

Life Below Zero: Cold Emergencies

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SANE-A



What are?
your Goals





JUST HOW BIG IS ALASKA?





**Temperatures
range from -
40 to -80F in
winter**



FROSTBITE







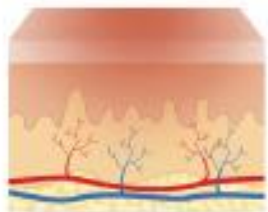




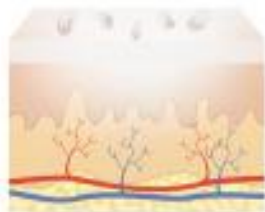


F R O S T B I T E

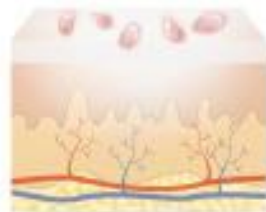
1st Degree



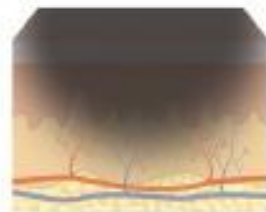
2nd Degree



3rd Degree



4th Degree



TREATMENT

Rewarm the Skin

- 37 to 39 degrees C
(Goldilocks- just right)



Pain Medication

- Opioid pain medication often necessary
- Rewarming HURTS!!!



Protect the Injury

- Wrap area with sterile dressing
- Put non-adherent dressing between toes and fingers



Surgery

- Remove dead, infected skin



tPA

- Given IV within 24 hrs has shown to decrease finger amputations



Hyperbaric Oxygen Chamber

- Poor evidence







CPT-1A
(CARNITINE PALMITOYL
TRANSFERASE
DEFICIENCY - TYPE 1)

Early Stages

- **extreme sleepiness**
- **behavior changes**
- **irritable mood**
- **poor appetite**
- **fever**
- **diarrhea**
- **vomiting**
- **hypoglycemia**
- **high levels of ammonia in the blood**

Late Stages:

- **Seizures**
- **Coma**
- **Death**



TREATMENT

Things to consider in lil ones:

- Only draw 3% of TBV: so a 6lb baby is 6ml in a draw and 12ml in a 30 day period - choose wisely!

There is NO cure for CPT-1A

Treat hypovolemia and hypoglycemia:

- IV dextrose 10% 2.5ml/kg
- Fluid resus using the 4,2,1 rule
 - Some shops are using plasmalyte 148 - no RCTs
- Followed by 5-8mg/kg/min
- Older kids will prescribed MCT oil as maintenance



Arctic Trauma



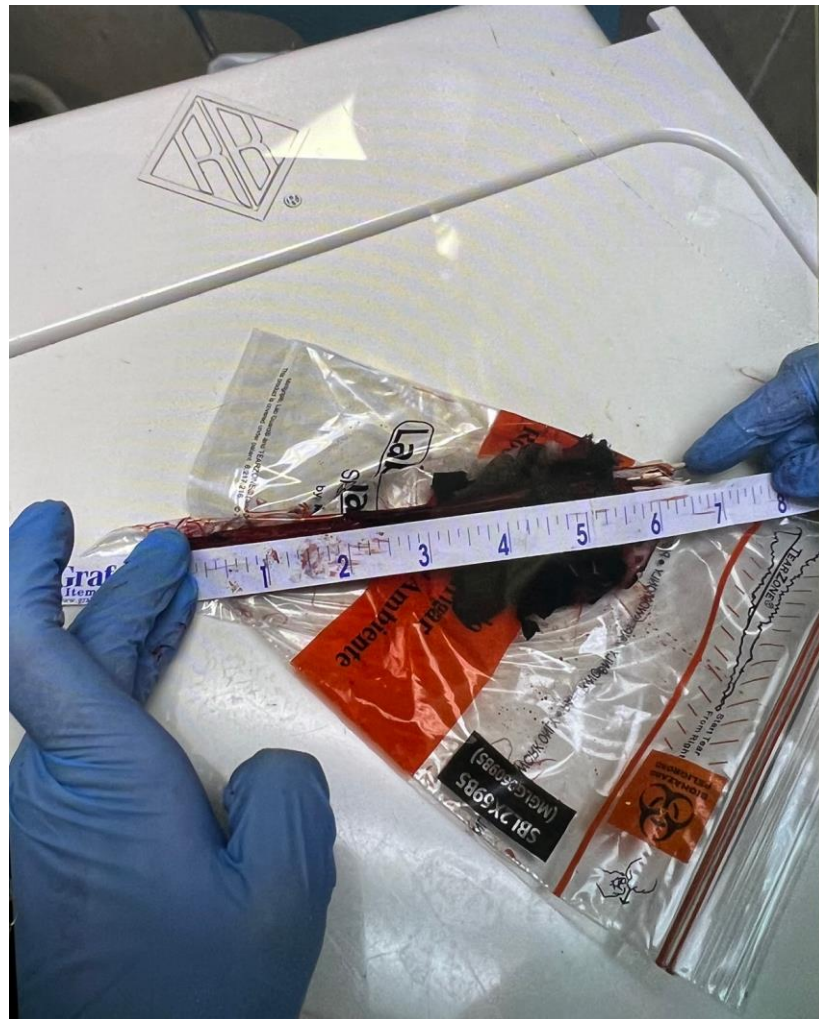
Moose Vs Man







Tree Vs Man



Meth Vs Man





Avalanche

- 92% survival if burial time less than 15 minutes
- Chances of death go up 3% per minute











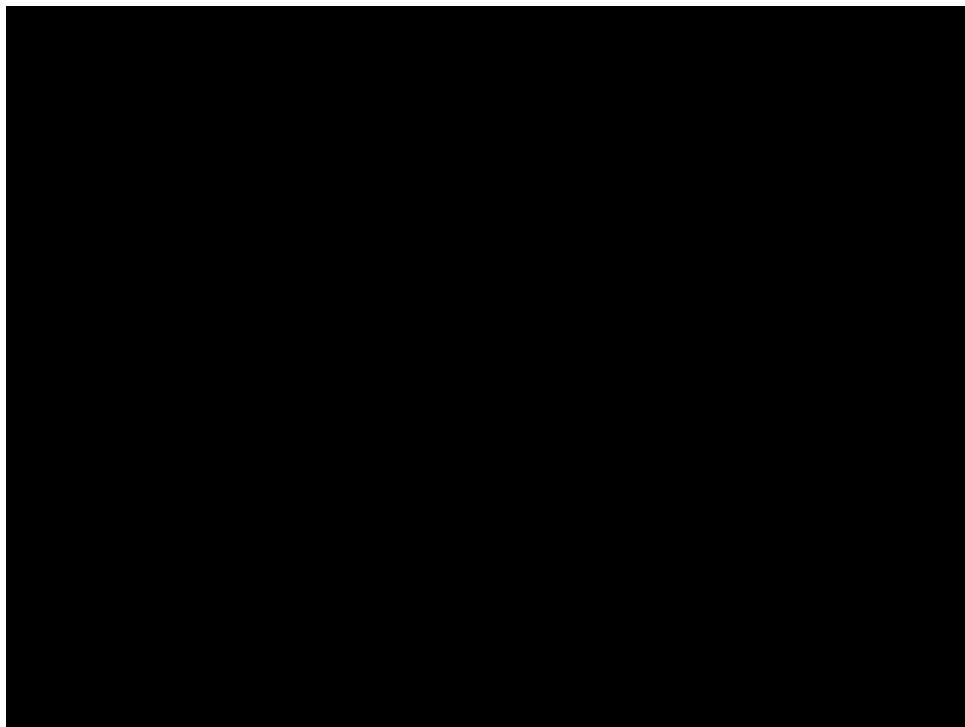


Green Beans

Pinto Beans

Wax Beans







Descending Paralysis

- **Drooping eyelids**
- **Facial nerve paralysis**
- **Blurred vision**
- **Slurred speech**
- **Respiratory paralysis**
- **Tachycardia**
- **N/V**
- **Dysphagia**



TREATMENT

Antitoxin Administration:

- **Within 48 hrs but ideally 24hr**
- **Toxin type specific; Only one approved in US for noninfant botulism**
- **Stocked by CDC**
- **Adult one vial; peds weight based**

Supportive Care

- **Mechanical Ventilation**
- **No oral charcoal; intraperitoneal shows promise in some studies**
- **Cholinergic agonists variable outcomes in studies**



LETS PLAY A GAME



What's in that orifice?





6/11/2















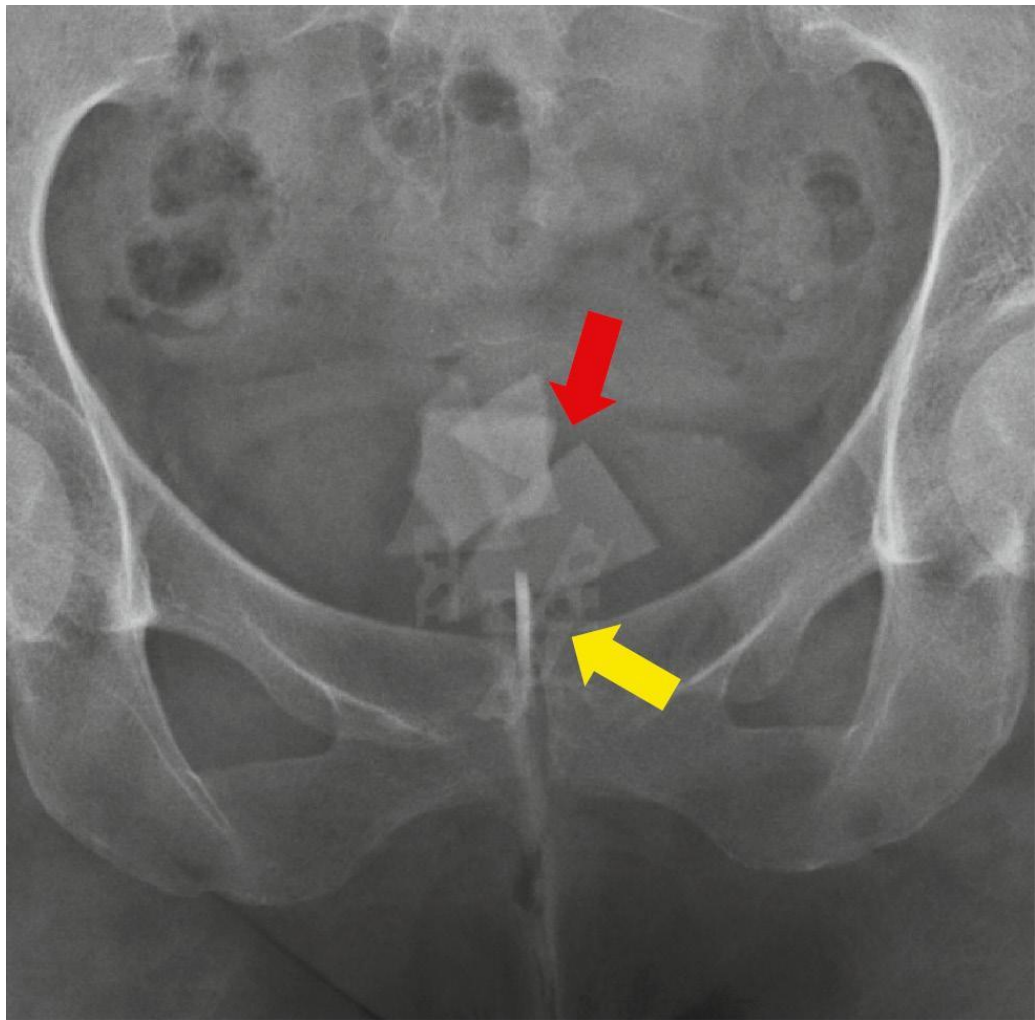








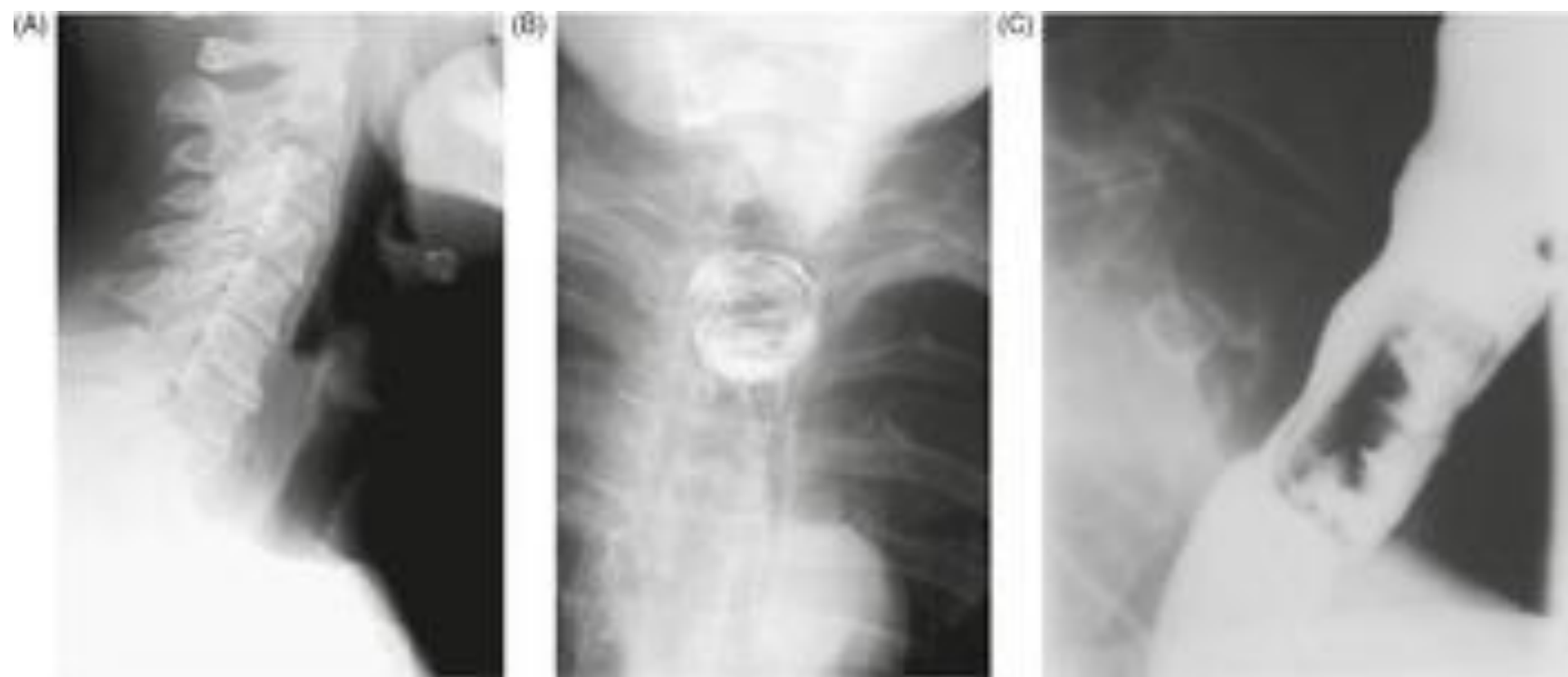






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(A)



(B)







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