

The US National Transportation Safety Board (NTSB) has released their Safer Seas Digest 2016 with an analysis of “Lessons Learned from Marine Accident Investigations”. (<https://www.nts.gov/investigations/AccidentReports/Reports/SPC1701.pdf>)

Discovery Health would like to highlight two of the NTSB “lessons learned” which involve occupational medicine topics: Fatigue and Use of Medication While Operating Vessels.

## **FATIGUE**

Fatigue has received wide attention and is recognized as a major safety risk factor by the Federal Aviation Authority for flight crews and by the Department of Transportation for truck drivers. The American College of Occupational and Environmental Medicine reports:

“The most significant consequences of fatigue were short-term degradation in cognitive (thinking) and physical functioning. Illnesses, human error, and injuries also occurred to a lesser extent. Evidence suggested that some consequences of fatigue can make other outcomes worse, reinforcing fatigue and leading to a “downward cycle”.

Occupational fatigue affects more than 20 percent of the US working population, resulting in more than \$136 billion in lost productivity and health care costs each year.

Unfortunately, the problem of fatigue may draw attention only after major accidents-the researcher cite the Three Mile Island, Chernobyl, and Exxon Valdez disasters.”

(<https://www.acoem.org/tired.aspx>)

## **USE OF MEDICATION WHILE OPERATING VESSELS**

As medical advisors to the maritime industry, Discovery Health encourages our clients and vessel medical officers to consult with one of our maritime physicians before offering a crewmember sedating medications. Crew taking prescription or over-the-counter medications should also be given warnings during orientation about the use of potentially sedating medications at sea. Some examples in a typical ship’s medicine chests would be:

- Narcotic/Opiates (oral -codeine, hydrocodone, tramadol [Ultram]; injectable – morphine, nalbuphine [Nubain]);
- Benzodiazepines (diazepam [Valium], lorazepam [Ativan];
- Antihistamines, cough syrups or seasickness pills (diphenhydramine [Benadryl], promethazine [Phenergan], meclizine [Antivert], dimenhydrinate [Dramamine], scopolamine patches.

If one of the ship officers, managers or crewmembers has a question regarding the potential for sedation as a side effect of a medication or combination of medications, a call (01-1-855-677-1111) or email ([seadoc@discoveryhealthmd.com](mailto:seadoc@discoveryhealthmd.com)) to Discovery Health is most appropriate.

# LESSONS LEARNED



## Fatigue

Fatigue continues to be a leading cause of accidents among all modes of transportation, and reducing fatigue-related accidents is once again a top safety improvement on the NTSB's *Most Wanted List*. Mariners should recognize the effects of sleep loss on performance and should never take a watch while too fatigued to be fit for duty. When fatigued to the point that it affects the ability to properly stand a watch, mariners should arrange for a qualified watchstander to serve in their place or otherwise avoid being on duty until they are able to safely carry out their responsibilities.

■ Fatigue was a significant factor in the *Key Largo/Sea Shepherd*, *Day Island*, and *Gordon Jensen* accidents.



## Use of Medication While Operating Vessels

For the safety of the crew, equipment, and vessel, use of medication in conjunction with the operation of a vessel must be done with caution. Mariners are encouraged to consult with a medical professional before using any medication, whether prescribed or over the counter. (For credentialed mariners, use of certain medications can be disqualifying.) Furthermore, mariners should never use medications that they are unfamiliar with or for which they are not the prescribed user. In many states, use of a prescription drug that is not prescribed to the user is illegal.

■ Improper use of medication, combined with fatigue, played a role in the *Day Island* and *Gordon Jensen* accidents.