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# SAFETY AT SEA AND WHAT TO INCLUDE IN YOUR OFFSHORE FIRST AID KIT

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# SAILING HEALTH RISKS

- ▶ Acute injuries
- ▶ Sailing Related Illnesses
- ▶ Unique challenges of Offshore Medical Care

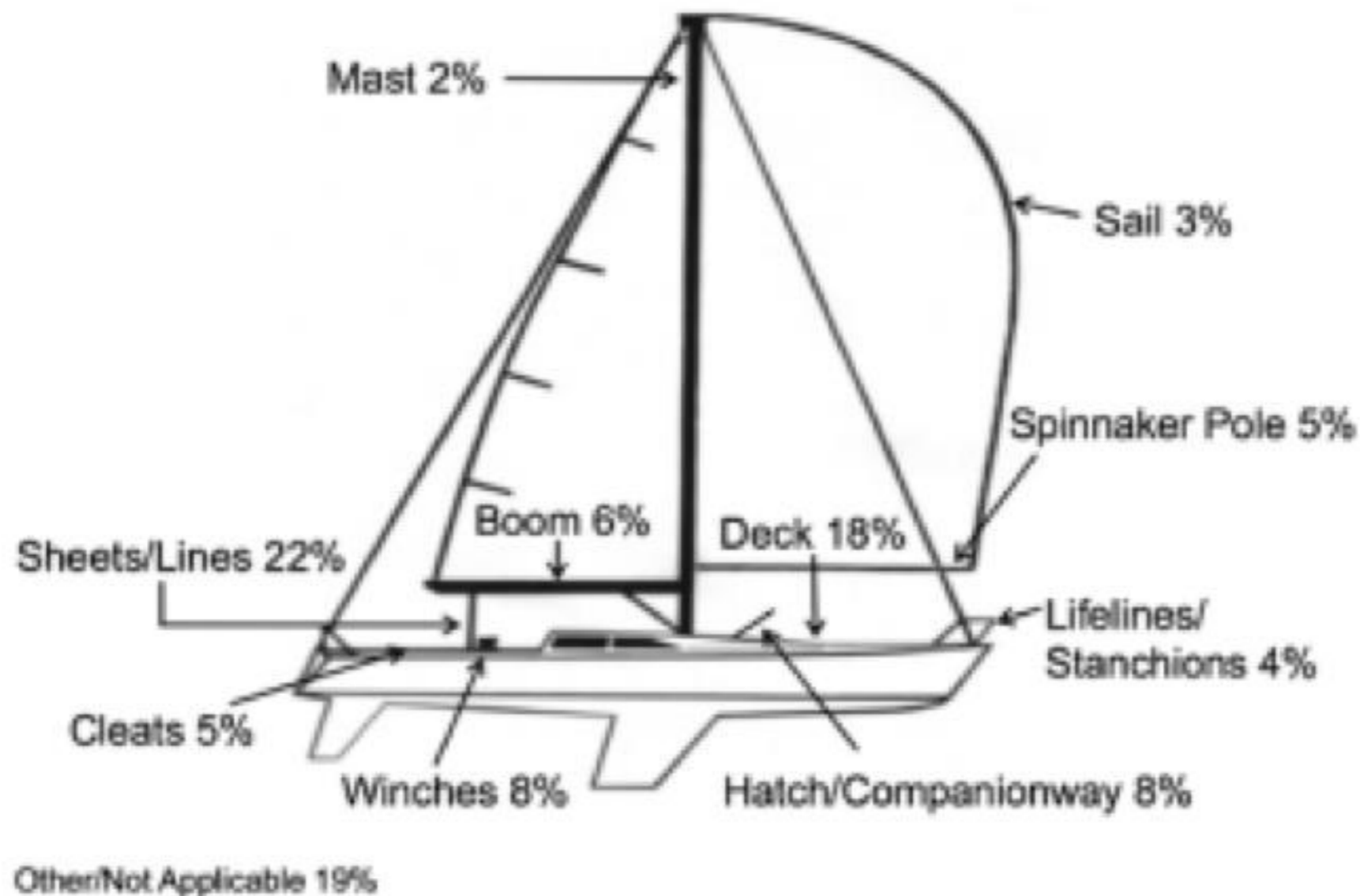
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# STUDIES OF KEELBOAT SAILING INJURIES

- ▶ Amateur around the world races-9 injuries/1000 days at sea
- ▶ Intermediate/advanced sailors-5 injuries/1000 sailing days
  - ▶ Mostly from falls (30%)
  - ▶ Contusions (12-40%)-mostly leg
  - ▶ Lacerations (5-26%)-mostly hands
  - ▶ Fractures and burns less common

# MECHANISMS OF KEELBOAT INJURY

- ▶ falls and Impacts from various parts of boat



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# ACUTE SAILING INJURIES

- ▶ Contributing Factors
  - ▶ High winds are the leading risk factor
  - ▶ Operator inexperience
  - ▶ Operator inattention

## SEVERE INJURY PATTERNS

- ▶ Boom/mainsheet impact in planned/accidental jibes
- ▶ collision with other boats
- ▶ dismasting
- ▶ Falls through hatches and companionways

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# LATEST ADDITIONS TO FIRST AID KIT



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# SAILING FATALITIES

- ▶ Sailing fatality rate 1.2/million sailing days
  - ▶ Up to 73% from drowning-82% not wearing life jackets (US Waters)
    - ▶ Falls overboard (39-44%)
    - ▶ Capsizing (20-40%)
    - ▶ Sinking (7%)
    - ▶ Collision (5%)
  - ▶ Trauma (10%)
  - ▶ Hypothermia (4%)



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# SAILING FATALITIES

- ▶ leading contributors to fatal sailing accidents
  - ▶ High winds (12-20%)
  - ▶ Alcohol use (10-15%)
  - ▶ Operator inexperience (8%)

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# SAILING ACCIDENTS

- ▶ Operator-preventable contributing factors
  - ▶ Alcohol use (15%)
  - ▶ Inexperience (8%)
  - ▶ Inattention (10%)
- ▶ Non-preventable contributing factors
  - ▶ High winds (12%)
  - ▶ Hazardous seas (9%)
  - ▶ Equipment failure (4%)

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# SAILING RELATED ILLNESSES

- ▶ Sea sickness
- ▶ Dermatologic conditions
- ▶ Upper respiratory infections
- ▶ Gastroenteritis

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# SAILING RELATED ILLNESSES

- ▶ Predisposing Elements
  - ▶ Exposure to the elements
  - ▶ Confined living quarters
  - ▶ Poor hygiene
  - ▶ Vessel motion

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# SEASICKNESS MOST COMMON SAILING RELATED ILLNESS

- ▶ Directly correlated with stormy conditions
- ▶ Incapacitation concerns
  - ▶ Short handed
  - ▶ More dangerous conditions
- ▶ Scopolamine patch, Stugeron & Phenergan suppository
- ▶ Usually resolves after 3 days of constant sea state

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# SEASICKNESS TREATMENT/PREVENTION

Scopolamine transdermal patch

- ▶ 4-6 hours to take effect
- ▶ Side effects
  - ▶ Urinary retention
  - ▶ Psychosis
  - ▶ Blurred vision
  - ▶ Dry mouth



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# SEASICKNESS TREATMENT/PREVENTION

- ▶ Stugeron (Cinnarizine) antihistmine
  - ▶ 2-3 hours to take effect
  - ▶ Dosing
    - ▶ 2 15mg tablets initially, then 1 tablet every 8 hours
    - ▶ 1 25 mg tablet as necessary
  - ▶ Main side effect is sedation

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# SEASICKNESS TREATMENT

- ▶ Phengergan Suppository
  - ▶ 25mg PR twice a day
  - ▶ Keep refrigerated
  - ▶ Side effects
    - ▶ Very sedating
    - ▶ confusion



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# DERMATOLOGIC ILLNESSES 21% OF SAILING RELATED ILLNESSES

- ▶ Sunburn
- ▶ Boils
  - ▶ Infected hair follicles
- ▶ Cellulitis
  - ▶ Keflex
- ▶ Tinea (fungal skin infections)
  - ▶ Ringworm, Athletes Foot, Jock Itch
  - ▶ Personal contact with damp surfaces

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# DERMATOLOGIC ILLNESSES- PREVENTION/TREATMENT

- ▶ Sunburn
  - ▶ Zinc oxide
  - ▶ Aloe
- ▶ Boils-usually don't require treatment
- ▶ Cellulitis
  - ▶ Neosporin ointment
  - ▶ Keflex
- ▶ Tinea
  - ▶ OTC anti fungal creams

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# OTHER TOPICAL MEDICATIONS IN THE FIRST AID KIT

- ▶ Cortisporin Otic Suspension
  - ▶ External Otitis (swimmers ear)
- ▶ Triamcinolone Cream & Hydrocortisone ointment
  - ▶ Allergic skin reactions, insect bites-not infections
- ▶ Polytrim/Trimethoprim Ophthalmic Solution
  - ▶ Conjunctivitis or Other Eye Infections
- ▶ Silvadene Cream
  - ▶ Burns

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# URI 18% OF SAILING RELATED ILLNESS

- ▶ Common Cold & Flu
  - ▶ Viral requiring only supportive treatment
- ▶ Strep
  - ▶ Azithromycin

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# GASTROENTERITIS 15% OF SAILING RELATED ILLNESSES

- ▶ “Stomach Flu”
  - ▶ Diarrhea, vomiting & low grade fever
- ▶ Viral or Bacterial
- ▶ Contaminated food or water
- ▶ Most require no treatment
  - ▶ Cipro, Flagyl
  - ▶ Dehydration

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# TREATABLE LIFE THREATENING CONDITIONS

- ▶ Angina
  - ▶ Sub-lingual NTG tablet or spray
  - ▶ Chew aspirin
- ▶ Severe Allergic Reactions
  - ▶ EpiPen
  - ▶ Prednisone
  - ▶ Benadryl

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# PAIN

- ▶ NSAIDS
  - ▶ Best for inflammation
- ▶ TYLENON
  - ▶ Enhances NSAIDs and reduces fever
- ▶ NARCOTICS
  - ▶ Last choice-side effects
- ▶ MUSCLE RELAXANTS
  - ▶ Valium is best

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# UNIQUE CHALLENGES OF OFFSHORE MEDICAL CARE

- ▶ Definitive care may be days away
- ▶ Limited supplies
- ▶ cramped and poorly lit space below deck
- ▶ unpredictable and violent vessel motion



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# UNIQUE CHALLENGES OF OFFSHORE MEDICAL CARE

- ▶ Challenge compounded by increased injuries in storms
  - ▶ Crew fully engaged
  - ▶ Fatigue
  - ▶ Seasick

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# DESIGNATED SHIP DOC

- ▶ Truly life threatening conditions are unlikely to be treated successfully offshore
- ▶ Prevention is key to minimizing crew health risks
- ▶ Sea sickness, dehydration, hypothermia and fatigue act cumulatively to impair judgement
- ▶ Recognize and address in early stages

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# EARLY RECOGNITION

- ▶ Seasickness
  - ▶ Lethargy, drowsiness
- ▶ Dehydration
  - ▶ Fatigue, dizziness, confusion
- ▶ Hypothermia
  - ▶ Drowsiness, confusion
- ▶ Fatigue