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IN REPLY REFER TO  
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COMNAVSURFPAC INSTRUCTION 3120.2  
COMNAVSURFLANT INSTRUCTION 3120.2

From: Commander, Naval Surface Force, U.S. Pacific Fleet  
Commander, Naval Surface Force Atlantic

Subj: COMPREHENSIVE FATIGUE AND ENDURANCE MANAGEMENT POLICY

Ref: (a) Naval Postgraduate School Crew Endurance Handbook v1.1, 1 Oct 2017  
(b) U.S. Coast Guard Crew Endurance Management Practices, Jan 2003  
(c) CNAF M-3710.7, 15 Jul 2017

Encl: (1) Individual Risk Management Tool

1. Purpose. To implement a Commander, Naval Surface Forces (CNSF) comprehensive fatigue and endurance management policy for all ships and afloat staffs, both at sea and in port.

a. Sailors are exposed to a variety of operational risk factors including unpredictable schedules, long work days, and heavy workloads. These risk factors degrade impact a Sailor's productivity and warfighting capability. This instruction codifies and consolidates several years of CNSF guidance regarding individual readiness, the circadian rhythm implementation message, waterfront briefings to ships in fleet concentration areas, and training sessions at Surface Warfare Officers School Command. This instruction provides Type Commander policy, commander's intent, and specific direction to achieve optimal crew endurance, performance, and safety.

b. The desired end state of this crew endurance policy is to ensure Sailors are adequately rested for safe, professional shipboard operations to deliver enhanced warfighting effectiveness by reducing conditions that contribute to fatigue, impaired health, decreased performance, and mishap potential.

2. Scope and Applicability. All CNSF immediate superiors in command, ships, and craft shall implement this policy, tailor best practices, and train their staffs and crews on its content.

3. Discussion

a. Crew endurance is the ability to maintain sustained, optimal warfighting performance while enduring job-related physical, psychological, and environmental challenges.

b. A critical tenet of crew endurance is circadian rhythm. The human circadian rhythm is the internal 24-hour biological clock that controls sleep and wake cycles, and affects levels of alertness. This clock mechanism influences sleep by controlling the timing of "sleep gates" and

“forbidden zones” for sleep. In round-the-clock operations or traveling across time zones, an individual’s internal biological day may not be aligned with the external environment. This “jet lag” or “shift lag” results in slower reaction times, increased errors, and an inability to remain alert. Watchbills based on a fixed 24-hour day (e.g., 6/6, 4/8, or 3/9), in which Sailors stand watch and sleep at the same times each day, optimize alertness and recuperation.

c. In order for a crew endurance plan to succeed, a circadian-based shipboard routine must complement circadian-based watchbills. A routine that does not protect sleep negates the benefit of circadian watchbills. While there will be times that operational requirements infringe on protected sleep periods, this infringement should be the exception, not the norm.

d. The Naval Postgraduate School Crew Endurance Handbook, reference (a), was developed through exhaustive research of over 1,300 Sailors at sea over a 16-year period. It provides circadian rhythm watchbills, shipboard routines, and best practices and is available at [www.nps.edu/crewendurance](http://www.nps.edu/crewendurance). The watchbills and shipboard routines are notional and should be tailored to individual ships and missions.

#### 4. Policy

a. To improve crew endurance, all ships will implement circadian rhythm principles in watchbills and shipboard routines, and train their crews about the risks of inadequate sleep.

b. Commanding officers (CO) will use their best judgment and implement circadian-based watchbills and shipboard routines in a deliberate and informed manner. Consistent with their responsibilities and authorities, COs have latitude in implementing this direction; ships with unique mission sets and manning constructs will incorporate circadian rhythm principles and lessons to the best of their abilities.

c. Each of the recommended notional circadian rhythm watchbills and shipboard routines in reference (a) will satisfy this policy. Commands are free to develop and test additional circadian routines, provided that they meet the same baseline requirements (fixed watches on a 24-hour day with predictable, protected sleep periods). Commands which do so are encouraged to submit their new routines to the Naval Postgraduate School Crew Endurance research team for analysis and potential incorporation in subsequent versions of reference (a).

#### 5. Responsibilities

a. COs will consider the following guidelines when planning operations and making go/no go decisions.

(1) Under ordinary circumstances underway, Sailors should receive a minimum of 7 hours of sleep in a 24 hour day; either by one uninterrupted 7-hour period or an uninterrupted 5-hour period with an uninterrupted 2-hour nap. Each of the notional watch rotations and shipboard routines presented in reference (a) meet these guidelines.

(2) Reference (b) recommends that Sailor workdays not exceed 12 hours in a 24 hour period or 8 continuous hours of work. Per reference (c), as the time continuously awake exceeds 16 hours, performance begins to drop. After 18 hours, performance efficiency rapidly declines to 75% of effectiveness or less, and accident rates increase for almost every activity.

b. Incumbent upon every Sailor is his or her professional responsibility to take advantage of sleep opportunities to support safe and professional shipboard operations. Sailors who are provided with protected sleep periods but deliberately fail to take advantage of them are sub-optimizing their performance and may be subjecting their ship and shipmates to increased risk of mishap or error.

c. Ships will include individual risk management as part of operational risk management in both routine operations, as well as special evolutions briefings. Individual risk management is a process which ensures that the proficiency, currency, and fatigue level of key watchstanders are accounted for when preparing to conduct operational evolutions. Enclosure (1) is an example tool to assess individual risk management and can be tailored to individual platforms.

d. Ships will integrate this policy into shipboard planning and safety processes (e.g., planning board for training, safety council, and special evolutions briefings) as well as the human factors detailed in reference (b): red zone/light management, the crew's psychological state, motion sickness, sleep quality and duration, the crew's diet and biological clock stability, excessive caffeine intake, napping, stress, cold and heat illness, work schedule and workload, weather, and ship environment.


e. Afloat staffs will incorporate this policy into their planning processes and establish battle rhythms that balance crew endurance in their subordinate units with operational requirements.

6. Records Management. Records created as a result of this instruction, regardless of media and format, must be managed per Secretary of the Navy Manual 5210.1 of January 2012.

7. Review and Effective Date. Per OPNAVINST 5215.17A, CNSF will review this instruction annually on the anniversary of its effective date to ensure applicability, currency, and consistency with Federal, DoD, SECNAV, and Navy policy and statutory authority using OPNAV 5215/40 Review of Instruction. This instruction will automatically expire 5 years after effective date unless reissued or canceled prior to the 5-year anniversary date, or an extension has been granted.



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Releasability and distribution: This instruction is cleared for public release and is available electronically only via COMNAVSURPAC directive Web site, <https://cpf.portal.navy.mil/sites/cnsp/Pages/Directives.aspx>

COMNAVSURFLANT directive Web site: <https://usff.portal.navy.mil/sites/surflant/n002/Lists/COMNAVSURFLANTDirectives/Summary.aspx>

# Individual Risk Management Tool

<u>Watchstation</u>	Watch/Rest	Experience	Weather	Equipment	IRM
OOD: LT Red	2	4	3	2	11
CONN: ENS Blue	3	2	3	2	10
Helm: BM3 Green	2	1	3	2	8
Lee Helm: EN3 Orange	3	4	3	2	12
<u>Nav Evaluator</u> : LTJG White	3	1	3	2	9
Overall	13	12	15	10	<u>Avg 10</u>

Watch to Rest Ratio:

- 4: No watch leading into event (or during scheduled watch), 7 hours of sleep in last 24 hours
- 3: 7 hours of sleep in last 24 hours, stood a full watch before event
- 2: Between 5 and 7 hours of sleep in last 24 hours
- 1: Less than 5 hours of sleep in last 24 hours

Experience:

- 4: 11 or more details in last 3 mos
- 3: 5-10 details in last 3 mos
- 2: 5 or less details in last 3 mos or UI
- 1: First time as qual'd watschstander

Equipment:

- 4: All equip operational
- 3: Moderately degraded equip
- 2: Severely degraded equip
- 1: Primary / backup Equipment OOO

Weather:

- 4: Good weather
- 3: Moderate weather
- 2: Significant weather
- 1: Heavy weather

IRM Code:

- <8: Critical
- 8-10: Serious
- 11-13: Moderate
- 13-14: Minor
- 15-16: Negligible