



# YourNavy

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The program, run through the Naval Postgraduate School, is limited to certain fleet concentration areas; applications for March classes are due Jan. 17. See NAVADMIN 261/13 for eligibility requirements and more details.



## [FIVEFACTS]

### BARBERS POINT PROBLEMS

1. The former Naval Air Station Barbers Point, Hawaii, has become a home to thieves and vandals, according to a local historian who says its decaying infrastructure is being raided for scrap metal.
2. John Bond told the Honolulu Star-Advertiser that more than 50 utility poles have been chopped down for their metal, and manhole covers have gone missing.
3. The station, established in 1942, was closed in 1999.
4. Bond blamed the vandalism on the end of Navy patrols of the base, which he says stopped a year ago.
5. Above, a picture of the base in the 1980s, when it hosted the "Rainbow Fleet" of maritime patrol aircraft that searched out Soviet subs during the Cold War.



## [CNOSITDOWN]

Hear the latest on sexual assault prevention efforts straight from the top: Chief of Naval Operations Adm. Jon Greenert gives a wide-ranging interview at [militarytimes.com/videonetwork](http://militarytimes.com/videonetwork), search **shipmate**.

# Sleep for the night shift

## Experts seek fixes for late crews before health, readiness problems arise

By Sam Fellman  
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As ships continue to experiment with watchbills that improve sailors' sleep, one of the Navy's foremost performance experts is warning about a new front in the Navy's fight against fatigue: shift work.

Researchers are increasingly concerned that those who stand night duty long-term get less sleep and are susceptible to health risks down the road, findings that could affect the thousands of sailors who routinely pull late-night duties in ships and squadrons.

"All the evidence on shift work indicates that if you sleep during the day, when other people would be working, the quality of your sleep is less," said Nita Shattuck, a professor at the Naval Postgraduate School who is one of the Navy's foremost experts on fatigue and human performance. "So you have poorer quality of sleep and they estimate that, in general, it's two-thirds of the amount of sleep you would get for a nighttime" period.

The Navy is not about to cancel night shifts, but Shattuck and some fleet leaders are looking for ways to improve sailors' sleep, especially for night crews. Here are some fixes they've come up with:

■ **Berthing by shift.** Reorganize berthing compartments so that everyone in a given compartment is on the same shift, thereby reducing the number of noises, talking and lights, which disturb sleep.

■ **Quiet ship.** Reduce the number of general announcements to the bare minimum and only allow them during times when everyone



MCSN SABRINA FINE/NAVY

The Navy's sleep specialists have long targeted better watch schedules, but their latest push is to help those working nights get enough rest. Here, sailors on the aircraft carrier Dwight D. Eisenhower participate in a nighttime barricade drill.

## ONGOING STUDIES

Nita Shattuck, a human performance expert at the Naval Postgraduate School in Monterey, Calif., has spent 12 years studying how sleep affects performance in the fleet. With the help of the officers who are her researchers, Shattuck is boosting awareness of the risks of inadequate rest and encouraging the adoption of watch and work shifts that conform to the human body's normal 24-hour clock.

Her current research projects in the fleet:

### DESTROYER BENFOLD

■ The San Diego-based ship plans to try a three-hours-on, nine-hours-off watch rotation for underway watches. This four-section rotation offers two benefits: Shorter watches that keep watchstanders more alert and conformance to the 24-hour circadian rhythm.

The crew of the destroyer

Jason Dunham tried the 3/9 and generally preferred it to the so-called "five and dime" rotation: five hours on watch, 10 hours off. The Benfold crew experimented with six-on, 18-off rotations on its 2012 deployment.

### CARRIER NIMITZ

■ Researchers have begun collecting watchstander

performance data and alertness levels aboard the deployed carrier, where some crew members are wearing watches that track their sleep. Shattuck said the crew of the Nimitz, now patrolling the Red Sea, is only the second carrier crew she's studied.

### LITTORAL COMBAT SHIPS

■ Shattuck's team has received funding to study crew work and rest aboard both types of littoral combat ships, which depend on 50-person core crews for all their watchstanding and maintenance tasks.

er to get back to sleep, studies have shown. The best defense against this are the curtains alongside a sailor's rack. The destroyer Benfold is considering thicker material to keep out light and even muffle sound.

Shattuck and many others worry that chronic sleepiness is a fleet-wide epidemic that harms health and morale and leads to accidents. But their campaign must contend with skepticism in branches like the surface and sub fleets, which have long viewed sleeplessness as a badge of honor — a sign that a sailor was getting the job done.

### Fighting sleep foes

The handling of fatigue remains uneven across the fleet. Aircrews won't fly unless they've slept enough, but sleep is not a prerequisite for a shipboard watchstander. And submariners typically live artificial 18-hour days underway, sometimes for months on end.

is awake. Ask sailors to remain quiet around berthing compartments where shipmates are resting.

■ **Thicker curtains.** Block out the biggest sleep disruptor — light. Seeing a bright light makes it hard-

## NEW-LOOK DDG

The latest pictures of the future destroyer Zumwalt make it clear the ship won't be mistaken for a Burke any time soon. See them at [blogs.defensenews.com/intercepts](http://blogs.defensenews.com/intercepts), search **Zumwalt**.





Shattuck and her postgraduate students are continuing to study crew rest and are testing the feasibility of better watch rotations aboard different classes of ship, with the help of commanding officers. A mounting body of evidence suggests that sailors are more alert when they conform to a 24-hour day, where they sleep at the same time daily.

The goal of the researchers is to persuade more squadrons, ships and subs to adopt watchbills that follow the body's natural 24-hour clock: rotations like four hours on, eight hours off, or three on, nine off. Both allow sailors to get up at the same time daily and give them enough time off to get the deep slumber needed to reset their bodies and stay alert.

Those efforts got a big boost in May from the heads of the surface Navy, who called upon ship COs to embrace the concept of crew rest and to experiment with circadian watch rotations. It remains unclear whether the Navy's other



MCI GERONIMO AQUINO/NAVY

**One suggested change to improve sleep for sailors working late — thicker rack curtains. Here, inspectors check out a berthing space aboard the dock landing ship Harpers Ferry.**

type commanders will similarly endorse this, but Shattuck is moving forward with other studies in the hopes of persuading more leaders to get serious about rest.

One of her focuses is night crews.

A 2013 study found that those who worked night shifts for a long time sleep more fitfully than daytime workers even years later, a condition that can lead to other health issues. That builds on research

that night crews are more fatigued and more susceptible to mental health issues and even cancer.

But this goes beyond health, proponents say. Having well-rested sailors boosts combat effectiveness. The Coast Guard and naval aviation recognize this and have firm crew rest rules. Shattuck said the rest of the Navy could also learn from Navy SEALs, who typically keep sleeping areas, like tents, quiet and dark for night crews.

"That's probably the best that we can do," Shattuck said in an Oct. 16 phone interview. She cited recent studies that found light, whether from the sun or an open refrigerator door, disrupts the body's production of the hormone that induces sleep, making it much harder to go back to sleep. "Even that tiny amount of light in the middle of the night... will suppress your melatonin, which is your sleep drug."

That's where the curtains come in. Shattuck is working with the Benfold to find and test curtains

that better keep out light; a thicker material might also dampen sound.

One of the foremost noise conduits are vents at the bottom of a berthing door. Commands like the Seawolf-class submarine Jimmy Carter are exploring ways to dampen the sound that comes through berthing doors and to keep the passageways quiet around berthing areas.

Indeed, one of the best measures may also be the most simple: Respect. Shattuck has heard sailors complain again and again in the course of her 12 years of shipboard studies that their berthing is loud, with shipmates switching on lights and talking without regard for those sleeping nearby.

"In some berthing spaces, they really don't care. They're very rude to one another," said Shattuck, who said leadership needs to be involved to change the attitude to be more like, "OK, that person had to stand watch so what I really need to do is stay out of there." □

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