

Unit	1008
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Table of Contents

Unit Introduction	5
Section 1008-1: Professionalism	6
Key Point 1.1: Arriving at Work on Time and Prepared for the Day	7
Preparation Checklist.....	7
Why Be Prepared	8
Efficiency	8
Safety	8
Pre-trips	8
Key Point 1.2: Effectively Dealing with Problems	9
Personal Problems	9
Interpersonal Relationships at Work	9
Changing Work Conditions	10
Key Point 1.3: Giving and Receiving Constructive Feedback	11
Giving Constructive Feedback.....	11
Guidelines for giving constructive feedback.....	11
Receiving Constructive Feedback	12
Key Point 1.4: The Importance of a Good Work Ethic.....	13
Section 1008-2: Safe Productivity.....	14
Key Point 2.1: Working Safely in an Organized Manner within Specific Worksite Requirements.....	15
Teamwork	15
Predictability	15
Work Progressively.....	15
Key Point 2.2: Achieving Outcomes While Maintaining Safe Work Practices...	17
Section 1008-3: Physical and Mental Well-Being.....	18
Key Point 3.1: Being Fit for Work.....	19
Self-awareness	19
Recognition of Personal Limitations	19
Impairment.....	20
Drugs	20
Prescription drugs	20
Recreational and illegal drugs.....	21
Alcohol	21
Nutrition.....	21
Benefits of proper nutrition	22
Eating right	23
Key Point 3.2: Physical Conditions that can Affect Ability to Perform Your Job	24
Dehydration	24
Preventing dehydration	24

Sports and energy drinks	25
Signs and effects of dehydration	26
Urine color chart	27
Maintaining hydration	27
Frostbite and Hypothermia	28
Frostbite.....	28
Hypothermia	28
Preventing frostbite and hypothermia	29
Heat Stress	30
Environment	30
Work	30
Worker	30
Dangers to workers	30
Signs of heat cramps.....	31
Signs of heat exhaustion	31
Signs of heat stroke.....	31
Preventing heat stress.....	31
Physical Fatigue and Exhaustion	32
Causes of fatigue	32
Sleep disorders	32
Signs and effects of fatigue	33
Managing fatigue.....	34
Minor Injuries	34
Key Point 3.3: Mental Conditions that can Affect Ability to Perform Your Job ..	35
Mental Fatigue	35
Rest breaks	36
Sleep deprivation.....	36
Personal Problems and Emotions	36
Overconfidence.....	36
Interpersonal Behaviour, Bullying, and Aggression	36
WorkSafeBC's Role	37
Target Fixation and Production, Performance, and Peer Pressure	38
Learner Activity	39
Answer	40
Self-Quiz.....	41
Self-Quiz – Answers.....	43

Unit Introduction

By the end of this unit you will be able to demonstrate knowledge of:

- Professionalism
- Safe productivity
- Physical and mental well-being

Section 1008-1: Professionalism

What you will learn in this section

By the end of this section you will be able to demonstrate knowledge of the following key points:

- 1.1 Arriving at work on time and prepared for the day
- 1.2 How to effectively dealing with problems
- 1.3 Importance of giving and receiving constructive criticism
- 1.4 The importance of a good work ethic

Key Point 1.1: Arriving at Work on Time and Prepared for the Day

It is important to arrive at work on time and prepared for the day with Personal Protective Equipment (PPE) in working order. This allows time to plan your work, knowing what you and others need to do, and ensuring you are well prepared. As a professional, you must come to work mentally and physically prepared for the day, everyday.

Note: There is more on mental and physical well-being in [Unit 1008-03](#).

When you arrive at work on time and prepared for the day you:

- promote safety
- minimize operational and transport delays
- avoid being rushed
- are able to participate in the daily work plan meeting
- can ensure tools and equipment are in working order

Preparation Checklist

This checklist will help you be prepared.

- Know what tasks you will be performing and plan ahead for them.
- Ensure your tools and equipment are in working order.
- Be prepared to adjust your plan in case something unexpected happens. You should always have a plan B in case your original plan doesn't work.
- Ensure you have all your PPE required for the task and that it is maintained and in good condition.
- Carry additional nutrition and hydration for when you are working to prevent suffering from low blood sugar or dehydration.
- Clothing for the work conditions and if applicable a change of clothing suitable for the conditions
- Ensure you carry any required paperwork such as your map.
- Ensure you are mentally and physically prepared for work.
- Ensure you know and are prepared to follow safe productivity principles.

- Know where First Aid kits are located and ensure they are fully stocked.
- Ensure everyone knows the check-in procedures and test communication devices.

Why Be Prepared

Efficiency

Failing to arrive on time fully prepared for work can slow you and your coworkers down and interfere with getting to the job site on time. This could result in you and your coworkers missing the daily safety meeting/crew talk.

Getting ready for the next day begins the night before. For example, if you fuel and grease your equipment at the end of the shift, it will be ready to go first thing in the morning.

By being prepared you avoid unnecessary transportation delays as well as being rushed at the beginning of your shift. Your tools and equipment are in working order and ready for the day.

Note: Inefficiencies can become safety issues when they distract you or others from their work or when workers try to make up lost time.

Safety

Planning ahead and being prepared allows you to focus on your work. Planning contributes to safety. If you are not prepared for the working conditions you face that becomes a distraction and a safety risk, and you may endanger yourself and others.

For example, if you get wet working in the forest on a cold day, carrying a change of clothes allows you to get warm and dry again and avoid the dangerous distraction of being cold. It also allows you to avoid dangerous physical conditions like hypothermia.

Pre-trips

Being attentive and focused at the wheel of a vehicle is important to driving safely, but it's not enough. The vehicle you're driving needs to be well maintained and in good working condition.

Conducting a pre-trip inspection of your vehicle will ensure that everything is running correctly and allows you to identify any issues before departure. If an issue with the vehicle is identified, do not drive it until the issue has been resolved. Pre-trip requirements will vary from company to company as well as vehicle to vehicle.

Key Point 1.2: Effectively Dealing with Problems

Don't bring unresolved problems to work with you that might become a distraction. Part of being a professional involves effectively dealing with both personal and professional problems and not letting one distract from the other.

Personal Problems

If you have personal problems you should attempt to resolve these before work so that you are not thinking about them when you are performing your work duties.

If you're struggling with a personal problem that you have not resolved, you should take time off work until it is resolved or at a minimum talk to your supervisor. Remember, a distracted worker is more likely to get injured.



CAUTION!

Communication commonly breaks down when a problem arises between coworkers. Safety and productivity are the first things to be affected by lack of communication.

Interpersonal Relationships at Work

Interpersonal issues with coworkers can make it difficult for you to ask for help. It may also keep others from asking for your help when they need it. A lack of communication affects safety. Resolving conflict contributes to open communication which in turn improves safety for everyone.

Communication is the first thing to break down when a problem arises between co-workers. There are several situations where you rely on support or advice from others, such as when:

- something goes wrong and you need to deal with it
 - you are developing your career, and learn from others
 - you are aware of your limitations and need assistance
-



Learning Point

A worker has issues at home with a family member. Could this issue affect the worker's ability to work? Why or why not?

Changing Work Conditions

When work conditions change unexpectedly or are consistently changing, this may cause stress to workers and impact safety. Communication of those changes is key to reducing or eliminating that stress.

To ensure safety is not affected make sure to communicate:

- when the change will take place
- why the change is taking place
- how this will affect workers

If you are still unclear of the change or have safety concerns, discuss with your supervisor.

Key Point 1.3: Giving and Receiving Constructive Feedback

Throughout your career you should continue to learn and improve your knowledge, skills, and attributes. In order to do this you must be able to give and receive constructive feedback.

On the job you are working as a team even though you may be working at a distance from them. Constructive feedback involves telling someone how to do something right, rather than just telling them they're doing it wrong.

It is important to be able to give and receive constructive feedback because it:

- builds respect
- identifies potential areas of weakness
- reinforces strengths
- contributes to open communication in the workplace
- reduces operational challenges
- promotes safety
- promotes productivity
- can build a level of trust between co-workers

Giving Constructive Feedback

You are responsible for your coworker's safety as well as your own. Because of this, you must be able to let others know if they are working in an unsafe manner or creating an unsafe situation. This is true whether it is unsafe for that worker, for you, or for someone else.



Reminder

Ignoring an unsafe situation because it is uncomfortable to address can result in injury or death. It is your duty.

Guidelines for giving constructive feedback

Guidelines for giving constructive feedback include:

- Thinking before you speak
- Remaining calm
- Giving any feedback based on what that person is doing or not doing that makes it unsafe
- Not making it personal
- Treating others as you would like to be treated
- Being polite and considerate when giving advice

- Ensuring you are speaking to facts and not opinion

Receiving Constructive Feedback

Similarly, if someone tells you how to do something differently, understand that they are telling you in order to make you and your workplace safer.

Here are some guidelines for receiving constructive feedback:

- Remember safety affects us all
- Remain calm
- Keep an open mind. Other people have different or more experience than you, so they may know things you do not.
- Constructive feedback is not a criticism of you, or of your professional status
- Listen to what they are telling you and ask questions for clarification if necessary
- Paraphrase the feedback you are getting to ensure you understand it completely. Ask for confirmation that your interpretation is correct
- If you don't understand or if you disagree with the feedback, you can discuss it with your coworker, your supervisor, or others in order to decide the best course
- Be open and gracious when receiving constructive feedback. Say "Thank you" and avoid saying "I know."

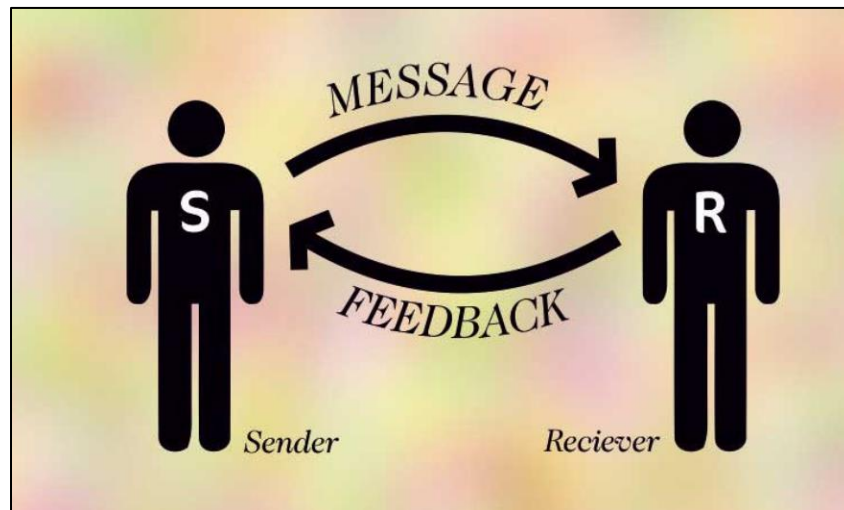


Figure 1: Giving and receiving constructive feedback

Key Point 1.4: The Importance of a Good Work Ethic

A good work ethic can be defined as a belief in working attentively, conscientiously, and professionally.

An example of a good work ethic includes:

- Following Safe Operating Procedures
- Arriving on time, prepared and ready for the work day
- Working diligently to meet outcomes in an organized manner
- Displaying integrity in work activities when no one is looking

A good work ethic will help you get the job done and still keep yourself and others safe. It will also make you a more valuable employee.

It is important to have a good work ethic to:

- Show respect for others including your co-workers
- Show self-respect and pride in yourself
- Meet workplace expectations
- Minimize down time
- Deliver a good product



Learning Point

Does it matter to you if other members of your team do not have a good work ethic? Why or why not?

Section 1008-2: Safe Productivity

What you will learn in this section

By the end of this section you will be able to demonstrate knowledge of the following key points:

- 2.1 Working safely in an organized manner within specific worksite requirements
- 2.2 Achieving outcomes while maintaining safe work practices

Key Point 2.1: Working Safely in an Organized Manner within Specific Worksite Requirements

Working in an organized manner is important in any occupation. You may have limited supervision and much of the responsibility for deciding how things will be done. You must think ahead and be aware of your surroundings at all times. At the same time, you must meet the requirements of your worksite for safety and quality while working in an organized manner.

Working in the forest environment involves multiple possible outcomes in many different situations. You need to be prepared and have a plan on how to handle contingencies that arise.

Teamwork

You are part of a team and protecting your own and others' safety is part of your responsibility. Working in a team environment requires a level of organization in order to coordinate your efforts with others.

For example, when you are helping a coworker with a specific problem, you need to be organized in order to coordinate that with them and also to fit it into your own work plan.

Predictability

You should develop the ability to plan and predict where in your work tasks you will be throughout the day.

For example, if you are a faller and there is a tree that you need assistance with to fall that day, but you have other trees you must fall before that one, you should be able to estimate approximately when you will get to the tree where you need assistance. That way, you can advise the other faller when they will be needed. This allows them to plan their work around coming to help you, and may prevent wasted time where one of you is waiting for the other, rather than working.

Work Progressively

Working in an organized manner involves working progressively and efficiently. This means doing things in the correct order, like ensuring your equipment has enough gas in it before beginning work. It also

means making the most of your work and meeting multiple objectives with a single action.

For example, if you're a hooktender and it is time to change roads, you will have your blocks moved and strawline strung ahead of time.

Key Point 2.2: Achieving Outcomes While Maintaining Safe Work Practices

Productivity is a balance between safety, quality, and required outcomes. Of these, safety is the first consideration.

The asterisk in the diagram below shows the balance of all three factors. This balance is what you are striving for in your work.

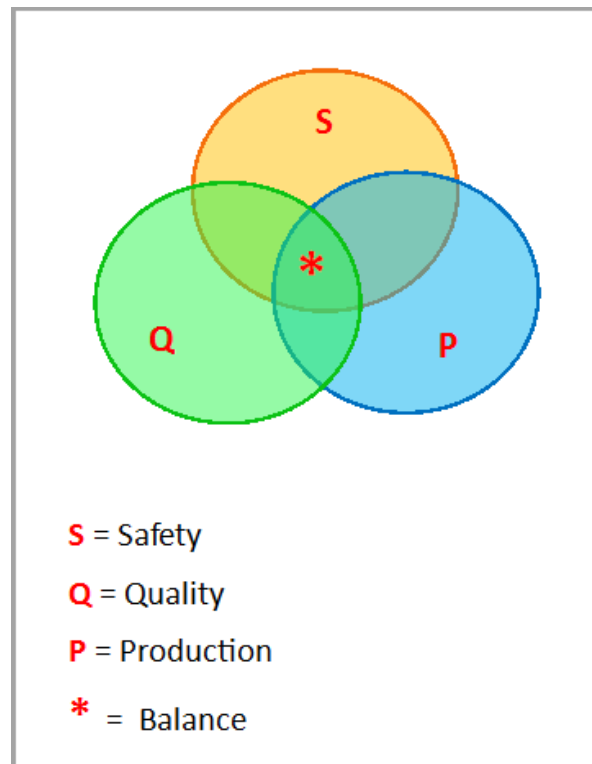


Figure 2: Balance



Learning Point

The supervisor is pressuring workers to meet deadlines. How does this affect the worker?

Section 1008-3: Physical and Mental Well-Being

What you will learn in this section

By the end of this section you will be able to demonstrate knowledge of the following key points:

3.1 Being fit for work

3.2 Physical conditions that can affect ability to perform your job

3.3 Mental conditions that can affect ability to perform your job

Key Point 3.1: Being Fit for Work

Looking after yourself and having a good attitude about yourself, your work, and others is necessary to help keep you safe.

All workers should arrive for work mentally and physically prepared and be physically able to do the job. It is important to eat a balanced diet and get enough sleep so you are alert and focused for the job. You should never work if you are physically or mentally impaired, including being under the influence of alcohol or drugs.

Many physical or mental conditions may influence or cause other conditions. For example, being under the influence of alcohol can influence dehydration, vision issues, judgment, and fatigue.

See [Fit to Log](#) by Delia Roberts for tips on maintaining hydration.

Self-awareness

An important factor in being fit for work is being self-aware. You should continually monitor your physical, mental and emotional health, to ensure you remain fit for work throughout the day. With many physical or mental issues, the more your condition deteriorates, the more difficult it is to maintain your awareness of that condition.

For example, as you become more dehydrated, your mental ability and your self-awareness decrease and you may not realize dehydration is an issue.

Recognition of Personal Limitations

Being able to recognize your limitations is very important in knowing when you:

- need to ask for help or advice
- should consider alternate work methods
- should rest

Self-awareness is required to recognize your limitations.

Your personal limitations can change depending on the situation and your physical or mental condition.

Your perception of your personal limitations may be influenced by things such as:

- lack of training or equipment, especially for a specific task
- injuries
- overconfidence
- physical and mental factors
- lack of confidence

In recognizing your personal limitations, you should also remember that you must refuse unsafe work. See [OHS Guidelines Part 3](#). For example, you may deem a task unsafe as your experience level or other limits would make the activity unsafe for you.

Impairment

Impairment is the inability to function normally or safely. Being impaired can affect your judgment, awareness, motor skills and senses, such as your vision. Impairment may be caused by:

- fatigue
- personal situations
- work situations
- prescription or over the counter medications
- alcohol or drugs
- stress
- poor nutrition
- dehydration

Your ability to work safely is impaired if you are under the influence of alcohol or drugs. Personal or work situations may also impair your ability to work if they keep you from being alert and focusing on what you are doing.

If you have a physical or mental impairment which may affect your ability to safely perform assigned work, you must inform your supervisor. You must not knowingly do work where the impairment may create an undue risk.

Sections [4.19](#) and [4.20](#) of the OHS Regulation deal with physical and mental impairment. Both you and your employer have a responsibility to ensure you are not working while physically or mentally impaired.

Drugs

Health Canada describes a drug as “any substance other than food, which is taken to change the way the body or mind functions”. This includes a variety of substances including alcohol, over the counter, prescription, and illicit drugs and other substances. These substances work on the central nervous system and affect memory, judgment and motor skills.

While using some of these substances is socially and legally acceptable, others are illegal. Their impacts on motor coordination, perceptual abilities, and physical and mental capacity can all be of concern in a workplace setting. Just because they are socially acceptable or legal does not mean it is acceptable to consume them before or during work.

Prescription drugs

- Prescription drugs can cause impairment which interferes with your judgment and motor skills.
- Sleeping pills are best used occasionally or for only a few days at a time.

- Cold and flu medication can keep you from sleeping.



Reminder

If you are taking medication, over-the-counter or prescribed by a doctor, follow the package directions, know the side effects, and advise your co-workers and supervisor.

Recreational and illegal drugs

These are drugs (such as cocaine or methamphetamine) used without medical justification for their psychoactive effects often in the belief that occasional use is not habit-forming or addictive.

Some industries have begun testing for drugs and alcohol, including the forest industry.

Alcohol

Working in the forest industry is a highly hazardous occupation. All workers should try to remain alcohol free. Alcohol can cause a significant decrease in your ability to be attentive, to concentrate, and to react to unexpected situations.

- While it is important not to work under the influence of alcohol, it is important to understand the longer-term impacts. Alcohol can help you relax before bed, but it can also disrupt your sleep.
- Alcohol can reduce your performance at both mental and physical tasks for up to a week following binge drinking.
- Alcohol can make you dehydrated, even when you are drinking what is usually an adequate amount of water.

It is everyone's responsibility to take part in controlling the hazard. For example, if you suspect that a co-worker is under the influence, it is your responsibility to notify your supervisor.

Nutrition

Every worker uses mental energy as well as physical energy. Your body is like a machine – it needs the right fuel (food) for it to work efficiently. Proper nutrition improves motivation, concentration, attention, alertness, and reaction time by providing fuel for mental skills. Without adequate nutrition, your body and mind will become fatigued, sluggish, and uncoordinated, creating a dangerous situation.

Here are some general tips about food:

- be sure to eat a balanced, healthy, daily diet to meet your body's nutritional requirements
- eat breakfast - it plays a vital part in helping your mental performance

- all foods provide fuel, but the best fuel is found in starchy carbohydrate rich foods
- carry enough food and water to feed and hydrate you throughout the day. Carry extra food when working in remote areas in case you get stranded overnight

Benefits of proper nutrition

The table below outlines the benefits of proper nutrition. Healthy eating is fundamental to good health and gives us the energy to do our job each day.

It is not just consuming the right amount of food, but the type of food you choose. Deciding when to eat can also make a difference, relative to work and rest.

Benefit	Description
Energy to work hard	<ul style="list-style-type: none"> • At a basic level, food is fuel. It provides the calories needed to survive and complete our daily work tasks. • If we have a physically demanding job, we need to have enough calories to complete the work. • If we don't have a physically demanding job, we have to manage our calorie intake as well. • Individuals vary in the amount of daily calories that they need depending on their activity level and other factors.
Speeds up recovery	<ul style="list-style-type: none"> • At the end of a hard day, our bodies need to "recharge the batteries" and replenish our energy stores. It is important to think about what we are eating while at work but also after work. • Making the right choices will help active workers recover quickly and be ready to work hard the next day. <p><i>Note: There are other factors that also come into play here such as rest and sleep.</i></p>
Build and repair tissue	<ul style="list-style-type: none"> • Many forestry workers experience repetitive strain or MSI injuries, which are caused by repetitive movements breaking down the body until an injury results. • Workers should choose foods that are nutrient rich and supply the necessary elements (adequate protein, vitamins, minerals, etc.) to help maintain health and repair broken down tissue.
Boosts immune system	<ul style="list-style-type: none"> • Adequate blood sugar levels are needed to sustain the immune system. The chances of catching a cold or flu increases when blood

	<p>glucose levels are low.</p> <ul style="list-style-type: none"> • Fats contain fatty acids some of which are necessary for the proper functioning of the immune system.
Improved mood	<ul style="list-style-type: none"> • Most people are familiar with the term “hangry” which is the combination of hungry and angry. People get hangry when their blood sugar level drops. This is also known as hypoglycemia. • The preferred fuel for the brain and nervous system is glucose (blood sugar). When it drops the worker’s ability to stay alert, make good decisions, and react quickly is impaired. • Although workers may not have blood sugar levels low enough to be considered clinically hypoglycemic, research with fallers, drivers and mill workers shows that when blood sugar rises and falls a lot as it does with the typical north American diet, reaction time and decision making are impaired by about 15% or the equivalent amount to 10 years of aging.

Table 1: Benefits of proper nutrition

Eating right

Eating right helps maintain blood sugar levels which are key to controlling ups and downs in energy levels.

Remember:

- eating low-fat, high-protein foods can increase alertness
- high-fat foods can slow you down
- high-sugar foods can cause your blood sugar to rise and fall quickly

See the BC Forest Safety Council’s [Faller Food Chart](#) for more about information about nutritional foods.

Key Point 3.2: Physical Conditions that can Affect Ability to Perform Your Job



CAUTION!

If you are hungry, thirsty, cold, heat stressed, or tired, your ability to concentrate on the task at hand will be impaired.

Many physical conditions can affect your ability to perform your job:

- dehydration
- frostbite
- hypothermia
- heat stress or sunstroke
- fatigue or exhaustion
- minor injuries
- issues with your strength
- issues with your vision, hearing, or smell

Most of the physical well-being factors also contribute to the mental well-being of a worker.

Dehydration

We lose fluid out of our system by sweating, bowel, and bladder movement and even through breathing. Although most people don't realize it, we lose a significant amount of fluid through breathing, especially when working at high elevations or in cold dry air. Dehydration occurs in both hot and cold environments. Even though you may not feel as if you're sweating as much when it's cold water vapour is being expelled.

Hard physical work causes your body to sweat as it works to cool down, resulting in a fluid loss of between 0.5 and 1 litre per hour. Sweating is the main cause of moisture loss in physical jobs, and dehydration comes from not replacing the lost moisture.

It is important for you to drink enough fluid to fully replace your fluid loss. Sweat rates vary from person to person but generally, you need to drink 0.5 to 1 litre an hour to prevent dehydration. The best way to do this is to drink small amounts of fluid at a time, regularly, throughout the day.

Preventing dehydration

Drinking plenty of fluids helps to improve your performance.

The following tips will help prevent dehydration:

- keep an adequate supply of drinking water on hand. Choose plain, cool water, not sugary drinks, or caffeinated drinks such as coffee, tea, or colas
- be careful when consuming alcohol or drinks that contain caffeine as both are diuretics, which means they cause you to lose more fluid than you gain from them
- stay well hydrated, especially when it is very cold and very hot
- drink small amounts of water or warm liquids regularly throughout the day. Don't chug large amounts of water when you drink, because this will cause your kidneys to excrete more fluid
- avoid drinking water from natural sources such as streams, rivers and lakes because bacteria in the water can cause diarrhea

Sports and energy drinks

Sports drinks can be helpful for workers who sweat heavily or are prone to losing lots of salt when sweating. One way to tell if you lose lots of salt during work is to check your shirt at the end of the day. If you have white streaks of sweat on a dark shirt after it dries, you are probably losing enough salt that a sports drink in moderation may be beneficial.

Energy drinks are not a good liquid for hydration. They contain sugar and caffeine that provides a temporary increase in energy and alertness but can have long term negative health effects from over use.



Figure 3: Energy and sports drinks



Reminder

Drink small amounts of water regularly throughout the day. Don't wait until you become thirsty as you are becoming dehydrated by that point.

Water intake takes 2 hours to re-hydrate your body.

Signs and effects of dehydration

Dehydration reduces mental and physical performance. The greater the degree of dehydration, the greater the reduction in mental and physical performance, and the higher the risk of injury or illness.

Thirst is an indicator of when you are becoming dehydrated. Your body can be down about one litre of fluid before you start feeling thirsty. A feeling of thirst can be satisfied by drinking a small amount of water which can lead to not fully replacing all the fluid that has been lost. It is important to start drinking water early and often before you start feeling thirsty.

The effects of dehydration include:

- increased risk of frostbite and hypothermia
- increased stress and heart rate
- reduced capacity for work
- reduced mental ability, concentration, and coordination
- slower decision making ability
- earlier onset of physical fatigue
- reduced heat tolerance
- feelings of drowsiness, lethargy, and irritability
- headaches

The table below shows how the effects of fluid loss increase with the amount of fluid loss.

Litres Lost	Signs/Effects of this Loss
1	<ul style="list-style-type: none">• Dark urine (see Urine Color Chart, below)• Decrease in mental ability and appetite
2	<ul style="list-style-type: none">• Decrease in physical performance• Headaches
3	<ul style="list-style-type: none">• Flushed skin• Sleepiness• Nausea
4	<ul style="list-style-type: none">• Difficulty walking and talking• Slurred speech
8	<ul style="list-style-type: none">• Difficulty seeing and hearing
12+	<ul style="list-style-type: none">• Numbness• Coma• Death

Table 2: Effects of fluid loss

Urine color chart

The table below indicates dehydration based on urine colour.

Urine color	Possible meaning
Clear	Good hydration, over hydration or mild dehydration
Pale Yellow	Good hydration or mild dehydration
Bright Yellow	Mild or moderate dehydration or taking vitamin supplements
Orange, Amber	Moderate or severe dehydration
Tea-colored	Severe dehydration

Table 3: Urine colour chart

Maintaining hydration

Below is the BC Forest Safety Council's [Maintaining Hydration](#) checklist.

MAINTAINING HYDRATION



FUELING UP

- Your engine can't run right if the fuel mix is wrong. Do the same for your body to keep your reactions sharp.
- Even mild dehydration can reduce your physical endurance and your ability to stay focused.



HOW MUCH WATER YOU NEED TO DRINK

- Drinking small amounts of plain water frequently is the best way to stay hydrated.
- SIP don't chug your water! A small hydration bag helps to make it easy to drink regularly.
- Aim for 1/2 cup of water every 15 minutes of physical work and increase if you sweat heavily.



PPE + WATER LOSS

- Summertime temperatures can cause very high sweat rates.
- Working muscle generates a lot of heat, even in the winter.
- PPE restricts heat loss, which makes you sweat even more.



SPORTS DRINKS

- Use a sport drink or add a small amount of salt (1/8 tsp) and sugar (1/4 cup) per liter:
 - + If you are a heavy sweater.
 - + When temperatures are high.
 - + When you can't carry much water with you.
 - + You see white streaks on a dark work shirt when it dries.







Figure 4: Maintaining Hydration poster

Frostbite and Hypothermia

The hazards of a cold environment include frostbite and hypothermia. Frostbite and hypothermia are very serious conditions that can lead to loss of extremities such as fingers or toes and can result in coma and death.

Contributing factors include:

- temperature
- wind speed
- working near water
- length of exposure to cold temperatures
- type of clothing
- ability to keep warm while taking a break
- type of work performed
- certain medications
- not being acclimatized
- fatigue
- age and physical condition
- failure to drink fluids

Frostbite

Frostbite occurs when skin tissue freezes. Exposed skin is subject to frostbite when the air temperature is below zero or when wind speeds are high.

The first symptoms of frostbite include pain and redness. As the cold progresses the affected part becomes pale and the pain is replaced by tingling and numbness. The frozen extremity may appear completely white or be mottled with blue and white patches. The affected tissue feels frozen and solid to the touch.

The most commonly affected areas include:

- ears
- fingers
- toes
- cheeks
- nose

Hypothermia

Hypothermia is a serious condition. It occurs when the core body temperature drops below 35° C and the body loses the ability to prevent heat loss.

Hypothermia is a gradual process. Initially the victim has a sensation of cold, followed by pain. With prolonged exposure the sensation of pain is reduced and numbness develops.



Figure 5: Symptoms of hypothermia and frostbite

The signs and symptoms of the three stages of hypothermia are:

First stage	<ul style="list-style-type: none"> • Shivering • Reduced circulation
Second stage	<ul style="list-style-type: none"> • Slow • Weak pulse • Slowed breathing • Lack of co-ordination • Irritability • Confusion and sleepy behavior • Slurred speech
Advanced stage	<ul style="list-style-type: none"> • Slow, weak or absent respiration and pulse • Inappropriate behaviour, such as taking off jacket in freezing temperatures • Dilated pupils • Muscle rigidity

Table 4: Signs and symptoms of hypothermia

Preventing frostbite and hypothermia

To avoid frostbite and hypothermia, it is important to wear appropriate clothing including a toque. Workers should wear at least three layers of clothing:

- an outer layer to break the wind and allow some ventilation such as a rain coat
- a middle layer of down, wool, or water wicking synthetics to absorb sweat and retain insulation when wet
- an inner layer of wool or synthetic weave to allow ventilation

Protect the exposed areas such as ears, feet, hands, face, and head. Up to 40% of body heat can be lost when the head is exposed.

Wear footwear that is insulated to protect against cold and dampness.

Keep a change of dry clothing readily available in case clothing becomes wet.

Use heated shelters, vehicles, or small fires to warm up, especially during breaks, or if you are experiencing symptoms.

Drink adequate amounts of warm fluids such as warm water. Do not eat snow as it causes cooling of the body and uses extra body energy to melt the snow.

Heat Stress

Very hot and dry weather conditions can also affect your physical well-being. Our bodies naturally maintain a temperature between 36°C and 38°C. Sweating cools our bodies down, but if you work in a hot environment this might not be enough. If your body heats up faster than it can cool itself, you can experience heat stress. This can lead to serious heat disorders and potential injury.

The following are the three main causes of heat stress.

Environment

- Heat from direct or indirect sunlight (reflection from pavement or kilns)
- Air temperature hotter than skin temperature (warms a worker up)
- High humidity (makes it harder for a worker to cool down)

Work

- The more active you are, the more heat you will produce

Worker

- Conditioning (regular work in hot environments makes workers less prone to heat stress)
- Poor health, including obesity, advanced age, and medical conditions (the body responds poorly to overheating)
- Not staying hydrated
- Excess clothing or inappropriate personal protective equipment (they trap heat and prevent cooling)

Dangers to workers

As a worker's body heats up, it loses fluids and salt through sweat. As workers dehydrate they are less able to cool themselves down.

Workers in a hot environment should be aware of the warning signs of heat stress:

- excessive sweating
- dizziness
- nausea

If heat stress is not recognized and treated early, it can lead to heat disorders which have serious effects on the body. These include:

- heat cramps
- heat exhaustion
- heat stroke

Signs of heat cramps

- Painful muscle cramps
- Can lead to heat exhaustion if left untreated

Signs of heat exhaustion

Signs of heat exhaustion include:

- shallow breathing
- increased heart rate
- weak, rapid pulse
- cool, pale, clammy skin
- sweating
- weakness, fatigue, dizziness
- headache and nausea
- fainting
- muscle cramps
- can lead to heat stroke if left untreated

Signs of heat stroke

Signs of heat stroke include:

- hot, dry, flushed skin
- no longer sweating
- agitation and confusion
- decreased level of consciousness and awareness
- headache
- nausea and vomiting
- seizures
- increase in breathing rate
- irregular pulse
- shock
- cardiac arrest

Preventing heat stress

The most effective way to reduce the risk of heat stress is to eliminate the source of exposure. If this is not possible, then exercise other risk controls. Examples are:

- wear appropriate protective clothing, for example, light clothing, natural fibres, synthetic wicking
- follow safe work practices. For example, work early shifts, rest in cool areas, and work the falling area to take advantage of the shade
- continuously drink small amounts of water
- be aware of the risk factors and indicators
- take time to acclimatize to the environment if possible. For example, graduated exposure

Check out the following WorkSafeBC references for more information:

- [Preventing Heat Stress at Work](#)

- [Heat Exhaustion](#)
- [Heat Stroke](#)
- [Sun Safety at Work: Workers](#)

Physical Fatigue and Exhaustion

Fatigue and exhaustion can be both a physical and mental condition. Fatigue is physical or mental weariness that results in reduced alertness. It can negatively affect your strength and coordination, and put you at greater risk for injury.

The word fatigue can be used to describe:

- a mental fatigue resulting from spending extended or intense periods of time on a task
- a physical state resulting from body movements like exercise
- an overall psychological and physical condition of lethargy that can result from several illnesses such as depression or the common cold
- sleep-related fatigue

Fatigue is a serious safety hazard that can result in:

- slower reaction time
- trouble concentrating or remembering things
- difficulty communicating clearly
- falling asleep on the job
- increased risk of a safety-critical mistake

Causes of fatigue

Fatigue can be the result of a variety of factors:

- hard physical work
- poor health
- poor physical shape
- lack of adequate sleep (not enough, or poor quality)
- heat
- drugs
- stress
- poor nutrition
- anxiety
- boredom
- overwork, for example, working long shifts (extra hours in a day and too many days in a row)

Sleep disorders

Sleep disorders are very common in the general population and more prevalent in shift-workers. Sleep deprivation may have similar effects to intoxication.

Many over the counter cold medications contain a stimulant called pseudoephedrine. The stimulating properties of this medication reduce nasal congestion, but if it is taken too close to bed time, the stimulating properties can also disrupt sleep quantity and quality which can result in fatigue the following day.

The effect of nicotine is very similar; by increasing the time to fall asleep also decreases total sleep time. This affects both sleep quality and quantity being affected.

Caffeine is also a stimulant and has even more effects on sleep as it increases the time it takes to fall asleep and decreases total sleep time.

Some seemingly harmless medications can also increase fatigue shortly after they are taken. An example is the common over-the-counter medications for allergies.

Signs and effects of fatigue

Fatigue is a serious safety hazard. It is important that you can spot the signs of fatigue. When you are fatigued, you may experience:

- low or no energy
- lightheadedness
- being very tired

The table below illustrates the impact of fatigue on human performance.

Area of Human Performance	Indicators (What would we see?)
General cognitive functioning	<ul style="list-style-type: none"> • Increasing difficulty problem solving • Decreasing vigilance • Increasing difficulty with communication tasks • Increasing difficulty with hand eye coordination • Increasing reaction time • Increasing information processing time
Problem solving	<ul style="list-style-type: none"> • Decreased flexibility – not adapting to change in situation • Increased perseveration in the face of evidence the plan is not working
Memory	<p>Increased difficulty maintaining information in short term or working memory:</p> <ul style="list-style-type: none"> • Asking for information multiple times • Having to refer to reference material frequently • Leaving tasks unfinished • Frequent reminders from co-workers
Attention and vigilance	<ul style="list-style-type: none"> • Slower response to stimuli • Not responding to stimuli • Less focus on task as demonstrated by decreased secondary task behavior (less proactive task management)

Reaction time	<ul style="list-style-type: none"> • Responds to stimuli more slowly than usual • Excessively long time to react to emergency situation • Prolonged time to make a decision
Mood	<ul style="list-style-type: none"> • Increased lethargy • Decreased interest in task • Increased irritability
Physiological effects	<ul style="list-style-type: none"> • Indication of succumbing to sleep (nodding off, falling asleep)

Table 5: Impact of fatigue on human performance

Managing fatigue

Managing fatigue includes using strategies to stay alert. This may even mean taking a nap.

Strategies to stay alert

In the case of minor to moderate fatigue a strategy to counter fatigue includes caffeine, exercise, and strategic napping. To deal with fatigue that is not sleep-related, ensure you are eliminating possible secondary causes, such as hunger or dehydration.

In the case of significant fatigue, this may require you to recognize your level of fatigue and take steps up to and including recusing yourself from duty.

Take a nap

- naps can supplement sleep but do not replace it
- naps 10 minutes or longer can improve alertness, communication and mood
- the value of a nap doesn't depend on the time of day
- allow 5 to 20 minutes for sleep inertia to pass

Minor Injuries

Keep in mind that even seemingly small injuries can affect your work performance. You must report your injury to your supervisor even if you can still work with it. You must take care of your injuries while working. Do not ignore or avoid reporting the injury because you are worried about seeming weak or losing income through time off.

You may be asked to participate in an investigation as a result of a close call/near miss or an injury.

Key Point 3.3: Mental Conditions that can Affect Ability to Perform Your Job

Many mental conditions can affect your ability to perform your job.

These include:

- mental fatigue
- personal problems and emotions
- overconfidence
- interpersonal behaviour
- bullying
- production/performance/peer pressure
- sleep deprivation

Most of the mental well-being factors can contribute to the physical well-being of a worker.

Mental Fatigue

Much of your work requires constant attention and intense mental effort, often over periods of 6 to 8 hours in duration. Having to maintain a high level of alertness places high demands on your body, and can contribute to mental and physical stress.

A worker must process a wide variety of information. This may be from drawing on memory and information processing capabilities. For example, a worker must:

- concentrate to recognize the visual hazards of terrain, weather, and other work conditions
- recall a number of different specifications and requirements
- meet time and production pressures
- work in diverse and often adverse weather
- be aware of any changes to the equipment, such as breakdowns

The longer you do a mentally demanding task, the greater the chance your performance will drop. A mentally fatigued worker is likely to have:

- increased mental error rates
- poor hazard recognition
- slower reaction time
- poor concentration, inability to focus
- increased boredom
- more negative moods
- increased muscular tension

Rest breaks

Arrange work schedules with two or more substantial rest breaks spread evenly throughout the working day to achieve recover from mental fatigue.

Rest breaks can include activities such as refueling equipment or filing the chain.



REMEMBER

Build two or more substantial rest breaks into your daily work schedule.

Sleep deprivation

Fatigue is also a result of insufficient sleep or sleep deprivation. It is simply the condition of not having enough sleep. As mentioned above, fatigue can be caused by many things which in turn lead to sleep deprivation.

Personal Problems and Emotions

Having problems at home, personal problems, and emotional issues can also affect your mental well-being and work performance and safety.

Some examples of the emotions which can affect your work are:

- stress (financial or family related)
- boredom
- anxiety
- trust
- anger
- depression
- too much going on

If you are having personal problems, including problems at home, inform your supervisor and get professional help if needed.

Overconfidence

Overconfidence is an issue because it interferes with knowing your limitations and may cause you to do something that puts you or one of your coworkers at risk. Be honest with yourself about what you can and can't do. Use your best judgment.

Interpersonal Behaviour, Bullying, and Aggression

Since you work in a team environment where everyone's lives depend on one another, you need to ensure that your interpersonal behaviour contributes to a safe work environment. Bullying coworkers, or being aggressive toward them is not acceptable at any

time. It is also not acceptable for a coworker to bully or be aggressive towards you or other workers.

If you've experienced bullying and harassment in your workplace, there are steps you can take. The first step is to report the bullying and harassment to your employer. Employers are required to have bullying and harassment policies and procedures in place, and to investigate the report, following their own procedures.

WorkSafeBC website lists the steps to resolving a workplace bullying or harassment complaint. They are:

1. Report to your employer

Report the bullying and harassment to your employer as soon as possible, following your employer's policies and procedures.

2. Contact the Prevention Information Line

If your employer has not taken reasonable steps to address the incident, contact the Prevention Information Line at 604.276.3100 (1.888.621.7233 toll free) and speak with a prevention officer about your employer's duty to take reasonable steps to prevent workplace bullying and harassment.

3. Submit a complaint

If the issue has not been resolved after reporting the incident to your employer and discussing it with a prevention officer, you may submit a complaint to WorkSafeBC. WorkSafeBC may make further inquiries into the steps your employer has taken to prevent workplace bullying and harassment.

WorkSafeBC's Role

WorkSafeBC's role is to ensure that employers have proper policies and procedures in place to address bullying and harassment, and that complaints of workplace bullying and harassment are investigated and addressed. WorkSafeBC's role is not to resolve or mediate any specific disputes or conflicts.

After receiving your completed questionnaire, a WorkSafeBC prevention officer will review it to determine if they have the authority to investigate further. If not, WorkSafeBC will notify you and briefly explain why WorkSafeBC will not be taking any further action. A prevention officer may refer you to other resources if available.

If your complaint is that your employer has failed to adhere to bullying and harassment legal requirements — and has no bullying and harassment policy and procedures in place in your workplace — a prevention officer can make sure your employer meets these requirements.

Target Fixation and Production, Performance, and Peer Pressure

Sometimes you might feel pressure to concentrate on and meet your production or other targets. At these times, it may seem that production is more important than safety and you might be tempted to take risks you wouldn't normally. Remember that safe productivity means that safety is more important than quality and production. Never put yourself or others at risk.

Similarly, do not let performance pressure or peer pressure distract you from working safely, or from acknowledging when you need to ask for advice or assistance.



REMEMBER

Poor production from co-workers can affect your mental ability to do your job.

Learner Activity



Fill in the blanks.

1. Thinking you can do more than you can is_____.
 2. Mental fatigue causes_____.
 3. Personal issues can cause_____.
 4. Peer pressure can cause_____.
-



Now check your answers on the next page.

Answer

Fill in the blanks.

1. Thinking you can do more than you can is **overconfidence**.
2. Mental fatigue causes **slower reaction time**.
3. Personal issues can cause **distractions**.
4. Peer pressure can cause **production pressure**.

Self-Quiz

1. Why is it important to arrive at work on time and prepared for the day? (1008.1.1)
 - Allows for a slower paced work day, minimizes delays
 - Good for morale, looks good to crew and supervisor
 - More time to be prepared, demonstrates work ethic
 - Minimizes operational delays, promotes safety
2. What is the first thing affected by a communication breakdown? (1008.1.2)
 - Safety
 - Work load
 - Supervision
 - Production
3. Why is it important to give and receive constructive feedback? (1008.1.3)
 - Increases operational capacity
 - Positive affect on workload
 - Identifies areas of improvement
 - Reduces lost work time
4. Why is it important to have a good work ethic? (1008.1.4)
 - Others view you in positive light
 - Increases available downtime
 - Helps pass the time
 - Helps meet workplace expectations
5. What are characteristics of working in an organized manner? (1008.2.1)
 - Teamwork and speed
 - Efficiency and production
 - Progressively and fast

- Predictability and progressively
6. What are the components of achieving outcomes? (1008.2.2)
- Safety, production, communication
 - Safety, quality, production
 - Work ethic and safety
 - Quality and work ethic
7. What are components of being fit for work? (1008.3.1)
- Focused, not impaired, aware of limitations
 - Focused, aware of limitations, good communication
 - Ability to exceed limitations, good work ethic, rested
 - Not impaired, good work ethic, good communication
8. Which type of physical condition can affect the ability to do a job? (1008.3.2)
- Peer pressure
 - Bullying
 - Fatigue
 - Production pressure
-



Now check your answers on the next page.

Self-Quiz – Answers

1. Why is it important to arrive at work on time and prepared for the day? (1008.1.1)

Answer: **Minimizes operational delays, promotes safety**

2. What is the first thing affected by a communication breakdown? (1008.1.2)

Answer: **Safety**

3. Why is it important to give and receive constructive feedback? (1008.1.3)

Answer: **Identifies areas of improvement**

4. Why is it important to have a good work ethic? (1008.1.4)

Answer: **Helps meet workplace expectations**

5. What are characteristics of working in an organized manner? (1008.2.1)

Answer: **Predictability and progressively**

6. What are the components of achieving outcomes? (1008.2.2)

Answer: **Safety, quality, production**

7. What are components of being fit for work? (1008.3.1)

Answer: **Focused, not impaired, aware of limitations**

8. Which type of physical condition can affect the ability to do a job? (1008.3.2)

Answer: **Fatigue**