

Module 4:

Environmental Conditions
Safety & Health Topics



Environmental Conditions

Definition: Environmental conditions

1. Conditions that OSHA has noted:

- a. Electrical storms
- b. Strong winds which may affect the fall of a tree
- c. Heavy rain
- d. Heavy snow
- e. Extreme cold
- f. Dense fog
- g. Fires
- h. Mudslides
- i. Darkness



2. This is more important for the conventional logger.

3. For mechanical loggers they can have effect but many of these are for us to understand & plan for.

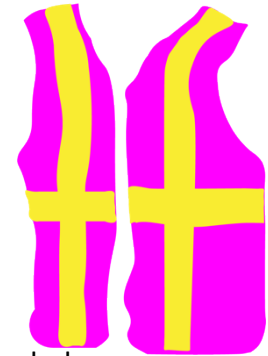
- a. Most electrical storms are short lived.
 - i. Shelter in place (in equipment)
 - ii. Put booms down while the storm goes over.
- b. Strong winds
 - i. Stay in the equipment when possible.
 1. If this is not possible look up and all around; have good situational awareness.
 2. Make a plan to get out of the woods at the end of the shift.
 - a. More than once we needed to use a skidder to clear the road.
- c. Heavy Rain
 - i. Here is one place we need to make a plan ahead.
 1. Identify hazard areas, make a plan to handle them.
 - a. Brush
 - b. Bridge
 - c. Matts
 2. Do Not Cross Flooded Streams or Rivers
 - a. **TURN AROUND DON'T DROWN!**
 - b. Watch for road deterioration.
- d. Heavy Snow
 - i. Most times this is an not issue except
 1. Getting home
 - a. Make sure you have a plan to keep the road open.
- e. Extreme cold
 - i. Have a plan... maybe stay at home.
 - ii. Dress for the day like you are going to be outside all day.
 - iii. Have a place to go (like a pickup) if the equipment you are running no longer can keep you warm.



- f. Dense Fog
 - i. Be Patient
 - ii. Stay off challenging ground (i.e., Steep Hills)
- g. Fires
 - i. Listen to the Authority Having Jurisdictions (AHJ)
 - ii. Stay away from affected areas.
 - iii. Park equipment out of danger if possible
 - iv. Stay informed!



- h. Mudslides
 - i. Pay attention to conditions.
 - ii. Stay away from affected areas.
 - iii. Mark areas
 - iv. Stay informed
- i. Darkness
 - i. Have a plan (We all work in dark sometimes)



- 1. Have flashlights handy.
 - 2. I carry a flashlight in
 - a. The pickup
 - b. The machine
 - c. My lunch box.
 - 3. I am not afraid of the dark but I don't like working in the dark.
 - 4. Park the equipment in a place that you can use the pickup lights to do your morning inspection.
 - 5. Wear safety vest with retroreflective striping that are in good condition.

4. Weather does not tell you how to feel just how to dress.

- 5. Listen to the weather and make a plan for the worst.
 - a. The Boy Scouts says it best "Be Prepared!"



Name: _____

Environmental Conditions Quiz

1. What is the number one thing to remember when it comes to environmental conditions?

- A. Have your home phone number
- B. When quitting time is
- C. Work hard
- D. Have a plan

2. What is the best plan for an electrical storm?

- A. Run
- B. Hide
- C. Shelter in place with boom down
- D. Call Mom

3. What's the important consideration when you must work in the darkness?

- A. Be afraid!
- B. Don't... work only in the daylight.
- C. Park your equipment far off the yard
- D. Have a plan & a flashlight.

4. You don't have to worry about the cold because you are in a piece of equipment all day.

- A. True
- B. False



Health Topics for Mechanical Logging Operators

Definition: Sedentary lifestyle: A **sedentary lifestyle** is a type of **lifestyle** involving little or no physical activity. A person living a **sedentary lifestyle** is often sitting or lying down while engaged in an activity like reading, socializing, watching television, playing video games, or using a mobile phone/computer for much of the day.

1. Sedentary lifestyle?

- a. Sedentary lifestyle – logging is a production-based business that will lead to choices to sit in a piece of equipment longer than is wise, long-term.
 - i. Leading to:
 1. Obesity
 2. Diabetes
 3. High Blood pressure
 4. Colon cancer
 5. Osteoporosis
 6. Lipid disorders
 7. Depression
 8. Anxiety
 - ii. Make a plan to get out of the machine every 2 hours and maximize your time outside to improve your body health.
 1. Stretch while you think of the job ahead.
 2. Do something that raises your heart rate.
 - a. Walk fast.
 - b. Park farther away so you need to walk more.
 - c. Kneel down just to move your body.
- b. Eat smart
 - i. Be careful how much sugar you eat.
 1. Here are five ways sugar hurts your body.
 - a. Empty calories (No nutritional value)
 - b. Weight gain (there is evidence that sugar leads to overeating.
 - c. Diabetes (Although sugar itself does not lead to diabetes it exposes you to the leading causes (Overweight).
 - d. Tooth cavities.
 - e. Heart Disease (High Sugar diets has been found to be related to heart disease)
 - ii. Know what sugar is in your food.
 1. 4 teaspoons is the recommended daily amount of sugar.
 2. A short video: <https://www.youtube.com/watch?v=FZqbxhI6eBU>
 - iii. Alternate names for sugar found in food.
 - a. Dextrose
 - b. Sucrose
 - c. Agave nectar
 - d. Maltose
 - e. Molasses

- f. Honey
- g. High-fructose corn syrup
- h. Corn sweetener
- i. Crystalline fructose
- j. Evaporated cane juice

iv. Large amounts of salt is hazardous to your health in the following 4 ways.

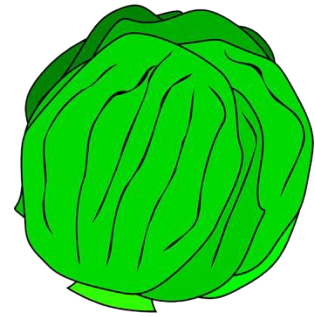
- 1. Leads to high blood pressure.
- 2. Edema (Swelling of your hand & feet)
- 3. Hurts your kidneys (Unbalanced body chemistry)
- 4. Bloating

v. Know what salt is in food

1. Sodium acts as a flavor enhancer and preservative.

a. Found in high levels in:

- 1. Canned Foods
- 2. Frozen Foods
- 3. Restaurant Foods
- 4. Pizza
- 5. Breads
- 6. Cold Cuts
- 7. Savory Snacks
- 8. Cheese



b. Foods low in sodium:

- 1. Fresh Fruit
- 2. Fresh Vegetables
- 3. Grains
- 4. Meat/Poultry/ Beans
- 5. Water



vi. What should you eat?

- 1. Food that is low in Sugar & Sodium
- 2. Fresh food (Think Homemade)
 - a. Fruits
 - b. Vegetables
 - c. Grains
- 3. A mix of foods

vii. How much?

viii. Water

- 1. Drink lots of water about ½ gallon More if you are working hard or it is hot out.
- 2. Soda / Fruit drinks / Energy drinks are not good substitutes.



FREE
At-a-glance guide

KNOW YOUR PORTION SIZES

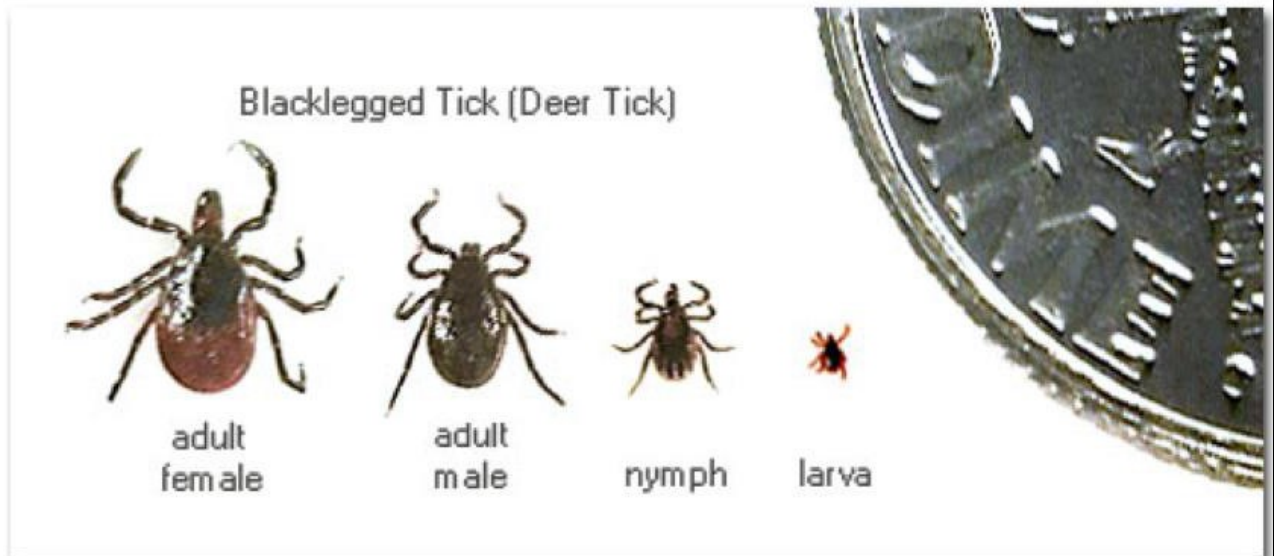
Take the guesswork out of losing weight

| | | | |
|---|-----|--|-----|
| PIZZA Weights 160g Quick size check A third of a standard size dinner plate Provides 295kcal | 1/3 | COOKED RICE Weights 150g Quick size check A tennis ball Provides 205kcal | x1 |
| CEREAL Weights 30g Quick size check 1 handful or 5 level tbsp Provides 120kcal | x1 | CHIPS Weights 100g Quick size check 10 chips Provides 160kcal | x10 |
| POPCORN Weights 10g Quick size check 2 handfuls Provides 45kcal | x2 | ICE CREAM Weights 60g Quick size check 1 scoop Provides 105kcal | x1 |
| NUTS Weights 30g Quick size check 2 level tbsp or 1 handful Provides 180kcal | x1 | WINE Measures 125ml Quick size check 1 small wine glass Provides 110kcal | x1 |
| PEANUT BUTTER Weights 30g Quick size check 2 level tbsp Provides 182kcal | x2 | CHOCOLATE BROWNIE Weights 30g Quick size check A box of cereal boxes Provides 183kcal | x1 |
| CRISPS Weights 25g Quick size check 1 handful Provides 145kcal | x1 | BUTTER Weights 5g Quick size check 1 tsp Provides 100kcal | x1 |
| CREAMY DIPS Weights 20g Quick size check 2 level tbsp Provides 110kcal | x2 | OLIVE OIL Weights 11g Quick size check 1 tsp Provides 100kcal | x1 |
| MUESLI Weights 45g Quick size check 3 level tbsp Provides 185kcal | x3 | COOKED PASTA Weights 150g Quick size check A tennis ball Provides 185kcal | x1 |

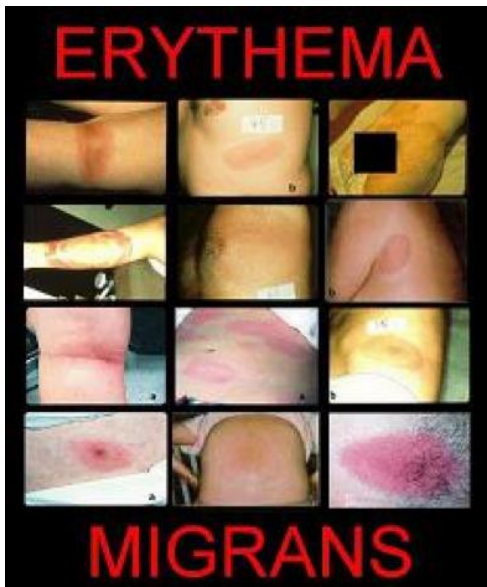
For recipes and diet advice go to WWW.HEALTHYFOOD.CO.UK

2. Ticks

- a. Lone Star Tick
- b. Dog Tick
- c. Black Legged Tick (**DEER TICK**)



- i. Larva - Spring Borne
- ii. Nymph - Bite is painless and has to be attached 36 / 48 hours to infect you with Lyme. Around June and July. 80% of the human cases come from this time.
- iii. Adult - 2nd year of life. Active in fall. Less cases of lyme from these because of their size and they are noticed before they can have time to infect.
- iv. Nymph & Adults can infect you!
 1. Nymph in the spring & early summer
 2. Adults Late Summer fall
- v. How do they get on you? (Now this is cool!!)
 1. They do what is called "Questing"
 2. They hang out on a blade of tall grass and wait for a victim to walk by and jump on. Like a Hobo hoping a train!

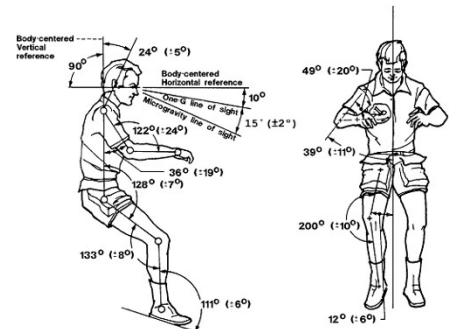
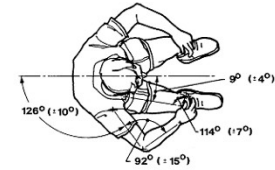


- vi. What does the infection look / feel like?
1. First symptoms are small:
 - a. Solid red or bull's-eye rash, usually at site of bite
 - b. Swelling of lymph glands near tick bite
 - c. Generalized achiness; Headache
 - d. You will feel: "Joint pains, chills, fever, and fatigue"
 - e. Abnormal pulse
 - f. Sore throat
 - g. Changes in vision
 - h. Fever of 100° to 102° F
 2. Later symptoms:
 - a. Severe fatigue
 - b. Stiff, aching neck
 - c. Tingling or numbness in the extremities
 - d. Facial palsy (paralysis) can occur
 3. Treatment:
 - a. Antibiotics
 1. Early diagnosis usually means a full recovery
 4. Best practices for not getting bit by a tick?
 - a. You can use tick repellent
 1. Spray that has Deet
 2. Permethrin (Only treat your cloths not directly onto your skin.)
 - Good for three or four washings
 - b. Wear long sleeve shirts and pants. (limits ways ticks can get to your skin)
 1. Tuck pants into your shoes or socks
 2. Tuck shirt into your pants
 - c. Put your cloths into the drier as soon as you get home on high heat (10 minutes). This will kill the ticks. (You will be surprised how many ticks will be in the lint collector)
 - d. Stay out of tall grass

3. Ergonomics:



- Definition: An applied science concerned with design and arranging things people use so that the people and things interact most efficiently and safely. (Merriam Webster)
- Neutral posture: is the **position** of the body that places the least stress on the musculoskeletal system while still allowing for maximum control and strength.....When sitting or standing, a **neutral posture** will be comfortable and balanced for the employee.
- Logging equipment has many options on how to set up the cab so there is less stress on the operator's body.
 - Tiger Cat Ergonomics Video: https://www.youtube.com/watch?v=2QAoaN_xC1c
 - Set your cab up so you sit and can reach everything easily.
 - Adjust your seat & joysticks so your body is in:
 - Natural position
 - Comfortable
 - Gives you good body support.





Name: _____

Health Topics

1. How much sugar is in a can of coke?
 - A. 5 teaspoons
 - B. 30 teaspoons
 - C. $\frac{1}{2}$ teaspoon
 - D. Almost 10 teaspoons

2. How many teaspoons of sugar are recommended daily?
 - A. 10 teaspoons
 - B. 25 teaspoons
 - C. 4 teaspoons
 - D. $\frac{3}{4}$ teaspoons

3. How much peanut butter should you have at one meal?
 - A. 1 Teaspoon
 - B. 5 Tablespoons
 - C. 3 $\frac{1}{2}$ Tablespoons
 - D. 2 Level Tablespoons

4. How many much Pizza should you have? (If you had pizza today how many did you have?)
 - A. One plate size
 - B. $\frac{1}{3}$ of the plate
 - C. 2 plates size
 - D. $\frac{1}{2}$ a Box

5. You should drink at least a $\frac{1}{2}$ gallon of water a day.
 - A. True
 - B. False

Glossary of Terms

Accident: An unfortunate incident that happens unexpectedly and unintentionally, typically resulting in damage or injury.

Danger tree (Stub & Snag): A standing tree that presents a hazard to employees due to conditions such as, but not limited to, deterioration or physical damage to the root system, trunk, stem or limbs, and the direction and lean of the tree.

Designated person: An employee who has the requisite knowledge, training and experience to perform specific duties.

Grounded: The placement of a component of a machine on the ground or on a device where it is firmly supported. Also called Zero Gravity.

Guarded: Covered, shielded, fenced, enclosed, or otherwise protected by means of suitable enclosures, covers, casings, shields, troughs, railings, screens, mats, or platforms, or by location, to prevent injury.

Landing: Any place where logs are laid after being yarded, and before transport from the work site.

Limbing: To cut branches off felled trees.

Logging operations: Operations associated with felling and moving trees and logs from the stump to the point of delivery, such as, but not limited to, felling, limbing, bucking, debarking, chipping, yarding, loading, unloading, storing, and transporting machines, equipment and personnel to, from and between logging sites.

Machine: A piece of stationary or mobile equipment having a self-contained power plant, that is operated off-road and used for the movement of material. Machines include, but are not limited to, tractors, skidders, front-end loaders, scrapers, graders, bulldozers, swing yarders, log stackers, log loaders, and mechanical felling devices, such as tree shears and feller-bunchers. Machines do not include airplanes or aircraft (e.g., helicopters).

Rated capacity: The maximum load a system, vehicle, machine or piece of equipment was designed by the manufacturer to handle.

Serviceable condition: A state or ability of a tool, machine, vehicle or other device to operate as it was intended by the manufacturer to operate.

Skidding: The yarding of trees or logs by pulling or towing them across the ground.

Slope (grade): The increase or decrease in altitude over a horizontal distance expressed as a percentage. For example, a change of altitude of 20 feet (6 m) over a horizontal distance of 100 feet (30 m) is expressed as a 20 percent slope.

Workers' Compensation Insurance: - A type of business insurance that covers medical and rehabilitation costs and lost wages for employees who suffer from work-related injuries or illnesses.

Yarding: The movement of logs from the place they are felled to a landing.