

**MEDICAL THOUGHTS AND SUPPLIES FOR A SINGLEHANDED PASSAGE**  
**Dwight Odom, MD May, 2003**

**Tetanus toxoid current—less than 5 years**

**Know the side effects of all the medicines you take with you —prescription and over the counter—as an example:**

**Scopolamine---dry mouth in 2/3 people, blurred vision, severe urinary retention in middle aged or older men, drowsiness, confusion, hallucinations. If taken for more than three days, when discontinued, may experience dizziness, vomiting, headache, and disturbance in equilibrium. This is the best drug with the least side-effects for sea sickness in many separate studies.**

**Multivitamin daily—recommend if going to Hawaii and back by sailboat**

**Bleeding—ALL WILL STOP WITH PRESSURE for 15 minutes with fingers or the heel of the hand.**

**DO NOT LOOK AT FIVE MINUTES!!! It will require another 15 minutes. The scalp may take longer.**

**Blow to the head---lie down immediately where you are with your face turned to the side, if you feel, even slightly, like you might pass out. DO NOT TRY TO GET TO A BETTER PLACE ON THE BOAT TO LIE DOWN!!!!**

**Skin rash develops during the passage — probably an allergic reaction to some medicine you are taking.**

**COMMON HEALTH RISKS—**

**Small Scrapes or Cuts—use antibiotic ointment immediately and several times a day to prevent infections. As always, an ounce of prevention is worth a pound of cure**

**Mal de Mer —use medications quickly or before you start the race if you know it is a problem for you. Start with small doses but quickly take large doses if symptoms worse or vomiting occurs. Have suppositories if you are prone to this malady. (see next page.)**

**Constipation—very common. Prevent with forced fluids in the first few days and use laxatives early. Metamucil is good preventative. Possibly have Ducolax suppositories.**

**Dehydration—common when you get to the warm weather. You are dehydrated if you do not pee two good amounts in 24 hours. Remember we lose large amounts of fluids in our breath and through our skin in the tropics.**

**Injury—falls from sudden boat movements, lines wrapped around body parts, spinnaker poles hitting you, and large ships going bump-bump. Please hold on tightly, use harnesses, use radar detectors and/or use strobes at night when sleeping.**

**SUPPLIES:**

Dial soap or other antibacterial	sterile gauze pads 4 x 4 inch
Band-Aids - long	SAM splint (padded aluminum) Campmore or REI
Adhesive tape-2 inch	Inflatable splint-possibly
Steri-strips or make with tape	Safety pins-large
Benzoin—to make tape stick	Betadine liquid and maybe gauze pads
Ace bandages- 4 inch	Superglue
Duct tape	Bandage scissors (West Marine stainless)
Hydrocortisone cream	Thermometer
Desitin cream	Imodium-AD
Triple Antibiotic ointment-large tube	For Women—Monistat cream and suppositories
Advil—generic ibuprofen often irritates stomach—as good as codeine for pain	
Visine eye drops	Tweezers
Dental kit—REI \$12.50 Campmore \$16—includes Cavit temporary filling material	
New Skin—for skin cracks in fingers	
Baby wipes	

**PRESCRIPTION ANTIBIOTICS:**

Ampicillin 250mg q (every) 6 hrs x 7-10 days or  
 Amoxicillin 500 mg q 8 hrs x 7-10 days  
     Broad spectrum for skin, tissue, urinary, and ear infections, sinusitis, bronchitis  
     Avoid if allergic to penicillin and use one of next three

Erythromycin 500-mg q 6 hrs for 10 days with food (irritates stomach)—for those allergic to Penicillin

Keflex 250 mg q 6 hrs x 7-10 days—for allergic to Penicillin

Cipro 500 mg q 12 hrs x 7-10 days (expensive) excellent for saltwater contaminated infected wounds

Sepra DS or Bactrin DS q 12 hrs x 7-10 days for dysentery, and infections such as urinary, ear, sinus, bronchitis (is a sulfa drug)

Sulamid ophthalmic ointment for eye infection—(sulfa drug)

**FIRST AID BOOKS:**

Onboard Medical Handbook Paul Gill, Jr, MD \$18  
 Advanced First Aid Afloat Peter Eastmen, MD \$17

Both excellent books.

**SEA SICKNESS:**

Prevention is the best. If you know you might have trouble, begin medications the day before leaving. Scopolamine patch have been found to be the best with the least side-effects in many separate medical studies. All the other medications that are effective are antihistamines and have sedation as a side-effect: the stronger the medication and the higher the dosage, the greater sedation. Caffeine will reduce the sedation. Also, combination medications such as Actifed reduces the sedation.

The non-sedative antihistamines (Allegra and Claritin) have not been studied for sea sickness yet, but I think they might offer significant relief if started the day before the trip.

In all the well controlled studies, the placebo effect is approximately 40% so all the other substances and wrist bands etc work well in that per cent.

Stugeron (cinnarizine) has been highly recommended by the sailing community, but is not available in the US because the company that makes it doesn't want to sell it here. It is another antihistamine similar to all the others and has the same side-effects. The pill size available in Mexico is often 75 mg. And the recommended dose is 25-50 mg so be very careful if you use this medication.

**SLEEP DEPRIVATION:**

This is a very real entity with the cognitive functions activity decreasing 25% for each 24 hours of sleep deprivation (equal to 2 drinks of ethanol). SLEEP LOSS IS CUMULATIVE AND THE ONLY CURE IS SLEEP. The degradation occurs in the higher more complex mental processes first. You lose the ability to integrate information well. There are significant increases in workplace and auto accidents in all studies.

Naps of 20 minutes or less are very helpful even during the day. Many people who are awakened between 20 minutes and 90 minutes often have difficulty thinking and performing tasks because they are in REM (deep) sleep. It has been found that a 90 minute sleep once every 24 hrs. is very helpful and much better than multiple short naps. Try to avoid small amounts of caffeine during the day as in coffee or soft drinks.

If you must be awake when very tired, caffeine is very helpful in the range of 400-600 mg dose (NoDos 200 mg tabs). A cup of coffee only has 80-100 mg.

The LongPac is a relatively short distance race but we are in shipping all of the time so be very careful with your watches and your naps!!!



one man    one plane    one world



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### Sleep facts from our experts

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- Polyphasic napping - a method of sleep management devised by world sleep expert and neurologist, Dr Claudio Stampi for solo global sailor Ellen MacArthur. In a bid to avoid the risks of sleep deprivation, whose effects can be loss of judgement, mood swings and even hallucinations, Stampi advocated sleep in small chunks of around half hourly intervals every few hours rather than one long uninterrupted deep sleep. According to Stampi, this method is successfully adopted by 85 percent of the animal kingdom. (especially in dogs and cats). He views it as a strategy of choice in maintaining acceptable levels of alertness under situations of continuous work.
- The world record for uninterrupted sleep is held by Randy Gardiner in 1965 for 14 and a half days. He went to sleep the night of the experiment for 16 hours non-stop with no signs of physical and or mental damage.
- Underground and train drivers have to constantly depress a handle when driving. Failure to do so through entails automatic braking.
- For long distance train drivers in the Australian outback a button beeps every minute which requires reaching out and pressing it in order to cancel.
- The Italian Renaissance artist and inventor, Leonardo da Vinci, who painted the Mona Lisa, would sleep 15 minutes out of every four hours - a daily total of one and a half hours' sleep.
- At NASA a modification of da Vinci's sleep pattern was modified successfully for sleep management in space missions. Participants were trained to sleep for 30 minutes every four hours - a daily total of three hours sleep. Findings revealed that they performed better and were more alert than when they had had three hours of uninterrupted sleep.
- Napoleon, the French 19th century emperor and general, famously advocated six hours sleep for a man, seven hours for a woman and eight for a fool.
- Virgin Atlantic Airways airline pilots are not allowed to fly a plane when deprived of sleep. There are always two, three or four pilots on any one flight. The longest flight is the 12-13 hour flight to between London and Tokyo and during this they take it in turns to fly the aircraft.
- The untrained winner of a British TV programme 'Shattered' broadcast last year from the Big Brother House was a woman who kept herself awake for 178 hours by inducing a painful cramp in her leg.
- When severely deprived of sleep and rest, people endure short bursts of microsleeps - where the brain shifts uncontrollably from wake to sleep for up to several minutes according to Stampi.

## SLEEP DEPRIVATION

Dwight Odom, MD    May, 2002

### CIRCADIAN RHYTHM

Specific genes control each individual: night vs day person. These genes are essentially the same in all mammals. In most people the maximum physical urge to sleep is 2-6 AM, and this is associated with a decrease in body temperature and blood pressure. There is also a mild sleep cycle from 1-4 PM, but much less than at night and not associated with the physical changes. Average nightly sleep has changed in humans with the inventions of electricity, TV, and alarm clocks. Before clocks, 10.3 hours was the average sleep (like the great apes), and before electricity, the average was 9 hours.

### SLEEP DEPRIVATION

This is a very real entity that has real consequences in the work place—especially for those who work changing shifts, or continuous work activity such as physicians, the military, and SINGLEHANDED SAILORS. The best studies have been done by the Army and the Navy. Cognitive function activity decreases 25% after each 24 hours of sleep deprivation. SLEEP LOSS IS CUMULATIVE AND THE ONLY CURE IS SLEEP. It was recently was discovered that different organ systems recover at different rates. The brain of a rat can recover in one light cycle, but the lungs and muscle require 6 cycles, and the liver requires 16 cycles. Science Apr 28

Sleep deprivation symptoms and effects:

Cognitive function decrease 25% per 24 hours without sleep (> 2 shots of alcohol)

Degrades the higher more complex mental process first

Lose ability to integrate information

Simple mental processes unaffected

Significant increases in workplace and auto accidents

Decreases initiative and productivity

Daytime sleepiness and weariness

Sleep requirements—6 hrs in 24 hrs is the minimum to prevent sleep deprivation. This can be supplied by naps, but people vary in the length of a nap from which they can awake and be fully cognitive. Naps of more than 20 but less than 90 minutes cause trouble in many people. At 60 minutes you can wake up in REM sleep and have difficulty thinking well. Each individual has to experiment. At some time during each 24 hrs it is probably very good to sleep 90 minutes without interruption. Several studies have found that mental function decreases even with frequent naps without deep sleep.

### THE CURE

Recovery during sleep is front loaded with the first 4 hours having the maximum effect

**Frequent naps. Try to store sleep during the daytime**

**Sleep longer than 90 minutes at least once in a 24 hour period (better between 12-5 AM if possible)**

**Avoid small amounts of stimulants---small amounts of caffeine such as a cup of coffee or a soft drink**

**Avoid drugs that sedate---sea sickness types**

**Habits to stimulate sleep---eat protein 20 minutes before sleeping, wash face, brush teeth**

**Eat Carbohydrates when you wake up**

#### **STIMULANTS**

**Caffeine 300-600mg dose works well. Returns mental function for 2-4 hours.**

**NoDos 200 mg pills---use 2-3 at one time**

**A cup of coffee only has 80-100 mg caffeine**