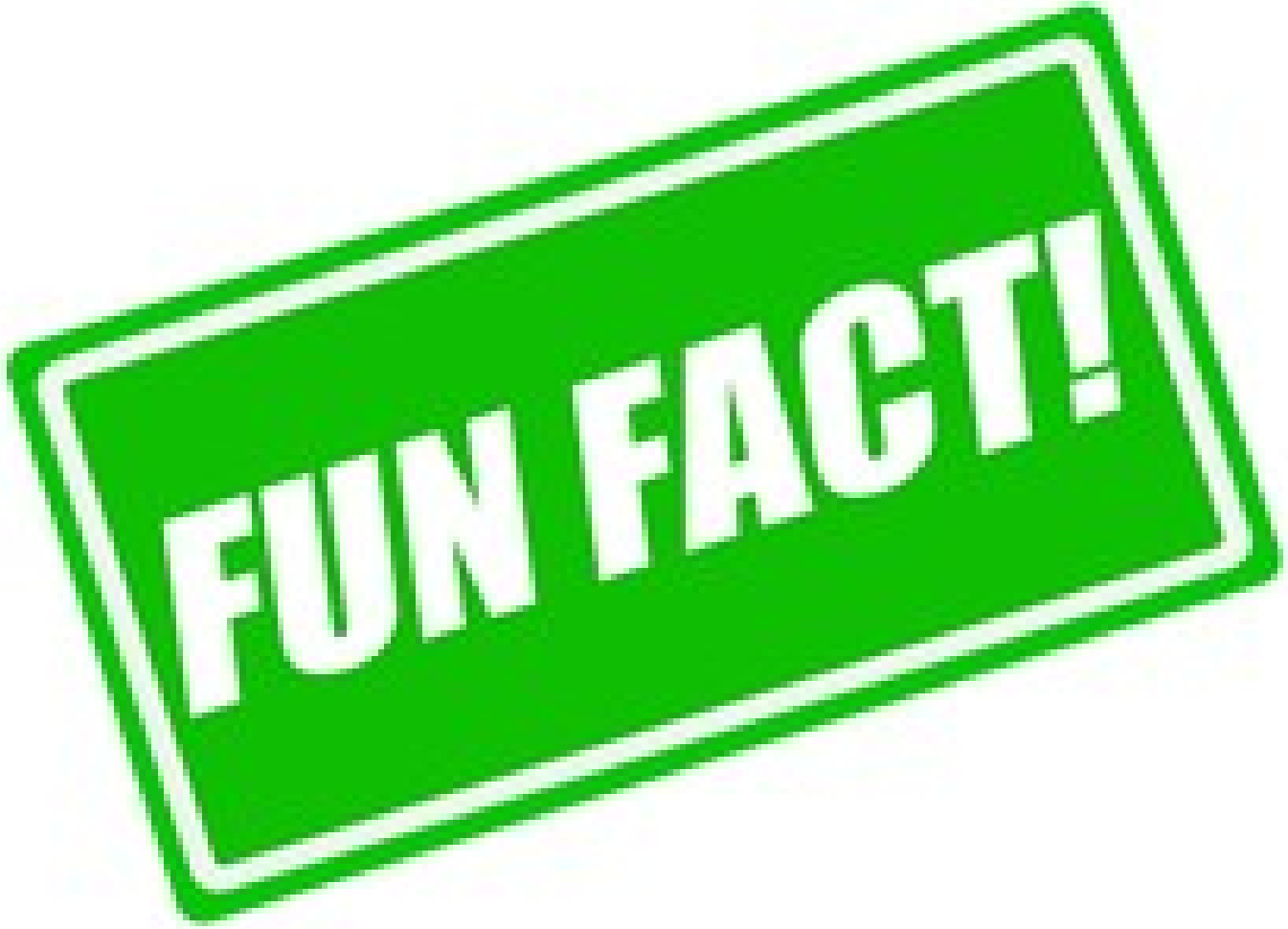
DEPARTMENT OF ENERGY & ENVIRONMENT

Green Roof Safety

Green Roof Fun Fact

- The oldest Green Roof in the United States is on top of the Rockefeller Center in New York. Although the Rockefeller rooftop garden was built in 1930, interest in Green Roof technology has only occurred within the last 15 years. Currently, Chicago, Portland and New York are the leaders in implementing Green Roof technology in the United States.



Green Roof Safety

- Ensuring a safe environment to work in
- Combat climate change
- Improve air quality by converting CO2 to oxygen
- Visually appealing

Green Roof Safety

- Build maintenance into the design
- Provide easy access
- Inspections
- Prevent falls from height
- Guardrail alternatives
- Be mindful of the weather

Fall Protection

- Guardrail System
- Personal Fall Arrest System
- Safety Net System

Fall Protection

- Wear a harness and stay connected
- Inspect all fall protection equipment before use
- Guard or cover all holes, openings, and skylights
- Training Workers is critical

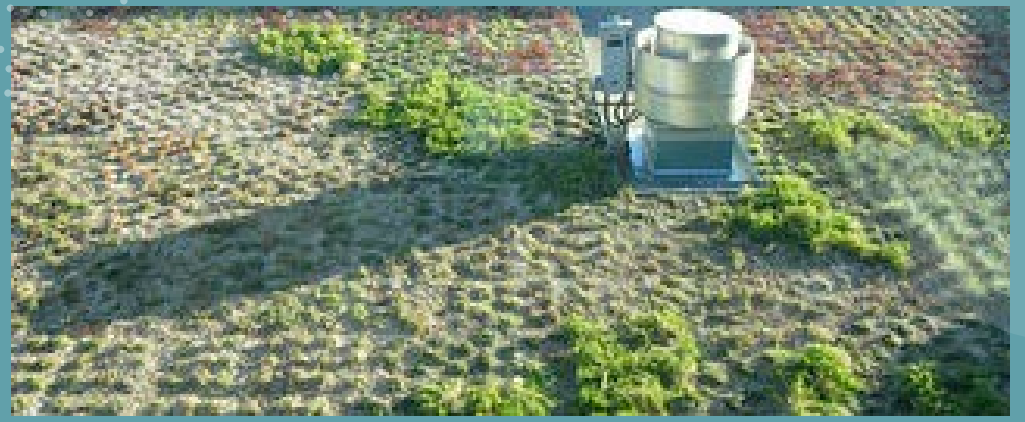
Personal Protective Equipment (PPE)

- Saves lives
- Prevents injuries/illness
- Employers must assess workplace for all hazards.

PPE

PPE

- Personal protective equipment, or PPE, is designed to protect workers from serious workplace injuries or illnesses resulting from contact with chemical, radiological, physical, electrical, mechanical, or other workplace hazards. Besides face shields, safety glasses, hard hats, and safety shoes, protective equipment includes a variety of devices and garments such as goggles, coveralls, gloves, vests, earplugs, and respirators.



PPE

- PPE SAVES LIVES
- Never underestimate the value of your PPE.
- Advise and remind others to wear their PPE
- If no PPE is worn, work can not be done.

Electrical

Don’t modify	Don’t modify cords or use them incorrectly
Report	Report any nonfunctional power lines
Use	Use OSHA approved equipment
Remove	Properly remove cords from receptacles by pulling on the plugs, not the cord

Electrical Safety

01

Never assume that a wire is safe to touch even if it is down or appears to be insulated

02

Never touch a fallen overhead power line. Call the electric utility company to report fallen electrical lines

03

Never operate electrical equipment while you are standing in water

04

Have a qualified electrician inspect electrical equipment that has gotten wet before energizing

Heat/Cold Stress

- Heatstroke – Confusion, Loss of consciousness, Convulsions, Lack of sweating (usually), hot, dry skin, and Very high body temperature

Heat exhaustion – Headache, Nausea, Vertigo, Weakness, Thirst, and Giddiness

Heat/Cold Stress

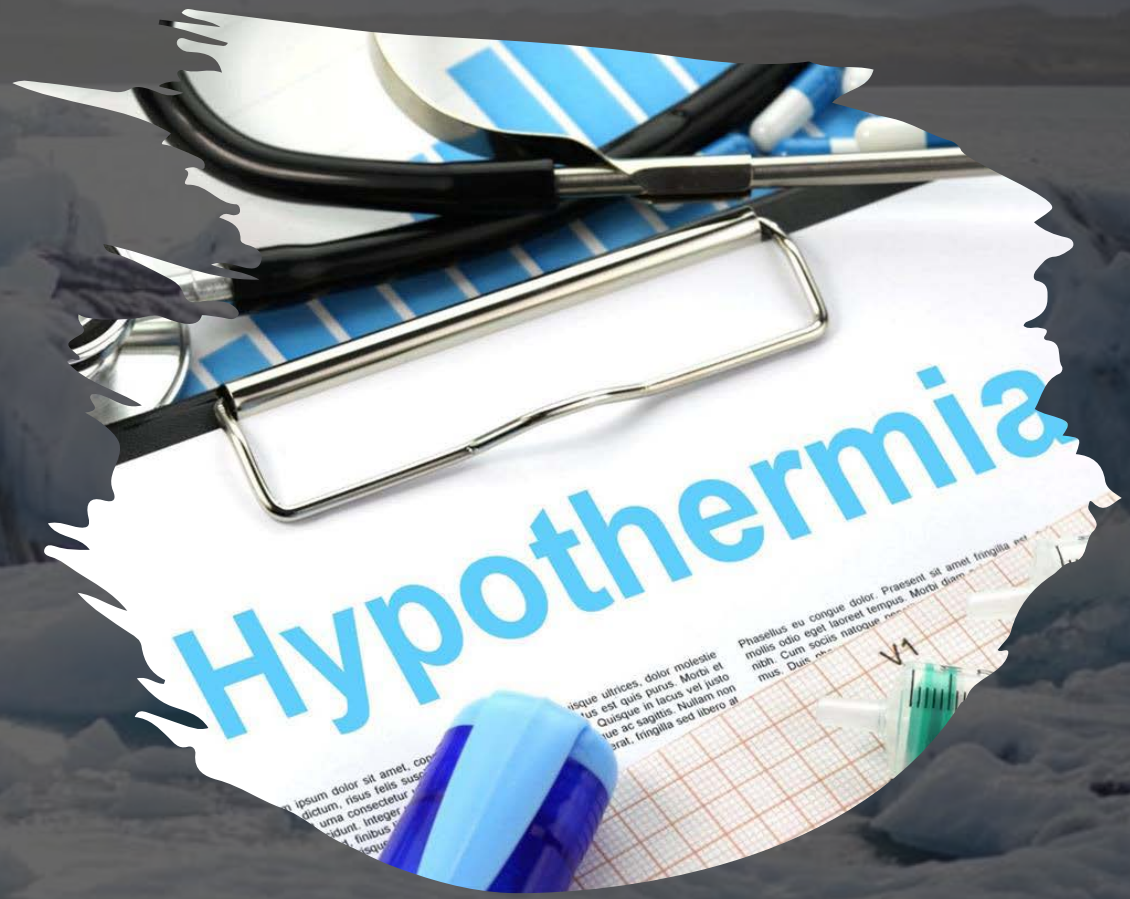
- If a worker shows any signs of symptoms of a possible heat stroke, medical treatment should be obtained immediately. While waiting for medical help, the worker should be:
- Placed in a shady area, and the outer clothing should be removed
- The worker's skin should be wetted, and air movement around the worker should be increased
- Fluids should be replaced as soon as possible

Heat/Cold Stress

- Working in a wet or damp environment
- Wearing clothing that's not appropriate for the temperature
- Being out of shape (poor physical conditioning
- Being physically exhausted
- Having a predisposing condition, such as hypertension, hypothyroidism or diabetes

Heat/Cold Stress

- Cold weather quickly can become very dangerous and can drive down internal body temperature. In extreme cases, injuries may occur, or permanent tissue damage or death could result. Take some simple precautions to stay safe during winter weather.

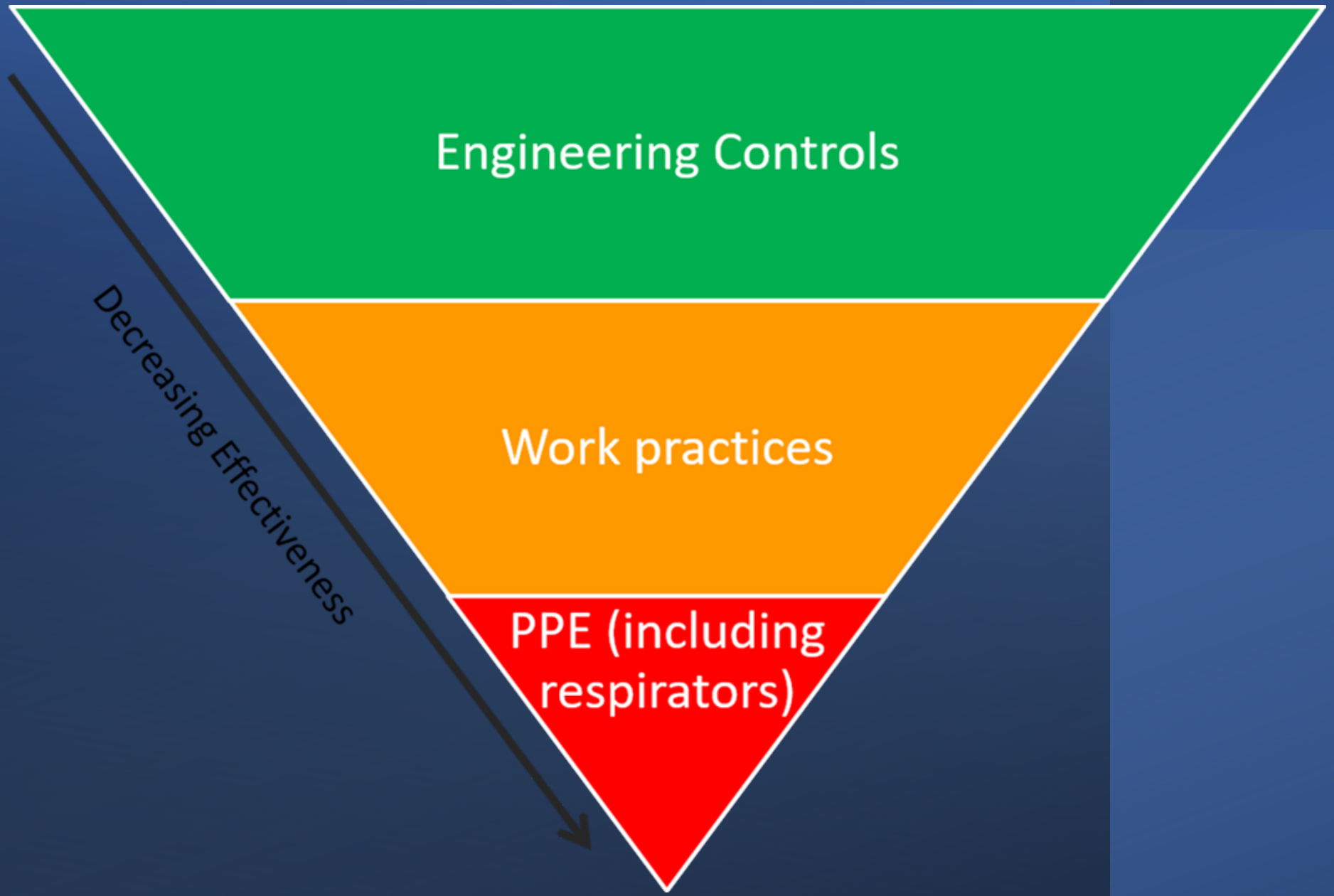


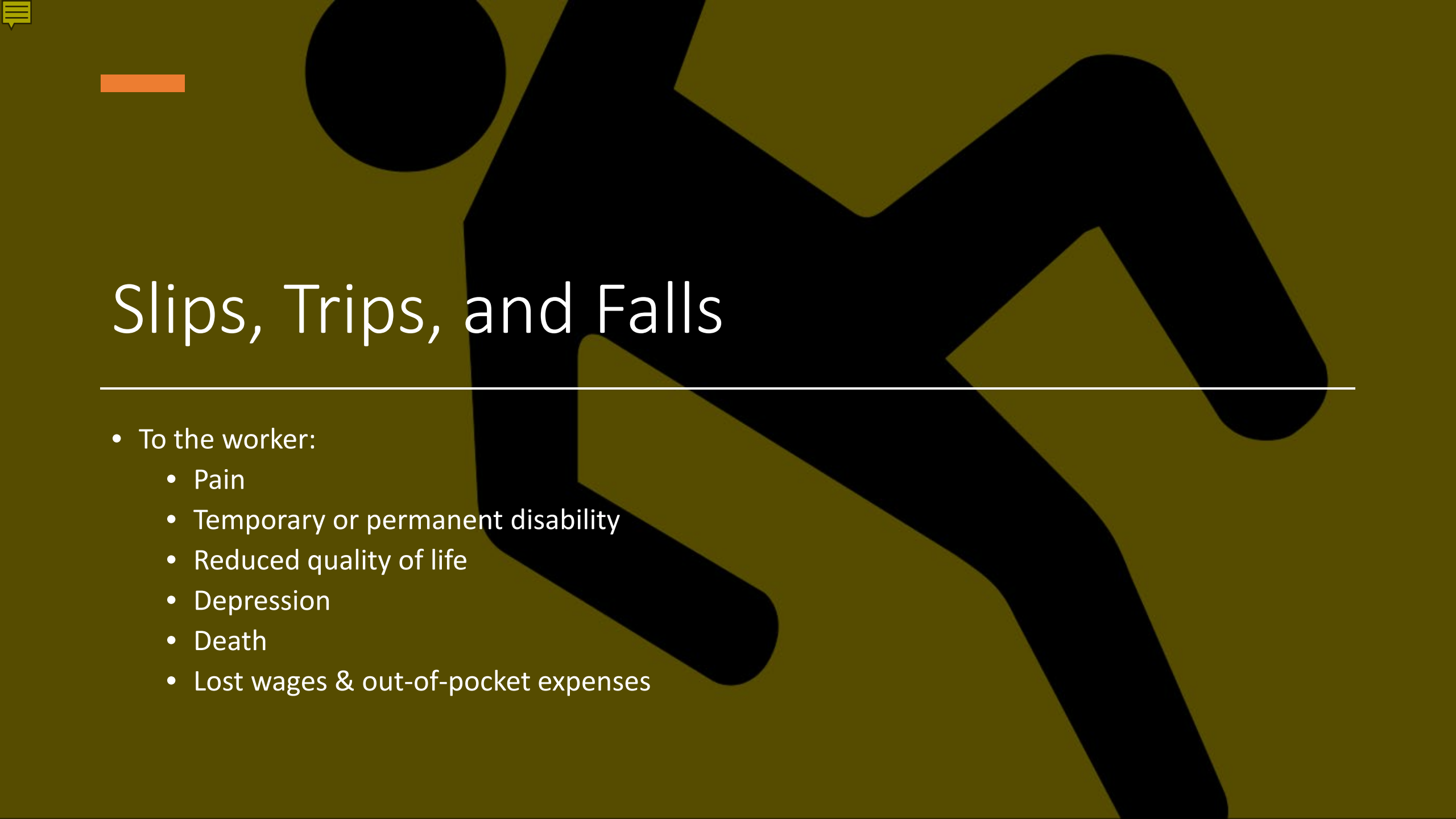
Exposure to Silica Dust

- Silica sand is a basic component of soil, sand, and granite and can be found in many concrete and masonry products. Green roof workers may be exposed to many forms of silica dust from the cutting, grinding and drilling of these products, often used in the hard-scaping of rooftop landscapes.

Silica Dust

- Silicosis damages the lungs permanently
- Debilitating
- Leads to death
- Kidney disease
- About 2.3 million people in the U.S. are exposed to silica at work


Engineering Controls
Work practices
PPE (including respirators)
Decreasing Effectiveness



Slips, Trips, and Falls

- To the worker:
  - Pain
  - Temporary or permanent disability
  - Reduced quality of life
  - Depression
  - Death
  - Lost wages & out-of-pocket expenses

Environmental Conditions Increasing Risk of Trips & Slips

- Poor lighting
- Glare
- Shadows
- Bulky PPE (includes improper footwear)
- Excess noise or temperature
- Fog or misty conditions
- Poor housekeeping
- Improper cleaning methods & products
- Inadequate or missing signage

1. Small falls do not have serious consequences?

a. True b. False

2. To prevent falls, only management can control factors that contribute to falling?

a. True b. False

3. To prevent trips, you should always be on the lookout for potential trip hazards?

a. True b. False

4. Always assume that someone else will address a slip and trip hazard if you do not?

a. True b. False

Slip, Trip, and Falls

- Aisles and passageways should be well-lit, clean, and marked
- Material storage and work-related scraps shouldn’t create trip hazards
- Uneven surfaces should be repaired or reported
- Hoses and cables should be routed away from active work zones and walkways

Thank you

- Daniel Alexander Emergency Preparedness Coordinator
- Daniel.alexander@dc.gov
- https://www.osha.gov/green-jobs/green-roofs