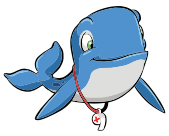


Think Twice Before Going Near Cold Water or Ice

KEY TERMS

HELP (Heat Escape Lessening Posture): A position for floating in cold water when wearing a life jacket and awaiting rescue. You draw up your knees to your chest, hold your arms at your sides and fold your lower arms against your chest.

Huddle position: A position for two or more people floating in cold water wearing life jackets and awaiting rescue. You put your arms over each other's shoulders so that the sides of your chests are together. Children and elderly persons are placed in the middle.

Hypothermia: A life-threatening condition in which the body is unable to maintain warmth and the entire body cools.

OBJECTIVES

After completing this lesson, students will be able to:

- Recognize the potential hazards of being immersed in cold water.
- Define hypothermia.
- Identify the signs of hypothermia.
- Explain how to prevent hypothermia.
- Recognize the importance of wearing a life jacket when around cold water.
- Name two methods of conserving body heat when in a cold water situation.
- Understand the HELP and huddle positions.
- Explain why you should only go on ice that has been tested and approved.
- Describe how to rescue yourself if you fall through the ice.
- Explain safe ways to respond in a cold water emergency.

MATERIALS, EQUIPMENT AND SUPPLIES

- Poster: Think Twice Before Going Near Cold Water or Ice
- 4 small buckets or coolers
- Water
- Large ice bucket filled with ice
- Ice scoop
- Towels
- 4 aquarium thermometers
- 2 or 3 mats or blankets
- 4 life jackets (Type II)
- Pencils, crayons and markers
- Fact Sheet 8: Longfellow's Information on Hypothermia

- Student Handouts (one for each student):
  - Activity Sheet 7-1: Signs of Hypothermia
  - Activity Sheet 7-2: Make Good Choices Around Cold Water and Ice
  - Activity Sheet 7-3: Reach or Throw
  - Activity Sheet 7-4: Ice Self-Rescue
  - Activity Sheet 7-5: Think Twice

Leader's Note

Display the poster, Think Twice Before Going Near Cold Water or Ice, at the front of the classroom. Begin a discussion about the poster by asking students questions such as, "Why are these people sledding rather than ice skating? Why should you pay attention to Thin Ice or No Ice Skating signs?" Refer to the poster throughout the lesson. As an option, you may use a projector to display the electronic version of the poster.

TOPIC: INTRODUCTION

Key Points

- Cold water is always dangerous.
- If a person falls into cold water, his or her body temperature drops very quickly.
- Being in cold water could cause hypothermia.
- Hypothermia is a serious condition.
- We are going to learn about the dangers of being immersed in cold water and how to respond to a cold water emergency.

TOPIC: WHAT IS HYPOTHERMIA?

Key Points and Discussion

- How many of you have ever been in very cold water?

  Answer: *Responses will vary. Allow time for responses.*

- How did it feel?

  Answer: *Responses will vary. Allow time for responses*

- What are some signs that you are getting too cold?

  Answer: *Responses will vary, but may include shivering, numbness, trouble breathing.*

- Hypothermia is a life-threatening condition that can happen when someone gets too cold and the body cannot stay warm.

- Temperatures do not have to be really cold for someone to suffer from hypothermia, especially if the person is wet or if it is really windy.
- When a person's body temperature drops, the heart and other organs can't work properly.
- Signs of hypothermia include:
  - Shivering.
  - Numbness.
  - Glassy stare.
  - Indifference.
  - Loss of consciousness.
- Hypothermia can cause a person's heart to stop working, make it hard to breathe and could lead to death.

- What do you think could cause hypothermia?

  Answer: *Some things that could cause hypothermia include:*
  - *Being in cold weather.*
  - *Being in windy conditions.*
  - *Being in cold water.*

- What rule helps us remember that cold water can be very dangerous?

  Answer: *Think twice before going near cold water or ice!*

Leader's Note: *Have students complete Activity Sheet 7-1: Signs of Hypothermia.*

TOPIC: PREVENTING HYPOTHERMIA

Key Points and Discussion

- No one plans to fall into really cold water.

- What could happen that could cause you to be in cold water unexpectedly?

  Answer: *Responses will vary but could include situations like:*
  - *Slipping into cold water from the water's edge, such as the slippery bank of a canal.*
  - *Falling through ice.*
  - *Being in a boat accident.*

- What kinds of things can you do to avoid getting into that kind of situation?

  Answer: *Responses will vary based on the responses provided in the previous question, but could include things like:*
  - *Staying well away from the edge of the water to prevent slipping.*
  - *Staying off of ice unless it has been designated by someone in authority as being safe.*
  - *Safely operating a boat and obeying all boating laws.*

- If you suddenly find yourself in cold water after a boat accident, get back in the boat if at all possible–even if it's full of water.
  - If the boat has turned over and you can't get back in, climb on top and hang on.
- It may seem like a good idea to try swimming to shore, but you should only do this if you are very close to shore.
  - Swimming increases heat loss from the body.
  - Movement will cause your body to cool faster, which speeds up the effects of hypothermia.
- If you have fallen into the water with clothing on, leave your clothing on. It will help keep your body warm.

Leader's Note: *Have students complete Activity Sheet 7-2: Make Good Choices Around Cold Water and Ice.*

Wear a Life Jacket Around Cold Water

Key Points

- Life jackets help conserve body heat and help you keep your head out of water.
  - Body heat is quickly lost through the head.
- Wearing a life jacket can increase your survival time because the life jacket reduces the amount of your body that is exposed to cold water.
- Wearing a life jacket gives rescuers more time to find and help you.

Keep Warmth In

Key Points

- The length of time you can survive in cold water depends on many things, such as what you are wearing, your age, your size, the length of time you are in the water and the temperature of the water.
- You can try to keep warmth in your body by getting into a position that lessens the amount of heat that escapes from your body.
- Get into the HELP position, which stands for Heat Escape Lessening Posture. While wearing a life jacket:
  - Pull your knees up to your chest.
  - Keep your face forward and your head out of the water.
  - Hold your upper arms at your sides and fold your lower arms across your chest, as if hugging yourself.
- If you are with other people, you can lessen heat escape if you huddle together.
  - The huddle position is for two or more people in the water.
  - While wearing a life jacket, put your arms over each other's shoulders so that the sides of your chests are together.

Activity

- Divide the class into groups of four.
- Place a mat or blanket on the floor to represent a body of water.
- Tell students they are going to demonstrate the HELP and the huddle position.
- Tell the first group of students to put on life jackets and sit on the mat.
- Tell students, "When I say go, get into the HELP position. Go."
- Make sure each student is in the correct position.
- Tell students, "When I say go, get into the huddle position. Go."
- Make sure the group gets into the huddle position correctly.
- Let all groups have a turn.

Leader's Note: *See Fact Sheet 8, Longfellow's Information on Hypothermia, for more information about hypothermia. You can provide this information to students, depending on the level of the group.*

TOPIC: ICE-COLD FACTS

Key Points

- The colder the water, the quicker hypothermia can set it.
- If you fall into ice-cold water, the body will automatically gasp for air in response to being hit in the chest area with cold water.
- If your mouth is underwater when this gasp occurs, you could drown.
- If you know you are about to fall into cold water, cover your face with your hands and hold your breath. This helps you to avoid gasping water into your lungs.
- In very cold water you may experience violent shivering and pain. These are natural body responses.
- It's easy to panic under these conditions, but it is important to stay calm. After a couple of minutes, a person's body adjusts to the cold.

Activity

- Divide students into groups of four.
- Give each group a bucket or cooler filled with lukewarm or cool water and one aquarium thermometer.
- Tell each group to measure the temperature of the water using the aquarium thermometer.
- Tell students to write the temperature down.
- Have each group put a scoop of ice into the bucket or cooler.
- Wait 2 minutes.
- Tell students to measure the temperature of the water with the aquarium thermometer. Tell them to write the temperature down.
- Wait 2 more minutes.
- Tell students to measure the temperature of the water with the aquarium thermometer. Tell them to write the temperature down.
- Point out how quickly the temperature drops when ice is added to the water.

TOPIC: SAFETY AROUND ICE

Key Points and Discussion

- What color is ice?

  Answer: *Responses will vary but will probably include blue, white, black, green.*

- Why do you think ice can be different colors?

  Answer: *The color comes from the thickness of the ice, the light source and how long the ice has been frozen.*

- Can you tell if ice is safe to walk on by looking at it?

  Answer: *No you can't. The safety of ice depends on the appearance (color, texture), how deep the body of water is, how long it has been frozen, how thick the ice is, the temperature of the air, whether there is snow on top of it.*

- You should only go on ice that is checked by designated authorities on a regular basis. This may be staff at parks or resorts, such as park rangers, or government officials, such as city engineers or township workers.
- Ice should be checked daily.
- Obey all signs posted on or near the ice. Yellow signs usually mean caution, and red usually means the ice is not safe!
- Ice may not be the same thickness over the entire area of a lake or pond. It can be a foot thick in one place and only an inch thick just 10 feet away.
- Even thick ice may be weak, especially if it contains layers of snow or water, if it has frozen and thawed repeatedly or if it is spring ice.
- Snow acts like a blanket. A snowfall can warm up existing ice. The ice under the snow will be thinner and weaker.
- It is especially dangerous to go on ice at night. Ice conditions change daily, and you will not be able to see danger or warning signs at night.
- Ice on small, shallow and slow-moving bodies of water is usually more solid and safer for ice activities than ice on deeper, larger bodies of water.
- Always stay with at least one other person (a buddy) when on or near ice.
  - If your buddy falls through the ice, tell them to stay calm.
  - Find something to reach or throw to your buddy. Remember: Reach or Throw, Don't Go!
- Do not go on ice that has not been tested and approved for safe use.
- Remember, you cannot trust any ice just by looking at it.

Leader's Note: *Have students complete Activity Sheet 7-3: Reach or Throw.*

Falling Through Ice

Key Points

- Here is what you should do if you fall through ice:
  - First of all, try not to panic.
  - Do not remove your winter clothing. Heavy clothes will not drag you down. They trap air to provide warmth and flotation.
  - Turn toward the direction you came from. That is probably the strongest ice.
  - Place your hands and arms on the unbroken surface.
  - Kick your feet. This should help you move onto the ice.
  - Lie flat on the ice and roll away from the hole. This will help distribute your weight to avoid breaking through again.
  - After you are out of the cold water, move to a warm place.
  - Remove any wet clothing and dry off.
  - Warm up slowly by wrapping yourself in blankets or by putting on dry clothing.
  - Drink warm liquids.
  - You should not rewarm too quickly.

Leader's Note: *Have students complete Activity Sheet 7-4: Ice Self-Rescue.*

Activity

- Set up mats on the floor to simulate pieces of ice.
- Have students "fall through" the cracks in between the ice.
- Allow students to experiment with different ways to get back onto the ice.
- After they are back on the ice, experiment with different ways of traveling across the ice, such as crawling or rolling.

Leader's Note: *Have students complete Activity Sheet 7-5: Think Twice.*

TOPIC: WRAP-UP

Leader's Note: *Refer back to the poster, Think Twice Before Going Near Cold Water or Ice, as you review the lesson.*

Discussion

- What can happen if a person gets too cold?

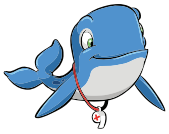
  Answer: *A person could get hypothermia.*

- How can you prevent hypothermia?

  Answer: *Responses should include the following:*

  - *Make good choices and stay away from situations where you could fall into cold water or through ice.*
  - *Always wear a U.S. Coast Guard–approved life jacket when around cold water.*
  - *Wear layers of insulated clothes that keep you warm even when wet.*
  - *Wear a hat. Body heat is quickly lost through the head.*

- If you fall into cold water and you are waiting to be rescued:
  - Keep your clothes on.
  - Keep your head out of the water.
  - With your life jacket on, get into the HELP position, which stands for Heat Escape Lessening Posture. In this position you cross your arms across your chest and pull your knees up to your chest, as if hugging yourself.
  - If you are with other people, you can lessen heat escape if you huddle together.
- Remember to think twice before going near cold water or ice.



Signs of Hypothermia

Name: _____

Find the hidden words listed below. They describe signs of hypothermia. The words can run across or down.

n	u	m	b	n	e	s	s	k	d	v	z	h	p	s	s	w	n
d	m	o	s	h	m	y	j	n	d	f	c	g	m	e	c	i	o
i	a	t	e	i	w	i	n	q	o	e	t	o	v	g	o	u	i
c	t	z	a	f	g	d	m	g	e	h	b	e	g	f	n	e	t
o	o	k	y	i	i	r	v	p	u	a	r	h	n	c	f	b	a
l	w	f	x	l	s	h	i	v	e	r	i	n	g	c	u	b	n
d	u	u	v	j	e	s	o	k	s	i	j	n	l	o	s	a	i
v	h	v	o	z	e	n	a	h	y	y	s	a	e	r	i	h	d
h	w	e	a	k	n	e	s	s	s	c	b	x	t	i	o	l	r
x	s	q	k	g	p	v	m	z	i	j	a	f	h	a	n	i	o
h	v	a	j	l	e	r	d	o	e	g	z	v	a	r	m	b	o
x	e	o	m	r	n	q	u	f	d	f	k	l	p	o	w	i	c
w	x	h	i	k	i	s	u	j	n	n	r	h	a	j	g	d	f
d	r	o	w	s	i	n	e	s	s	m	c	t	t	s	s	p	o
u	g	s	w	e	i	t	e	l	d	w	v	a	h	h	r	k	k
b	t	l	s	o	o	q	f	a	h	y	y	e	y	y	i	l	c
d	c	s	p	c	g	o	z	b	t	z	w	d	i	l	x	k	a
w	u	n	c	o	n	s	c	i	o	u	s	n	e	s	s	m	l

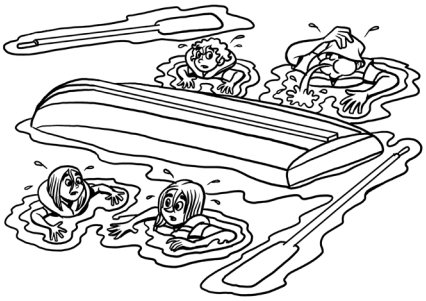
Word List

apathy	confusion	numbness	unconsciousness
cold	drowsiness	shivering	weakness

Make Good Choices Around Cold Water and Ice

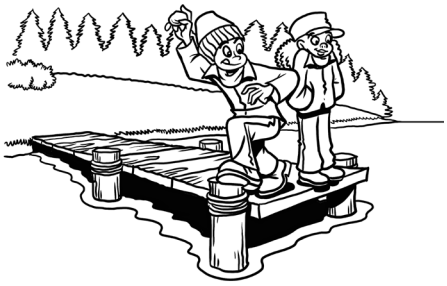
Name: _____

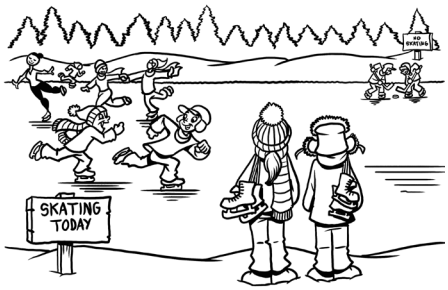
Here are some pictures of things that could happen to you around cold water. Write what you would do to keep yourself safe. Then color the pictures.



1. _____

2. _____





3. _____

4. _____

Reach or Throw

Name: _____

Color all of the things in the picture that you could use to help a friend who has fallen through ice.

Ice Self-Rescue

Name: _____

Fill in the blanks using the words below.

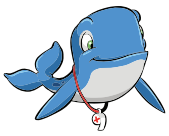
Word List

roll	push	far	throw	breaststroke
ice	panic	stand	reach	

If you break through _____, you can rescue yourself as long as you do not _____. Reach forward onto the broken ice, but do not _____ down on it.

Use a _____ kick or other kick to push farther onto the ice. Do not _____ up on the ice.

Once you are out of the water, you can _____ away from the hole. Do not stand up until you are _____ away from the hole. Have someone _____ or _____ something if needed.



Think Twice

Name: _____

Read each clue below. Write the letter of the correct answer on the line in front of the clue.

_____ 1. This is the first thing you should do in a cold water emergency.

_____ 2. This helps to keep body heat in and a person's head out of the water.

_____ 3. Two or more people in cold water should do this to stay warm.

_____ 4. This is how to move away from a hole in the ice once a person has climbed out.

_____ 5. This can help a person move forward to slide onto the ice after falling through it.

_____ 6. A serious condition where body heat is lost.

_____ 7. This position helps a person keep warm in cold water.

A. Huddle

B. Life jacket

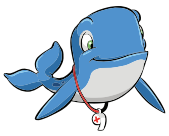
C. Kicking

D. Don't panic

E. HELP

F. Hypothermia

G. Roll or crawl



Signs of Hypothermia

Name: _____

Find the hidden words listed below. They describe signs of hypothermia. The words can run across or down.

n	u	m	b	n	e	s	s	k	d	v	z	h	p	s	s	w	n
d	m	o	s	h	m	y	j	n	d	f	c	g	m	e	c	i	o
i	a	t	e	i	w	i	n	q	o	e	t	o	v	g	o	u	i
c	t	z	a	f	g	d	m	g	e	h	b	e	g	f	n	e	t
o	o	k	y	i	i	r	v	p	u	a	r	h	n	c	f	b	a
l	w	f	x	l	s	h	i	v	e	r	i	n	g	c	u	b	n
d	u	u	v	j	e	s	o	k	s	i	j	n	l	o	s	a	i
v	h	v	o	z	e	n	a	h	y	y	s	a	e	r	i	h	d
h	w	e	a	k	n	e	s	s	s	c	b	x	t	i	o	l	r
x	s	q	k	g	p	v	m	z	i	j	a	f	h	a	n	i	o
h	v	a	j	l	e	r	d	o	e	g	z	v	a	r	m	b	o
x	e	o	m	r	n	q	u	f	d	f	k	l	p	o	w	i	c
w	x	h	i	k	i	s	u	j	n	n	r	h	a	j	g	d	f
d	r	o	w	s	i	n	e	s	s	m	c	t	t	s	s	p	o
u	g	s	w	e	i	t	e	l	d	w	v	a	h	h	r	k	k
b	t	l	s	o	o	q	f	a	h	y	y	e	y	y	i	l	c
d	c	s	p	c	g	o	z	b	t	z	w	d	i	l	x	k	a
w	u	n	c	o	n	s	c	i	o	u	s	n	e	s	s	m	l

Word List

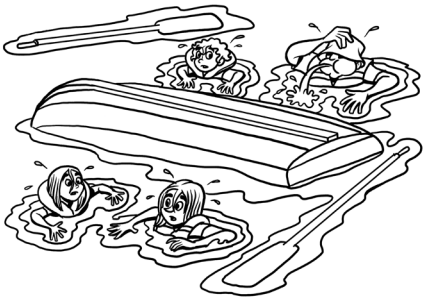
apathy	confusion	numbness	unconsciousness
cold	drowsiness	shivering	weakness

Make Good Choices Around Cold Water and Ice

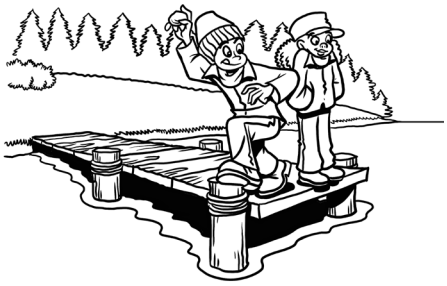
Name: _____

Here are some pictures of things that could happen to you around cold water. Write what you would do to keep yourself safe. Then color the pictures.

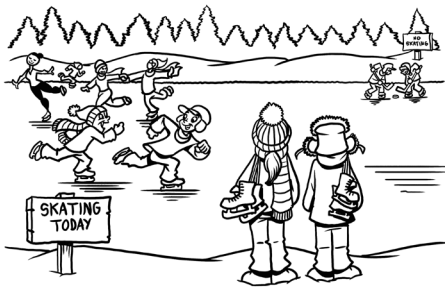
1. *The child who is shivering should not go in the water. He needs to warm up. He should wrap himself in a warm blanket or put dry clothing on and sip a warm drink.*



2. *The people should try to turn the boat over and get back in it. If that is not possible, they should climb onto the boat or hold onto it.*



3. *The children should not be on the dock. They should stay away from cold water. Even though they do not plan to go in the water, they could fall in.*

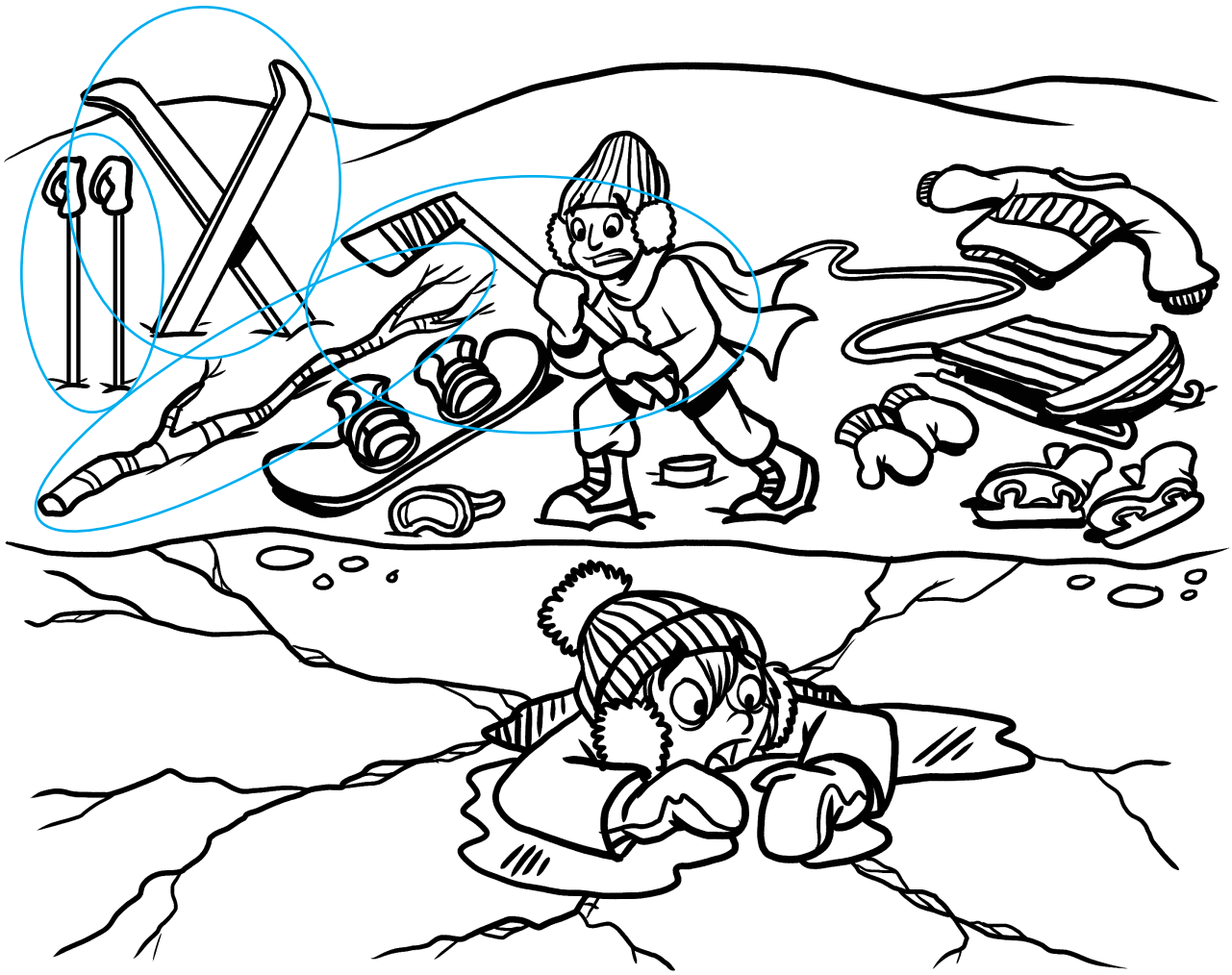


4. *The children should skate in the approved area only.*

Reach or Throw

Name: _____

Color all of the things in the picture that you could use to help a friend who has fallen through ice.



Ice Self-Rescue

Name: _____

Fill in the blanks using the words below.

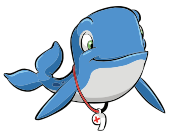
Word List

roll	push	far	throw	breaststroke
ice	panic	stand	reach	

If you break through ___ice___, you can rescue yourself as long as you do not ___panic___. Reach forward onto the broken ice, but do not ___push___ down on it.

Use a ___breaststroke___ kick or other kick to push farther onto the ice. Do not ___stand___ up on the ice.

Once you are out of the water, you can ___roll___ away from the hole. Do not stand up until you are ___far___ away from the hole. Have someone ___reach___ or ___throw___ something if needed.



Think Twice

Name: _____

Read each clue below. Write the letter of the correct answer on the line in front of the clue.

__D__ 1. This is the first thing you should do in a cold water emergency.

__B__ 2. This helps to keep body heat in and a person's head out of the water.

__A__ 3. Two or more people in cold water should do this to stay warm.

__G__ 4. This is how to move away from a hole in the ice once a person has climbed out.

__C__ 5. This can help a person move forward to slide onto the ice after falling through it.

__F__ 6. A serious condition where body heat is lost.

__E__ 7. This position helps a person keep warm in cold water.

A. Huddle

B. Life jacket

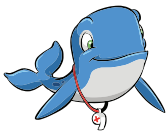
C. Kicking

D. Don't panic

E. HELP

F. Hypothermia

G. Roll or crawl



Longfellow's Information on Hypothermia

What Is Hypothermia?

Hypothermia is a condition in which the body is unable to maintain warmth and the entire body cools. Hypothermia is very serious. It is life threatening.

What Causes Hypothermia?

Hypothermia is brought on by exposure to cold, chilling winds and by getting wet. Children and the elderly are at more of a risk for hypothermia than other people.

Certain conditions can more easily lead to hypothermia, including:

- Drinking alcohol.
- Taking drugs and certain medications.
- Some medical conditions, such as diabetes or heart disease.
- Prolonged exposure to cold, wet and/or windy conditions.
- Wet clothing.

Signals of Hypothermia

Signals of hypothermia include:

- Shivering.
- Numbness.
- Glassy stare.
- Indifference.
- Loss of consciousness.

Shivering that stops without rewarming is a sign that the person's condition is worsening. He or she needs immediate medical care.

How to Prevent Hypothermia

Protect yourself from hypothermia by:

- Always wearing a U.S. Coast Guard–approved life jacket when around cold water.
- Wearing several layers of clothing. The first layer should keep moisture away from skin. The second layer should keep you warm. The outer layer should be waterproof or water-resistant.
- Wearing a hat. Body heat is quickly lost through the head.

Continued on next page

Longfellow's Information on Hypothermia

What to Do If You Fall into Cold Water and Are Waiting to Be Rescued

To protect yourself from hypothermia if you fall into cold water, you should:

- Keep your head out of the water.
- Keep your clothes on.
- Get into the HELP position (**H**eat **E**scape **L**essening **P**osture). In this position you hold your upper arms against your sides, fold your lower arms across your chest and pull your knees up to your chest.
- If you are with other people, you can lessen heat escape if you huddle together.
- Swim to shore only if it is a short distance or if a current is carrying you toward danger.

WEAR YOUR LIFE JACKET WHEN YOU ARE AROUND COLD WATER!

How Long Can You Survive in Cold Water?

The length of time you can survive in cold water depends on what you are wearing, your age, your body size and type, your fitness level, the length of exposure in the water and the temperature of the water.

You should remember that:

- Wearing a life jacket gives rescuers more time to find and help you.
- A life jacket helps conserve body heat.
- A life jacket helps keep your face out of the water.
- Wearing a life jacket increases your survival time.

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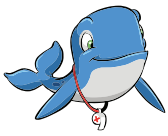

Longfellow's Information on Hypothermia

How to Help Someone with Hypothermia

To care for hypothermia:

- CHECK the scene and the person.
- Send someone to CALL 9-1-1 or the local emergency number.
- Gently move the person to a warm place.
- Remove any wet clothing and dry the person.
- Put on dry clothing.
- Warm the person gradually by wrapping him or her in blankets and plastic sheeting to hold in body heat.
- If you are far from medical care, position the person near a heat source. Keep checking the heat source. Keep a barrier such as a blanket, towel or clothing between the heat source and the person.
- If the person is awake, give warm liquids that do not contain alcohol or caffeine.
- DO NOT WARM THE PERSON TOO QUICKLY, such as by placing him or her in warm water.
- Check breathing and look for any changes in the person's condition.
- If the person is not breathing, perform CPR if you know how.
- Continue to warm the person until emergency medical services personnel take over.