

So Many Ways to Die in the Antarctic

Directions: With your groups, determine the claim that each passage or video clip is making and list evidence to support your interpretation.

For each passage:

- A)** State the claim in a complete sentence.
- B)** List 2-3 pieces of evidence from the passage or clip that supports your interpretation.

Scurvy Passage #1

Scurvy, also called **vitamin C deficiency**, one of the oldest-known nutritional disorders of humankind, caused by a dietary lack of vitamin-C. Vitamin C (ascorbic acid) is a nutrient found in many fresh fruits and vegetables, particularly the citrus fruits. Vitamin C is important in the formation of **collagen** (an element of normal tissues), and any deficiency of the **vitamin** interferes with normal tissue formation.

Scurvy is characterized by swollen and bleeding gums with loosened teeth, soreness and stiffness of the joints and lower extremities, bleeding under the skin and in deep tissues, slow wound healing, and **anemia**.

Scurvy killed many sailors. In modern times, full-blown cases of vitamin C deficiency are relatively rare; they may still be seen in isolated elderly adults, in people following restrictive diets, and in infants fed reconstituted milk or milk substitutes without a vitamin C or orange juice supplement.

Administration of vitamin C is the specific therapy for scurvy. Even in cases of severe deficiency, a daily dose of 100 mg (1 mg = 0.001 gram) for adults or 10 to 25 mg for infants and children, accompanied by a normal diet, commonly produces a cure within several days.

Scurvy Passage #2

https://www.youtube.com/watch?v=9c0K_6Y19nM

Leopard Seals Passage #1

The leopard seal is at the top of the food chain in its home in the Antarctic, and this is one predator you don't want to swim with. It is bold, powerful and curious, and it has been known to hunt people, although it usually targets penguins. In 1985, Scottish explorer Gareth Wood was bitten twice on the leg when a leopard seal tried to drag him off the ice and into the sea, and in 2003 a leopard seal dragged snorkeling biologist Kirsty Brown underwater to her death.

Read more: <http://www.mnn.com/earth-matters/animals/photos/15-cute-animals-that-could-kill-you/leopard-seal#ixzz3TXJEaJZm>

Leopard Seals Passage #2

<http://news.nationalgeographic.com/news/2014/03/140311-paul-nicklen-leopard-seal-photographer-viral/>

Hypothermia/ Drowning Passage #1

GENERAL PRINCIPLES
1. Hypothermia provides some temporary protection from the effects of postoperative arrest and prologs the possibility of normal recovery with or without the use of BLS/ALS treatment procedures. The duration of this protective effect is unknown and treatment procedures in the field should generally not cause significant delay in evacuation to definitive rewarming and effective resuscitation.

2. Because of the protective effect of severe hypothermia, resuscitation efforts should not be discontinued according to the same time criteria used for normothermic patients.

3. Severe hypothermia causes cardiac instability. Physical stimuli (includes jostling, exercise, chest compression, and endotracheal intubation) can cause ventricular fibrillation in a cold heart that is functioning effectively.

4. Because the severely hypothermic heart is unstable and ventricular fibrillation can be induced by physical stimuli, it is important to accurately determine that functional cardiac activity is absent before beginning chest compression. In severe hypothermia, functional cardiac activity can be present but the pulse might not be palpable under field conditions because: a. pulse rate can be very slow; b. pulse pressure is usually reduced in severe hypothermia; and c. environmental conditions can make even a strong pulse difficult to feel.

5. Cardiac tissue in severe hypothermia is resistant to defibrillation and anti-dysrhythmia medications. Use of anti-dysrhythmia agents before rewarming can cause significant accumulation which can have toxic or harmful effects when the victim is rewarmed. These procedures can be harmful and are generally withheld until core temperature has been raised to at least 98°F.

ASSESSMENT

1. In order to avoid the possibility of causing ventricular fibrillation in a cold but functioning heart, take up to 45 seconds to feel for the presence of a carotid pulse. If no other clinical signs of life are present, the absence of a palpable pulse usually indicates the absence of functional cardiac activity.

2. Even if a pulse is not palpable in the field, functional cardiac activity is always considered to be present in the severely hypothermic patient if any of the following clinical signs of life are present: a. spontaneous ventilation; b. response to positive pressure ventilation; c. any spontaneous movement or sound; d. organized rhythm on cardiac monitor; or e. audible heartbeat on auscultation.

Hypothermia/ Drowning

Passage #2

<https://www.youtube.com/watch?v=Wz3gy5XyaBo>

Start at 1:09