Introduction

Combining physical work and a hot environment increases your risk of dehydration, heat stress, and heat stroke.

Critical Task Inventory

- Dehydration
- Heat Stress / Exhaustion
- Heat Stroke
- Sunburn
- Fluid Drinking Guidelines

PPE Requirements Summary

Image	Description	Standard
	Long Sleeve Shirt should be white	Recommended
	Sun Block	Recommended
	Sun Hat	Recommended

Dehydration

Introduction

Dehydration is a condition that occurs when the body loses more fluids than a person takes in. Small differences usually go completely unnoticed and don't cause problems. Losing larger amounts of water without replacing them can sometimes make a person feel quite sick and pose serious danger.

Hazard Assessment

Task Steps and Hazards	F	S	P	R
Dehydration				
• Dehydration (S&H)	3	1	1	5

Controls

Awareness

Although thirst is one indicator of dehydration, it is not an early warning sign. By the time you feel thirsty, you are likely already dehydrated. Other symptoms of dehydration include:

- Dizziness and light-headedness.
- Dry or sticky mouth.
- Decreased and darker urine production.

Reporting

- Use the sign-out board indicating where you are working.
- Call for your or a First Aid Attendant if you are feeling nauseous or fatigued, are having trouble concentrating, or have a fainting spell.
- If working in the bush, report to your First Aid Attendant upon your return.

Actions

- Drink fluids frequently – before you get thirsty.
- Slow down your work pace.
- Take frequent breaks to hydrate yourself.
- Wear a hat and loose-fitting clothing.

Frequency of Exposure (F)	Severity of Loss (S)	Probability of Loss (P)	F + S + P = Risk Rating (R)
1 = Up to Weekly 2 = Up to Daily 3 = 1+ Times / Day	1=Class C – Minor, non-disabling, non-disruptive 2=Class B – Serious injury or disruptive loss 3=Class A – Major injury, permanent disability or loss	1=Limited chance adverse event will occur 2=Adverse event likely to occur 3=Adverse event likely to occur soon	**7 to 9 = High Risk** **5 to 6 = Medium Risk** **3 to 4 = Low Risk**

Type Of Hazard: H= Health (acute or chronic) S= Safety (people and equipment) Q= Quality P = Production E= Environment

Heat Stress / Exhaustion

Introduction

Heat stress results when your body's cooling system is stressed from working in a hot environment. Heat exhaustion can develop after several days of exposure to high temperatures and inadequate or unbalanced replacement of fluids.

Hazard Assessment

Task Steps and Hazards	F	S	P	R
Heat Stress / Exhaustion • Heat Stress / Exhaustion (S&H)	3	2	1	6

Controls

Awareness

Most people feel comfortable when the air temperature is between 20 and 27°C, and are uncomfortable when air temperature or humidity is higher. Higher heat and humidity do not cause harm as long as the body can adjust and cope with the additional heat. Very hot environments can overwhelm the body's coping mechanisms, leading to a variety of serious and possibly fatal conditions. Watch for:

- Cool, clammy, pale skin.
- Dry mouth.
- Dizziness.
- Nausea / vomiting.
- Rapid pulse.
- Sweating.
- Fatigue, weakness.
- Headache.
- Muscle cramps.

Reporting

Call for your First Aid Attendant or get transported to medical services.

Actions

- Move to a shaded area.
- To cool down, take frequent sips of cool water. Drinking cold water may cause stomach cramps.
- Drink a lot of cool water all day — before you feel thirsty. Every 15 minutes, you may need a cup of water (5 to 7 ounces).
- Do not continue with work until you are completely recovered.

Heat Stroke

Introduction

Heat stroke is caused by prolonged exposure to heat. It is the most severe form of heat illness and if left untreated, it is a potentially lethal condition. If the weather is hot enough, even people who are not working can be afflicted.

Hazard Assessment

Task Steps and Hazards	F	S	P	R
Heat Stroke • Heat Stroke (S)	3	3	1	7

Controls

Awareness

- High body temperature.
- The absence of sweating, with hot red or flushed dry skin.
- Rapid pulse and difficulty breathing.
- Strange behavior, hallucinations, or confusion.
- Agitation or disorientation.
- Dilated pupils.
- Seizure, or ultimately, coma, can occur in extreme heat conditions.

Reporting

- Victims of heat stroke must receive immediate treatment to avoid permanent organ damage.
- Always notify emergency services (9-1-1) immediately.

Actions

- First and foremost, cool the victim. Get the victim to a shady area and loosen clothing.
- Apply cool or tepid water to the skin (for example, you may spray the victim with cool water from a garden hose).
- Fan the victim to promote sweating and evaporation.
- Place ice packs under armpits and on the groin.
- Monitor body temperature with a thermometer and continue cooling efforts until the body temperature drops to 38 - 39°C.

Frequency of Exposure (F)	Severity of Loss (S)	Probability of Loss (P)	F + S + P = Risk Rating (R)
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Type Of Hazard: H= Health (acute or chronic) S= Safety (people and equipment) Q= Quality P = Production E= Environment

Sunburn

Introduction

A sunburn is a burn to the skin produced by overexposure to ultraviolet (UV) radiation, commonly from the sun's rays. Sunburn can be life-threatening and is a leading cause of cancer.

Hazard Assessment

Task Steps and Hazards	F	S	P	R
Sunburn				
• Sunburn (S)	3	3	1	7

Controls

Awareness

Sunburn can easily be prevented:

- Through the use of sunscreen, clothing (and hats).
- By limiting solar exposure, especially during the middle of the day.

Actions

The only cure for skin burn is slow healing, although skin creams can help reduce discomfort.

Fluid Drinking Guidelines

Introduction

After just three hours on the jobsite, workers' performance can be drastically affected by the effects of heat stress. Replacing fluids lost from sweating is the single most important way to control heat stress, keeping workers productive, safe and alert.

Maintain Your Focus

To ensure that you are performing at your peak, use the one-liter rule: drink one liter for every hour you are out.

What Happens if You Don't Drink?

If you don't drink often, the consequences are painful. When the dehydrated body is also wearing protective clothing in conditions of elevated heat and / or humidity, the danger of heat illness is magnified.

Hydration Tips

- Drink before, during and after physical labor to replace body fluid lost in sweating.
- Anticipate conditions that will increase the need for water, including high temperature, humidity, full gear, and degree of strenuous activity.
- Drink every 15-20 minutes to ensure proper hydration – by the time you are thirsty, you are already dehydrated.
- Keep water within easy reach.
- Drink cool water – your body absorbs it more quickly.