

Health Optimizing Physical Education 1

Quarters 1 and 2 – Module 5: Observes Personal Safety Protocol to Avoid Dehydration, Overexertion, Hypothermia and Hyperthermia During MVPA Participation



Health Optimizing Physical Education 1 (HOPE 1) Alternative Delivery Mode Quarters 1 and 2 – Module 5: Observes Personal Safety Protocol to Avoid Dehydration, Overexertion, Hypothermia and Hyperthermia During MVPA Participation First Edition, 2021

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Development Team of the Module
Writer: Tyson S. Ramos
Editors: Aleli C. Nitoral, Roderick C. Tobias
Reviewers: Lorelyn P. Arellano, Raine P. Ramos, John Lester F. Guerrero,
Celeste A. Cortez, Rhodora D. Barrido, Jayson B. Peñaredondo,
Jenna B. Dela Rosa
Illustrator: Roderick B. Blando
Layout Artist: Katherine Obrero Cordora, Florendo S. Galang
Management Team: Francis Cesar B. Bringas
Job S. Zape, Jr.
Ramonito Elumbaring
Reicon C. Condes
Elaine T. Balaogan
Fe M. Ong-ongowan
Cherrylou D. Repia
Babylyn M. Pambid
Gloria C. Roque
Rosemarie C. Blando
Mil F. Ponciano
Meliton Berin Jr.

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Office Address:	Gate 2 Karangalan Village, Barangay San Isidro, Rizal
Telefax:	02-8682-5773/8684-4914/8647-7487
E-mail Address:	lrmd.calabarzon@deped.gov.ph

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Observes Personal Safety Protocol to Avoid Dehydration, Overexertion, Hypothermia and Hyperthermia During MVPA Participation



Introductory Message

This Self-Learning Module (SLM) is prepared so that you, our dear learners, can continue your studies and learn while at home. Activities, questions, directions, exercises, and discussions are carefully stated for you to understand each lesson.

Each SLM is composed of different parts. Each part shall guide you step-bystep as you discover and understand the lesson prepared for you.

Pre-tests are provided to measure your prior knowledge on lessons in each SLM. This will tell you if you need to proceed on completing this module or if you need to ask your facilitator or your teacher's assistance for better understanding of the lesson. At the end of each module, you need to answer the post-test to self-check your learning. Answer keys are provided for each activity and test. We trust that you will be honest in using these.

In addition to the material in the main text, Notes to the Teacher are also provided to our facilitators and parents for strategies and reminders on how they can best help you on your home-based learning.

Please use this module with care. Do not put unnecessary marks on any part of this SLM. Use a separate sheet of paper in answering the exercises and tests. And read the instructions carefully before performing each task.

If you have any questions in using this SLM or any difficulty in answering the tasks in this module, do not hesitate to consult your teacher or facilitator.

Thank you.



What I Need to Know

This module was designed and written with you in mind. As a Grade 11 student, it is part of your learning journey to understand different kinds of sports and the types of injuries that come with each.

Sports injuries are injuries that occur when engaging in sports or exercise. However, participation in different sports sets high standards on athletes' physical skills as it may result to developing an injury. This problem may almost be completely solved if action is taken before injuries occur. This learning module permits you to understand how one can reduce the risk of sports injuries related to different sports. The language used recognizes the different types of injuries related to sports and how it may be prevented. The activities include learning concepts about the most common sports related injuries as well as the different safety protocol about the Moderate to Vigorous Physical Activities. (MVPA)

The module consists of one lesson:

• Lesson 1 – Sports-related injuries

After going through this module, you are expected to:

- 1. characterize sports-related injury;
- 2. differentiate acute from chronic injuries;
- 3. identify ways to prevent sports-related injuries; and
- 4. determine the safety protocols during MVPA participation.



What I Know

Directions: Choose the letter of the best answer. Write the chosen letter on a separate sheet of paper.

- 1. What do you call the injuries that happen when playing sports or exercising?
 - A. Aerobics C. Sports Fest
 - B. Physical activity D. Sports injuries
- 2. The following are common sports injuries. Which of them is a tear of ligament fibers, muscles or tendons supporting a joint?
 - A. Concussion C. Sprain
 - B. Contusion D. Strain
- 3. Which of the following occurs when the ball of a joint is forced out of its socket?
 - A. Concussion C. Fracture
 - B. Dislocation D. Strain
- 4. What is a break, crack, or shattering of a bone?
 - A. Concussion C. Fracture
 - B. Dislocation D. Strain
- 5. Which of the following is not a sign of chronic injury?
 - A. A bone or joint that is visibly out of place
 - B. A dull ache when you rest
 - C. Pain when you exercise
 - D. Pain when you play
- 6. Which activities are **NOT** good ways to warm up?
 - A. Jogging
 - B. brisk walking
 - C. doing jumping jacks
 - D. Sprinting
- 7. What is the best time to stretch your muscles?
 - A. After exercise C. During exercise
 - B. After warming up D. None of the above
- 8. Where is the largest (and often injured) tendon in the body?
 - A. Ankle C. Neck
 - B. Back D. Shoulder

9. What is the exact cause of muscle cramps?					
	A.	Dehydration		C.	Vitamin deficiency
	В.	Injury		D.	Unknown
10. Wh	ich c	of the following	may be sprained?)	
	А.	A bursa		C.	A muscle
	В.	A ligament		D.	A tendon
11. Wha	at pa	rt of your body l	nurts if you have pla	antar	fasciitis?
	A.	Ankle		C.	Knee
	В.	Foot	2	D.	none of the above
12. Wh	ich o	of the following s	tands for R.I.C.E. tr	eatm	nent?
	А.	Rest, Ice, Crut	ches, Elevation		
	B.	Rest, Ice, Com Elevation	pression,		
	C. Rest, Ibuprofen, Crutches, Exercise				
	D.	Reinforcement	, Immobilization, C	ryoth	erapy, Electrostimulation
13. Wł	nat is	s the most com	mon runner's inju	ıry?	
	А.	Achilles tendin	nitis	C.	Runner's knee
	В.	Plantar fasciiti	s	D.	Shin splints
14. Whi	ch of	f the following ca	auses Shin splints?		
	А.	Dehydration		C.	Tiny fractures
	В.	Inflammation		D.	Torn ligaments
15 Wha	t doe	es a good warm ι	ıp do to your body?		
	А.	Boost your bre	eathing	C.	Warm your muscles

B. Increase your blood flow D. All of the above

Lesson

Sports-Related Injuries

While participation in sports and physical activity has a lot of positive aspects such as improving fitness levels and being involved in a social group with common interest, it also has negative aspect in the form of incurring physical injury. This unit will identify different types of sports injuries and how they can occur. It will discuss physiological responses to injury and will suggest methods of prevention and treatment of sports injuries.



Directions: Encircle the letter that corresponds to the best answer in each statement.

1. The two elements of power is speed and _____.

Slow

B. Coordination D. Strength

2. It is the ability to control or stabilize the body when a person is standing still or moving.

A. Balance	C. Slow
B. Coordination	D. Strength

3. What skill related fitness is possessed by a person who can kick an object strongly?

A. Balance	C. Power	

B. Coordination D. Reaction Time

4. Which skill-related fitness activity is appropriate for a person with strong arms?

A. Catching	C. Eating

B. Driving D. Pull Up

5. Which skill-related fitness is manifested by a person who is able to avoid a fast car running towards him?

A. Balance	C. Power
B. Coordination	D. Reaction Time



Activity 1. Guess what...

a. Picture Talk:



b. Guide Questions:

Directions: Analyze the pictures above and answer the following questions below.

- 1. Have you experienced any of the incidents reflected in the pictures above?
- 2. When did you experience it?
- 3. Where did it happen?
- 4. How did it happen?
- 5. What do you call these circumstances?

a. K-W-L: Fill in the table with what you Know, what you Want to Know, and what you Learned about injuries. (Answer K-W only)

Know	Want	Learned



What is It

Let's Talk about it

Sports injuries

Injuries may occur when a person engages in Moderate to Vigorous Physical Activity (MVPA). This includes physical activities which span from moderate progressing to vigorous intensity. Brisk walking or cycling and jogging are examples of moderate activities while aerobic dance or cycling uphill are vigorous activities

On the other hand, sports injuries are those that happen when playing sports or performing exercises.

Some are from accidents. Others can result from poor training practices or improper gear. Some people get injured when they are not in proper condition. No proper warm-up and stretching before you play or exercise can also lead to injuries. The most common sports injuries are:

- **Sprain** is a tear of ligament fibers, muscles or tendons supporting a joint. This can occur when a joint is extended beyond its normal range of movement. A sprain may involve a small number of fibers through to a complete rupture. In extreme circumstances, the fibers of the ligament, muscle or tendon may remain intact and rip from the bone.
- **Contusion** or bruise is bleeding into the soft tissue. It is caused by a direct blow from another person, an implement or an object. A bruise can occur to any soft tissue of the body.
- **Concussion** is caused by a direct blow to the head. Depending on the severity of the concussion, injury can cause varying levels of impairment of brain function. Concussions are categorized as mild (grade 1), moderate (grade 2), or severe (grade 3) depending upon symptoms.
- **Dislocation** occurs when the ball of a joint is forced out of its socket (i.e. arm forced out of the shoulder joint). A dislocation must be reset by proper medical professionals.
- **Fracture** is a break, crack, or shattering of a bone. In closed fractures, the broken bone does not pierce the skin, while in open fractures, the broken bone breaks the skin's surface.
- **Strains** are injuries that involve the stretching, partial tearing, or complete tearing of a tendon. Strains are categorized as first, second, or third degree. Chronic strains are injuries that gradually build up from overuse or repetitive stress.







Kinds of Injury

Acute injuries occur suddenly when playing or exercising. Sprained ankles, strained backs, and fractured hands are acute injuries. Signs of an acute injury include:

- Sudden, severe pain;
- Swelling;
- Not being able to place weight on a leg, knee, ankle, or foot;
- An arm, elbow, wrist, hand, or finger that is very tender;
- Not being able to move a joint as normal;
- Extreme leg or arm weakness; and
- A bone or joint that is visibly out of place.
- 1. **Chronic injuries** happen after you play a sport or exercise for a long time. Signs of a chronic injury include:
 - Pain when you play;
 - Pain when you exercise;
 - A dull ache when you rest; and
 - Swelling.

Preventing Sports Injuries

Exercise is good for the body and with proper precautions, sports injuries may be prevented. The quality of protective equipment - padding, helmets, shoes, mouth guards – may contribute to safety in sports. But, you can still be susceptible to injury in certain situations. Always contact your healthcare provider before starting any type of physical activity, especially when performing vigorous types of exercises or sports.

Causes of sport injuries may include:

- improper or poor training practices;
- wearing improper sporting gear;
- being in poor health condition; and
- improper warm-up or stretching practices before a sporting event or exercise.

How can I prevent a sports injury?

The following are some basic steps to prevent a sports injury:

- Develop a fitness plan that includes cardiovascular exercise, strength training, and flexibility. This will help decrease your chance of injury.
- Alternate exercising different muscle groups and exercise every other day.
- Cool down properly after exercise or sports. It should take two times as long as your warm up.
- Stay hydrated. Drink water to prevent dehydration, heat exhaustion, and heat stroke.

- Stretching exercises can improve the ability of muscles to contract and perform, reducing the risk for injury. Each stretch should start slowly until you reach a point of muscle tension. Stretching should not be painful. Aim to hold each stretch for up to 20 seconds.
- Use the right equipment or gear and wear shoes that provide support and that may correct certain foot problems that can lead to injury.
- Learn the right techniques to play your sport.
- Rest when tired. Avoid exercise when you are tired or in pain;
- Always take your time during strength training and go through the full range of motion with each repetition; and
- If you do sustain a sports injury, make sure you participate in adequate rehabilitation before resuming strenuous activity.

How can I treat Injuries?

When it comes to sport and exercise, the possibility of injury is always present.

Inflammation and pain often occur after injuries to the ankle, knee, or joint. And the well-known R.I.C.E treatment method can help reduce this swelling, relieve pain, and promote flexibility and healing. In fact, R.I.C.E treatment is a mainstay for sports trainers and other athletic health experts.

The benefits of the **RICE** method can be explained by stage:

Rest: Immobilization prevents further injury and gives the body time to recover.

Ice: Cold reduces pain by numbing the affected area.

Compression: Pressure keeps swelling under control.

Elevation: Keeping the injured body part above the heart reduces swelling and the associated pain and discomfort.

Aside from the injury prevention techniques mentioned above, there are also some personal safety protocols that we need to consider before and after playing a sport or doing moderate to vigorous physical activities. Some of the personal safety protocols are as follows:

What to bring?

- Water
- Extra clothes
- Towels and caps

What to do?

- **Prepare yourself.** Know your limits so as not to overwork your body. Overworking your body might put your life to a threat.
- **Drink a lot of water**. Do not wait to feel thirsty. If you know have sweat a lot already drink water immediately.
- **Change clothes.** Do not let the wet cloth dry up in your body.
- **Use towel.** Use towel to wipe out excessive sweating.

Remember this:

When the body does not have enough fluid needed to function normally, it is dehydrated. This happens when lost body fluid is not replaced. Dehydration causes a person to have a dry thirsty mouth, become fatigued, have less urine yield with dark color, and in severe case, unconsciousness. The usual causes of dehydration are hot weather condition, too much perspiration, high fever, diarrhea, vomiting, and excessive exercise without taking in enough fluid. To nurse dehydration, the body will need to replenish lost fluids and electrolytes. Drink at least eight glasses of water a day and up to 12 glasses during summer months.

Hydration is also the soundest way to prevent dehydration. Prevention is better than cure, and the ways to prevent dehydration include the intake of adequate fluids, watery fruits and vegetables and avoiding hot environment.

The following are terminologies that you might experience if we opt to observe personal safety protocols during Moderate to Vigorous Physical Activities (MVPA).

- **Dehydration** Dehydration happens when the fluid in your body is used or lost more than the fluid you drink or intake. If your body does not have enough water or fluid to do its normal functions, hence, you get dehydrated. Anyone may become dehydrated, as to the people who are more at risk, young ones or children and the older adults are more at risk.
- **Overexertion** This refers to the pressure one puts in himself or herself, too much pressure that leads to a simple discomfort that might extend to a more serious injury.
- **Hypothermia** It usually happens when the body easily loses temperature. A person suffers hypothermia when his or her body temperature drops below 35 degrees Celsius.
- **Hyperthermia**-the opposite of hypothermia. It happens when the body temperature rises up significantly beyond the normal temperature which is 37 degrees Celsius. Hyperthermia like hypothermia can threaten life too.



What's More

Let's try....

1. Complete the table below. Write the type and causes of injury in each common sport injury.

Injury	Туре	Causes of injury
Sprain		
Strain		
Fracture		
Dislocation		
Stress Fracture		
Tendinopathy		
Osteoarthritis		
Bursitis		

2. Make your personal safety protocol to avoid dehydration, overexertion, hypothermia and hyperthermia during MVPA participation by filling out the table below.

My Personal Safety Protocol

	Before	During	After
Dehydration			
Overexertion			
Hypothermia			
Hyperthermia			



What I Have Learned

What you've got

1. List some sports injuries that you and your classmates have experienced.

2. List famous athletes who have been injured while playing their sports.

Common Sports Injuries for you and your friends

3. List some common injuries that teenagers like you may be at risk of when playing the following sports.

Basketball:
Volleyball:
Track and Field:
Lawn Tennis:
Combative sports:
Softball:
Badminton:

Other: _____

Complete the sentences below.

I learned that sports injuries are:

Common sports-related injuries include:

The types of injuries are:



What I Can Do

Let's do this!

1. Provide examples of acute sports injuries from the upper and lower extremities.

Acute injury	Upper Extremities	Lower Extremities
Fracture		
Dislocation		
Sprain		
Strain		

- 2. Choose one injury from the table and list specific ways to prevent it.
- 3. Provide example of chronic sports injuries from the upper and lower extremities.
- 4. Choose one injury from the Chronic injury table and list specific ways to prevent it.

Chronic injury	Upper Extremities	Lower Extremities
Osteoarthritis		
Tendinopathy		
Bursitis		
Fasciitis		



Directions: Choose the letter of the best answer. Write the chosen letter on a separate sheet of paper.

- __1 Which refers to the injuries that happen when playing sports or exercising.
 - A. Accident
 - **B.** Dislocation

- C. Hydration D. Sports injuries
- ____2. Which of the following is NOT an example of acute injuries?
 - A. Fractured hand C. Strained back D. Wound
 - B. Sprained ankle
- _3. What happens to the body if it does not have enough fluid needed to function normally?
 - A. Dehydrated C. Hydrated
 - B. Dislocated

- D. Stress Management
- ____4. Which of the following is NOT a cause of dehydration?
 - A. Diarrhea C. Too much water B. High Fever D. Vomiting
- ___5. Which occurs when body temperature is lower than the normal average of
 - 37 degrees Celsius? A. Diarrhea C. Hyperthermia
 - D. Hypothermia **B.** Hydration
- _____ 6. Which is NOT a sign of chronic injuries?
 - A. Bone and joint that is visibly out of place C. Pain when you exercise
 - B. Dull ache when you rest
- D. Pain when you play
- 7. What is a break, crack or shattering of a bone?
 - A. Contusion C. Dislocation
 - B. Concussion D. Fracture
- 8. Which of the following injuries is a tear of ligament fibers, muscles or tendons supporting a joint? A. Contusion C. Sprain
 - B. Dislocation D. Strain
- 9. Who should reset a dislocation?
 - A. Coach
 - B. Friend

C. Proper medical professional D. Teacher

10. Which type of injury involves the stretching, partial tearing, or complete tearing of a tendon?

A. Contusion

C. Sprain D. Strain

C. Strain

D. Overexertion

- B. Dislocation
- 11. What happens when the body temperature rises up significantly beyond the normal temperature which is 37 degrees Celsius?
 - A. Dehydration C. Hyperthermia
 - B. Fracture D. Hypothermia
- _____ 12. What is the temperature of a person who has hypothermia?
 - A. below 35 C. below 37
 - B. below 36 D. below 38
- _____ 13. Which refers to the pressure one put in himself or herself that leads to a simple discomfort that might extend to worse, injury?
 - A. Contusion C. Hyperthermia
 - B. Fracture D. Overexertion
- 14. Which occurs when the ball of a joint is forced out of its socket?

 - B. Dislocation

A. Contusion

- _____ 15. Which of the following stands for R.I.C.E. treatment?
 - A. Rest, Ibuprofen, Crutches, Exercise
 - B. Rest, Ice, Compression, Elevation
 - C. Rest, Ice, Crutches, Elevation
 - D. Reinforcement, Immobilization, Cryotherapy, Electrostimulation



Additional Activities

Complete me!

Complete the following cloze passage. Choose your answer on the words provided inside the box below.

Sports injuries are more likely to occur during 1, like in the backyard, at the park with friends or at 2, because 3 and game rules are often overseen.

The most common cause of school sports injuries are 4 and 5. These can result in sprains or <u>6</u>.

The most common parts of the body to get injured are the arms, elbows and

____7___.

Sport is very 8 and a healthy, fun way to live life. Sport should not be avoided but it should be taken 9 when players are at risk of injury.

informal playing times	lunch-time	protective gear
over-exertion	falls	fingers
strained muscles	safe	seriously

12'D

14.B

13.C

12.B

11.B

10.B

I. D 2. D 6. A 7. D 8. C 8. C 8. C 7. D 8. C	Second column: 1. Acute Injury 2. Acute Injury 3. Acute Injury 4. Acute Injury 5. Chronic Injury 6. Chronic Injury 8. Chronic Injury 8. Chronic Injury	1. D 1. D 1. D 1. D 1. D 1. D 1. D 1. D 1. D
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2. Possible answer 1. Marc Pingris 2. Paul Lee 3. Eugene Tejada 4. Jayjay Helterbrand	playing sports or performing exercises. Common Sports Injuries 1. Sprain 2. Strain 3. Fracture 3. Fracture	1. Acute Injury 2. Chronic Injury
I. 1 Sprain 2. Strain 3. Fracture 4. Dislocation 5. Contusion	Short for the second se	5. Contusion 6. Concussion Types of Injury
learned 1 Possible answers	1681106 3. Common sports and	learned Common Sports Iniuries
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Protocol Answers may vary

My Personal Safety

Απεwers may vary

Third Column



Answer Key

12'B

14.B

13.D

12.A

11.C

CO_Q1-2_HOPE1 SHS Module 5

vaty Answers to K-W-L may

Questions may vary Answers to Guide wan s'jadw

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uI	s,jeyM
D	.1
¥	.2.
С	.5
D	. 4 .
D	5.

- 9. seriously
 - siss .8

 - 7. finger
- 6. strained muscles
 - 5. falls
 - 4. overexertion
- 3. protective gears
 - - 2. lunch time

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- zniyslq lsm10îni.l
 - **Activities** IsnoitibbA

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For inquiries or feedback, please write or call:

Department of Education - Bureau of Learning Resources (DepEd-BLR)

Ground Floor, Bonifacio Bldg., DepEd Complex Meralco Avenue, Pasig City, Philippines 1600

Telefax: (632) 8634-1072; 8634-1054; 8631-4985

Email Address: blr.lrqad@deped.gov.ph * blr.lrpd@deped.gov.ph