacking
- Avoid:
 - Anything cotton
 - No show socks
 - Super thin socks (unless used as a sock liner)

Hiking Philosophy

Good Hiking Practices – Footwear – Maintenance

- Take care of your footwear
 - Allow them to dry out
 - Remove dirt and grime
- Leather needs special care
 - Treat with leather conditioners
 - Beeswax, silicone, natural oils, or other leather conditioners
 - Do not overheat next to a fire

Hiking Philosophy

Good Hiking Practices – Feet – Maintenance

- Take care of your Feet
 - Allow them to dry out
 - If you get a hot spot – STOP and treat it
 - Don't wear wet or dirty socks to bed
 - Antifungal powder is great
 - Use at night to help dry out feet and kill fungus

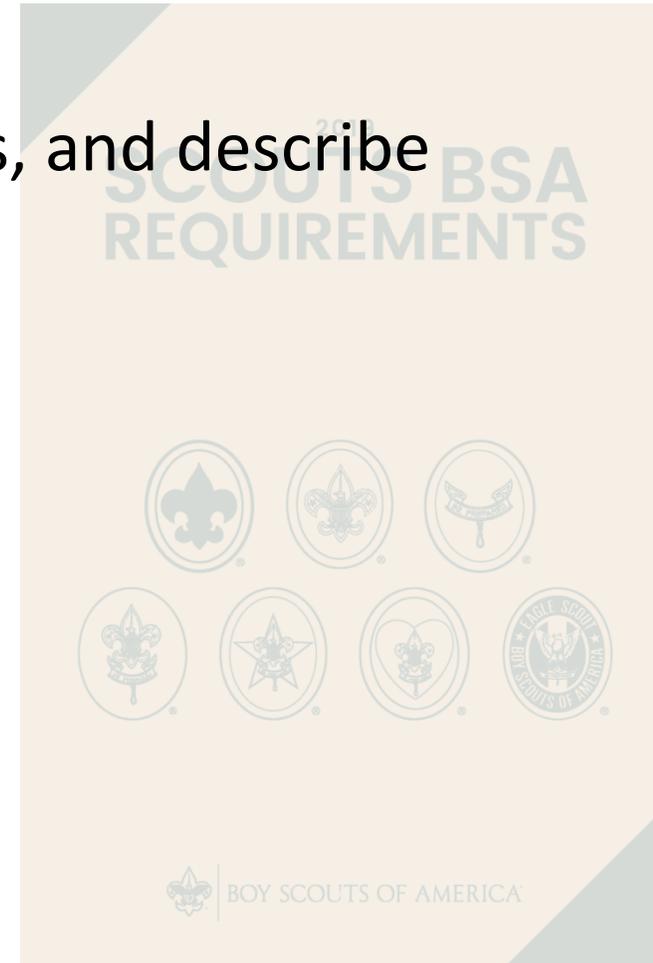
Hiking Philosophy

Requirement 3 – Hiking is Exercise

Explain how hiking is an aerobic activity.

Develop a plan for conditioning yourself for 10-mile hikes, and describe how you will increase your fitness for longer hikes.

Fill out in workbook



Hiking Philosophy

Hiking is Exercise

- The word aerobic means “with oxygen”
- Aerobic activities
 - Increase the rate of your breathing
 - Increase the rate of your heartbeat
 - Push your body to use oxygen more efficiently

Hiking Philosophy

Hiking is Exercise

- Aerobic training
 - Strengthens your circulatory and respiratory systems
 - Adds mass to muscles and bones
 - Burn excess fat
 - Leads to improvements in overall fitness.

Hiking Philosophy

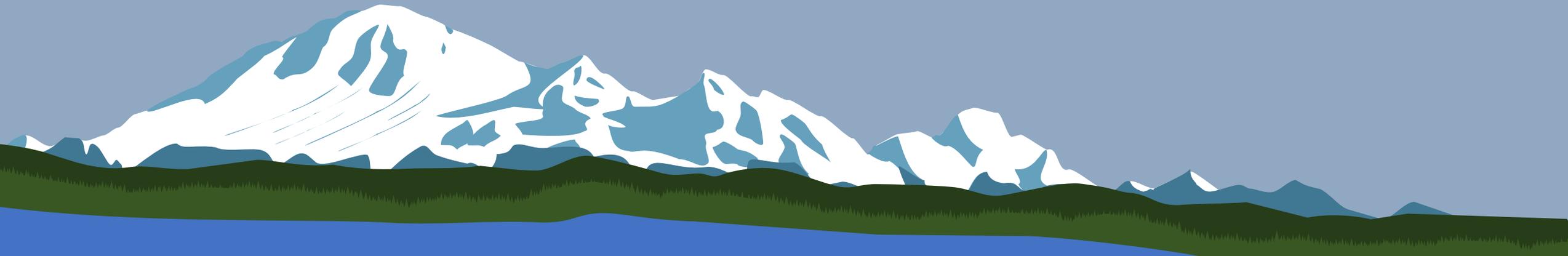
Hiking is Exercise

- For aerobic activities to be effective
 - Need to be half an hour or more
 - At least three times a week
 - Maintain enough intensity to break a light sweat
- Type of aerobic activity doesn't matter as much
 - Easier to do it if you enjoy doing it

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Hiking



Hiking

Requirement 4 - Initial Hikes

Take the five following hikes, each on a different day, and each of continuous miles.

These hikes MUST be taken in the following order:

- One 5-mile hike
- Three 10-mile hikes
- One 15-mile hike

Need to see Routes and Confirmation from Adult this was Completed

You may stop for as many short rest periods as needed, as well as one meal, during each hike, but not for an extended period (example: overnight). Prepare a written hike plan before each hike and share it with your Scoutmaster or a designee. Include map routes, a clothing and equipment list, and a list of items for a trail lunch. *

* The required hikes for this badge may be used in fulfilling hiking requirements for rank advancement. However, these hikes cannot be used to fulfill requirements of other merit badges.

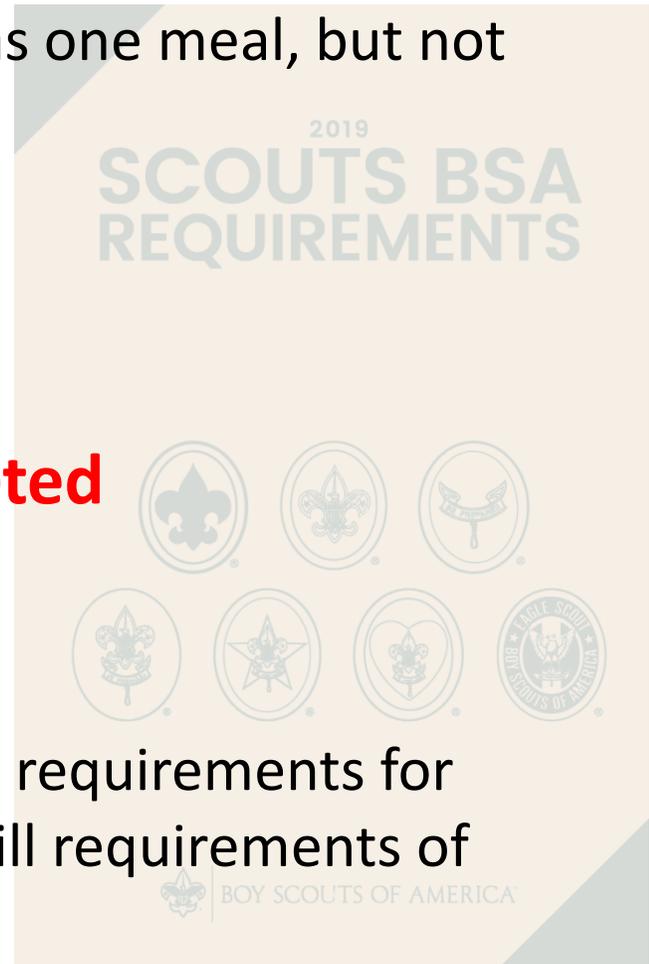
Hiking

Requirement 5 – 20 Miler

Take a hike of 20 continuous miles in one day following a hike plan you have prepared. You may stop for as many short rest periods as needed, as well as one meal, but not for an extended period (example: overnight).*

**Need to see Route and
Confirmation from Adult this was Completed**

- * The required hikes for this badge may be used in fulfilling hiking requirements for rank advancement. However, these hikes cannot be used to fulfill requirements of other merit badges.



Hiking

Requirement 6 – Hike Reflection

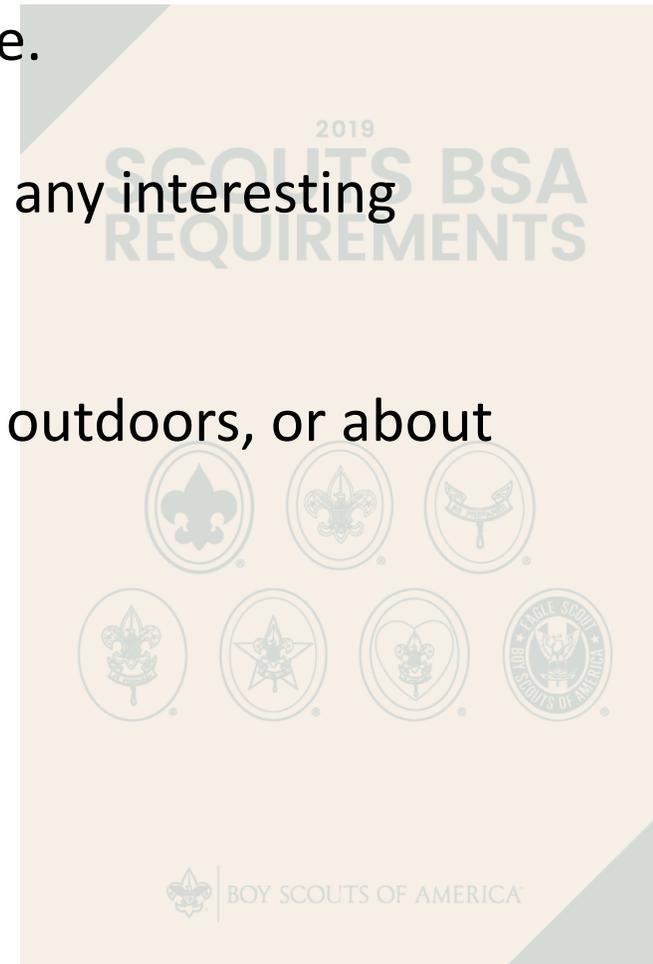
After each of the hikes (or during each hike if on one continuous "trek") in requirements 4 and 5, write a short reflection of your experience.

Give dates and descriptions of routes covered, the weather, and any interesting things you saw.

It may include something you learned about yourself, about the outdoors, or about others you were hiking with.

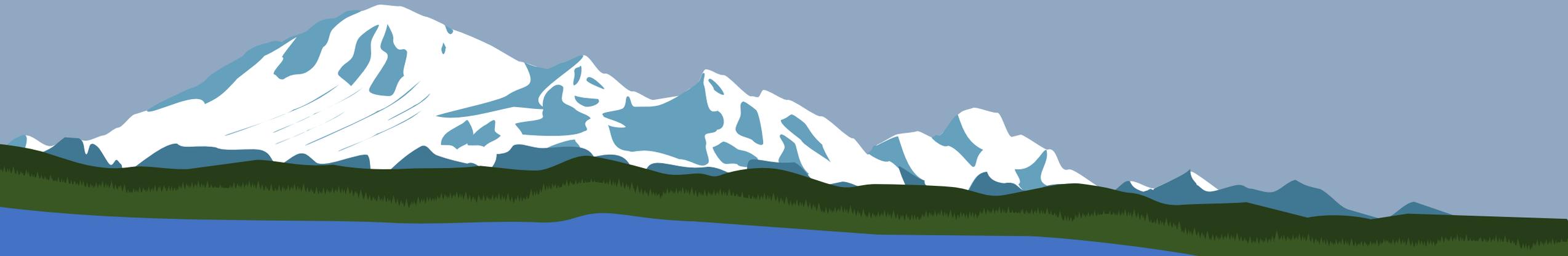
Share this with your merit badge counselor.

Fill out Workbook





Final Thoughts



Final Thoughts

Merit Badge Requirement Checklist

- Show completion of work
Ideally - **Turn in complete [Workbook](#)**
- There are obviously requirements that must be done outdoors
Complete these can send confirmation of completion



If you are unable to fill out a [Workbook](#)
Please contact your councilor

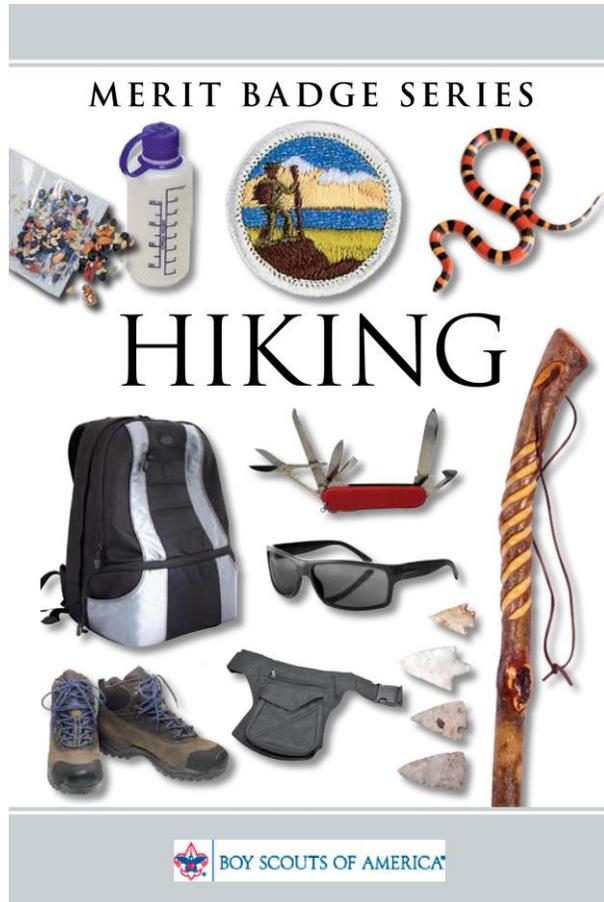
Final Thoughts

Final Thoughts

Final Thoughts

Looking for More?

- Merit Badge Pamphlet is a great resource



Final Thoughts

National Outdoor Awards

100 miles of hiking, backpacking,
snowshoeing, or cross country skiing



10 3-day 20-mile backpacking trips

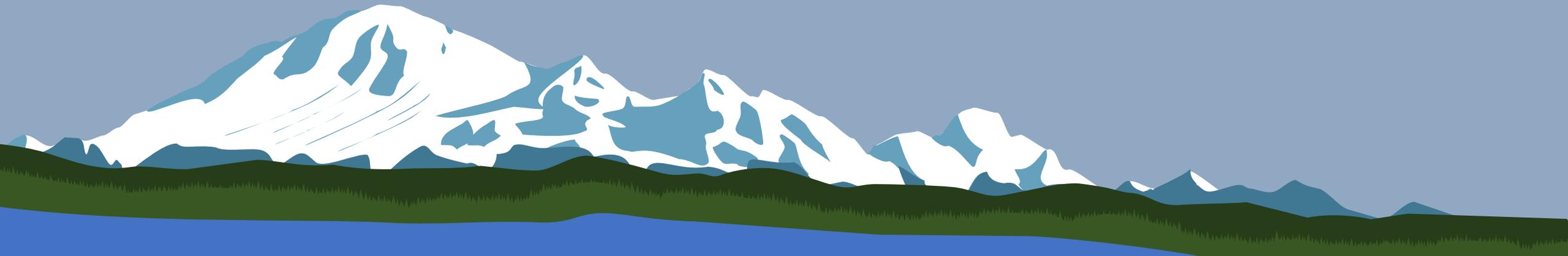


25 days and nights of camping





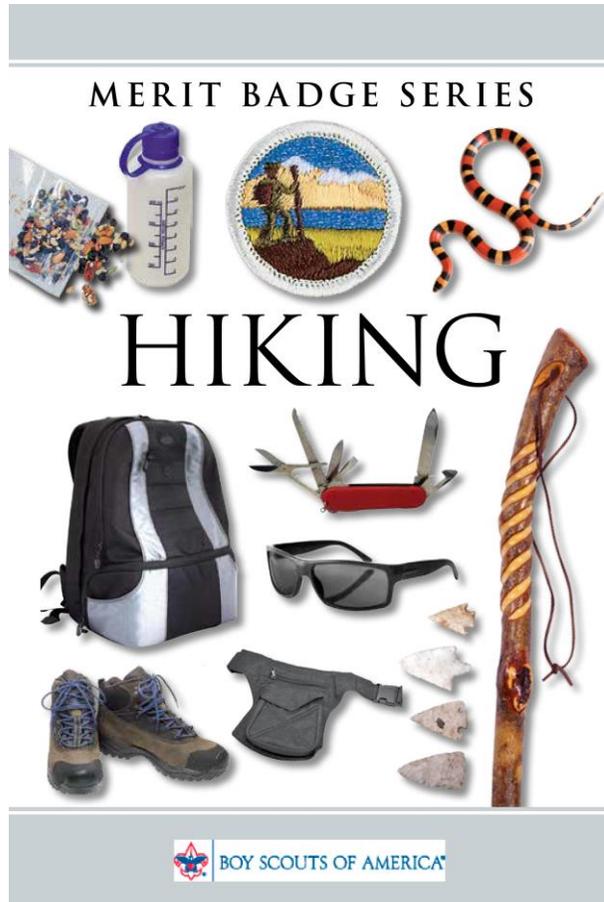
Resources



Resources

Looking for More?

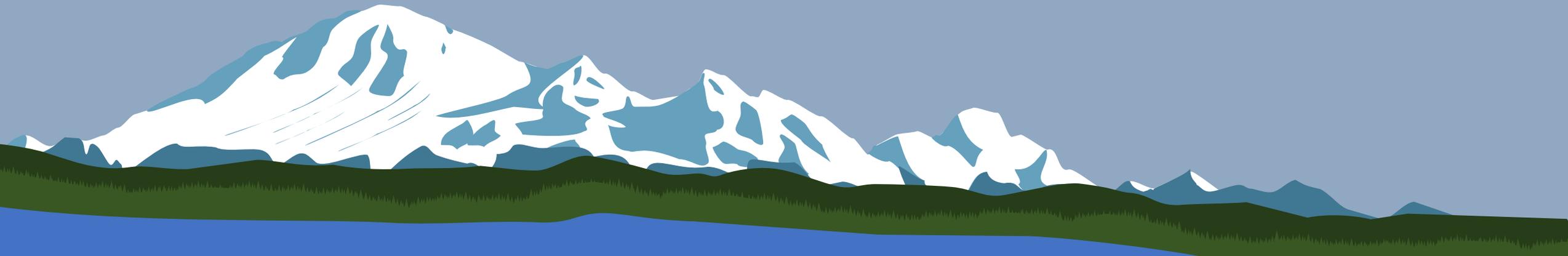
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Instructor's Corner



Instructor's Corner

Instructor's Corner

- Thank you for teaching our scouts the Hiking Merit Badge.