# THE NAVAL FLIGHT SURGEON'S GUIDE TO DUTIES AND RESPONSIBILITIES

## FOURTH EDITION

## FORWARD

This guide was originally written in 1991 by CAPT Dave Yacavone, LCDR Charlie Barker and LCDR Andy Bellenkes. It was written because safety surveys, at that time, indicated a less than satisfactory aeromedical program at many squadrons. After a great deal of feedback from young Flight Surgeons concerning their wish for additional guidance in their operational duties, the Aeromedical Division of the Naval Safety Center (NSC) developed the original document. Unfortunately, ten years later not much has changed. Accordingly ***The Naval Flight Surgeon's Guide to Duties and Responsibilities*** has been updated by the current incumbents at the NSC. This guide follows the Aeromedical Safety Survey Checklist.

This guide is primarily designed for the Flight Surgeon just entering operational naval aviation medicine. However, it can also serve as a general review for the more seasoned Flight Surgeon. This guide is written using conversational language in the same way we would discuss our recommendations at the time of a safety survey. We hope that you will find the guide both easy to read and informative. We solicit any suggestions you may have for improvement in future editions.


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# INDEX

# 2 INTRODUCTION

You are a Flight Surgeon, reporting on board a squadron for the first time. You may find yourself a bit overwhelmed by the nature and scope of your new responsibilities. You will find that you have to divide your time between the local clinic/hospital and the squadron(s) to which you are assigned. You will perform physicals and conduct sick-call for various military and dependent personnel, not just for the people assigned to your squadron. You will be required to sit as a member on numerous boards (including aircraft mishap boards), committees, and councils. You'll be asked to give lectures, demonstrations, safety stand-down briefs, and act as aeromedical consultant to the CO. You'll have to write reports and coordinate activities with the local Aviation Physiologist (AMSO), Aviation Experimental Psychologist (not located on all bases), Aviation Safety Officer (ASO), and others. You'll fly with your folks, obtaining invaluable operational experience in various fleet aircraft. You'll perform squadron rounds, ensuring that your people are fit and ready for any contingency. Depending on the number and size of your squadrons, you could conceivably be the "Doc" for over 600 people.

So where do you start? If you are a "nugget", just beginning your first tour, there's much to be learned. You have gained a superb didactic education at NAMI, and assume that you are now prepared to face the challenges of squadron life. Yet there are so many small, but vital details to be learned. You are already an aeromedical specialist, but you need to discover the practical "gouge" about how to run an aeromedical program. Even if you have had prior experience as a Flight Surgeon (FS), you may not be aware of all your responsibilities in establishing and maintaining an aeromedical safety program. To be frank, safety surveys conducted by the Safety Center's Aeromedical Branch have revealed that many Flight Surgeons do not realize just what an effective aeromedical program should include.

These surveys originate as an invitation from your Squadron or Wing CO. They are designed primarily as a formal "technical assistance visit", a gouge session with Safety Center personnel that can help assess your squadron's operational, maintenance, and aeromedical safety programs. The survey is frank and somewhat formal, yet it is designed as a help session rather than a true inspection. The results are kept within the squadron and are confidential. The only people who see the aeromedical survey results are the FS, Safety Officer, and the CO. The Naval Safety Center retains a confidential copy for reference in the event the surveyed squadron commanding officer calls the Safety Center for clarification of the survey results.

This "guide sheet" comes from the need to inform you, the Flight Surgeon, about some of the more important lessons learned from the many (over 100) surveys conducted each year. It is meant to give you a "heads-up" about problems encountered by your fleet colleagues, and provide straightforward approaches for tackling your many responsibilities. It is a practical supplement to that which you have already learned. We trust it will help make your experiences in Navy/Marine Corps Aviation a bit easier (more rewarding) and more fun.

# 3 FLIGHT SURGEON AVAILABILITY: ARE YOU READILY AVAILABLE TO COMMAND PERSONNEL?

How you are assigned will be a function of who "owns" your billet. If you are assigned to an OPNAV billet (one which is funded by a line unit), you will report directly to that unit's Commanding Officer. Your reporting senior might be a squadron Commanding Officer, an Air Wing Commander or the CO of an Air Station. You will most likely be assigned "ADDU" to a medical treatment facility, most often a branch clinic. The clinic's Officer-In-Charge (OIC) may be a Senior Flight Surgeon, another clinician or a Medical Service Corps or Nurse Corps Officer. This individual will assign you an office in the clinic and will most likely assist you in discovering your clinical responsibilities. However, he/she is not the person to whom you report. The OIC cannot tell you how much time you can spend at your squadron(s). OPNAVINST 6410.1 (Utilization of Flight Surgeons) along with Joint COMNAVAIRLANT Instruction 6000.2C COMNAVAIRPAC Instruction 6000.3B and Wing Instructions provides that guidance. You will spend 50% of your time in Wing/Squadron duties. That means you should anticipate spending a morning or afternoon each week in each of your assigned squadrons' spaces. (You will most likely be shared by a number of squadrons; the average is 4.) You may feel stretched quite thin by the necessity to divide your non-clinic/hospital time among so many squadrons. Try to remember that your training and responsibilities as a Flight Surgeon are first and foremost dedicated to the safety and operational readiness of your aviation personnel. Only by being available to your units on an ongoing, committed basis, can you achieve this goal.

If you are assigned to a BUMED (Claimancy-18) funded billet, your life may be significantly different. There, you will be assigned directly to a medical facility and will report to the clinic OIC or the hospital Commanding Officer. You will be ADDU to the Air Station or the flying unit. However, OPNAVINST 6410.1 still applies. Delineation of exact time allocation, duties, chain of command, etc., should be established by a written Memorandum of Understanding (MOU) between the Officer in Charge or Commanding Officer of the Medical Treatment Facility (MTF) and the Commanding Officer of the squadron(s) to which the Flight Surgeon is ADDU. See Joint COMNAVAIRLANT Instruction 6000.2C COMNAVAIRPAC Instruction 6000.3B and Sample Flight Surgeon MOU.

If you are assigned to the Marines, you will find a very different situation. Typically, you will have PCS orders to a Wing with orders for additional duty to a single squadron whose Commanding Officer will be your boss. In this capacity, you will spend as much as 50% of your time in spaces, the remainder of time will be spent at the branch clinic or hospital. This equal division of workload will provide you with an excellent opportunity to obtain extensive experience in operational aerospace medicine while, concurrently, enabling you to maintain your clinical skills. You will probably be assigned an office within the unit spaces. It may be dedicated only to Aerospace Medicine or you'll share a space with the Safety Dept. Whatever the case, having your own space is encouraged so that squadron members feel free to come in and discuss their medical concerns. One last note: The Marines love team players. Though not required, you are encouraged to wear the Marine uniforms and participate in their Physical Fitness program. Remember to obtain assistance from MAW Surgeon and AMSO (See MCO 3750.2) .

Remember, while your service to the fleet is invaluable, there is a love-hate relationship between the Doc and the aviator. Unfortunately, you are sometimes viewed as an annual "pain in the butt", whose only quest is to down as many aviators as possible. Others see you as a good guy who pops in once in a while to make sure "all is well." Ideally however, you will be seen as part of the safety team. This is your goal, which must be earned. You must make a concerted effort to identify and be identified with the team. That begins with your availability, but it includes your appearance and your attitude. You cannot impress your squadron mates simply with your degree; they're just as smart and well trained as you are, albeit in a different area.

They will assume that you are a competent physician until you show them otherwise. What will impress them are your professional officer-like qualities and your interest in understanding your squadron's aviation mission. In other words, you will not score any points by looking like a doctor. Your uniform MUST be sharp, your haircut within standards and your military bearing and demeanor MUST be above reproach. That's step one; unfortunately too many Flight Surgeons never get beyond it.

# 4 FLIGHT SURGEON PARTICIPATION: ARE YOU SUFFICIENTLY INVOLVED IN COMMAND ACTIVITIES?

As a member of the squadron team, you will be requested to attend a number of official and social activities. These may include All Officers' Meetings (AOMs), Department Head Meetings (DHMs), a number of safety-related committees, Happy Hours, assorted parties, and social events. You are urged to attend these functions, not only to benefit from "squadron gouge" but also to make yourself known. You must show that you have the desire to be an integral part of the team. This is especially vital if you cannot be at the Squadron as often as you would like.

There are a number of important reasons for you to make an attempt to fly as much as possible with your squadron(s). Not only will this enable you to obtain a first-hand wealth of knowledge about fleet aircraft and their flight dynamics but will also reinforce your position as their "Doc" by increasing your visibility among squadron personnel. Flying with the crews will also provide you with a good "heads-up" regarding the medical status and morale of squadron personnel. (NOTE- Even if assigned to a squadron with only single seat aircraft you can often fly in their simulator.) If trainers are available, make good use of them. If this isn't possible, nearby squadrons will usually be more than happy to have the "Doc" on board. Try to get as much experience as you can in as many types of aircraft from each community. While we are on the topic of flight time, remember that you are on temporary Aviation Career Incentive Pay. This means that you don’t get paid unless you fly. OPNAVINST 3710.7 series says that you need 24 hours every 6 months. (Don't let your flight time lag behind; catching up at the end of the fiscal year is difficult and not recommended!) (See OPNAVINST 3710.7 Chapter 11.2)

When you get to the squadron to conduct rounds, make sure they are complete; ensure that you visit all of your folks including maintenance, line, and night check personnel. Even if they have no gripes, stop in and shoot the breeze with them for a few moments. This is a perfect opportunity to get to know them better, to learn a little about who they are and what they do.

Finally, you may wonder whether or not you will accompany your squadron(s) on deployments, or be sent out with one of their detachments (Dets). If you are assigned to a BUMED activity, you will generally not accompany your squadron away from base unless the squadron commanding officer requests medical support from the local MTF. If they go aboard ship, you may be requested to augment the medical staff. If you are a Wing Doc, you can count on deployments and detachments. Deployments aboard an aircraft carrier are what it's all about. If you are assigned to a single squadron, on the other hand, such as a Fleet replacement Squadron (FRS), you will go with them whenever they travel. However, FRS travel consists primarily of detachments to places like Fallon or Key West. (Tough life!) The latter case also applies if you are assigned to the Marines. You will go where they go. Frequently that means deployment aboard an amphibious ship or long-term (six-month) assignments to overseas bases. Don't forget to maintain currency in CRM training for all aircraft you serve as aircrew in. (OPNAV 1542.7C)

# 5 ARE YOU APPROPRIATELY ASSIGNED TO COMMAND DUTIES?

Your duties as the squadron FS will be diverse. Your role in accident prevention is often overlooked. With your medical education and training from NAMI, you can provide a wealth of information on aeromedical threats. In addition to overseeing the health of your people, you will be tasked with a number of safety and training duties. The CNO through OPNAVINST 3710.7S section 8.4 has provided guidance that aeromedical threat training will be given and the Flight Surgeon and local Aerospace Physiologists are tasked to provide such training. Required and recommended training brief topics are outlined in Appendix E of the instruction (Enclosure 1). You will most certainly be requested to provide some of these briefs at squadron safety stand-downs and other training events. You should take an active role, working with your squadron safety and training departments to ensure a thorough preventive brief series is presented to your squadron. You will often be required to prepare these presentations yourself, but should look to other Flight Surgeons, AMSO's, local Aviation Survival Training Centers or the Naval Safety Center for assistance. They should be timely, relevant and interesting. Further more, make your talks short and to the point, tailoring them to the needs of your audience.

Safety stand-downs are periods designated only for safety related instruction. Stand-down periods may last from a day to a week. They can be Navy-wide, or may just be a local command effort. During this time, most normal squadron activities are suspended in order to have full attendance at stand-down briefs. As the FS, you might have to present topics as diverse as "the prevention of holiday stress", "alcohol and driving", or "flight deck safety".

Training lectures are designed for a smaller audience in a less formal setting. You may hold these as part of an All Officers Meeting (AOM) or General Military Training (GMT). Topics here should be more specific, designed to address timely concerns (i.e., G induced loss of consciousness, spatial disorientation, circadian disturbances, cold weather survival, simulator sickness, etc.). Enclosure 2 provides another list of example topics for both training and stand-down lectures.

You will also be required to be present during safety surveys and visits by inspection staff. It is vital that you are available for these events, as you may have to provide inspectors with information regarding your programs. In all cases, have your paperwork in an orderly and easily accessible state. Inspectors will want to see those files documenting your various aeromedical responsibilities and activities at the squadron (more on preparation for inspection later).

# 6 BOARDS AND MEETINGS

You should be assigned as the aeromedical representative to a number of Squadron and Wing safety activities. At first this may be a bit confusing, as there are many with seemingly similar names and purposes. These include the Standardization (Stan) Board, Safety Council (Officers), Enlisted Safety Committee, Human Factors Council (HFC), Human Factors Board (HFB), Planning Board for Training (PBFT), Field Naval Aviator Evaluation Board (FNAEB-pronounced FEENAB), Field Naval Flight Officer Evaluation Board, Field Flight Performance Board (FFPB), and so on.

**6.1 Standardization Boards** are primarily training committees composed of Squadron Department Heads, (i.e. the Training, NATOPS and Safety Officers), the CO and/or XO, and the unit Flight Surgeon. Stan Boards are tasked with ensuring that the squadron-training program is complete and is in compliance with all wing/squadron SOPs, and other regulations, and instructions. It also documents that individual qualifications are in accordance with established standards and norms. You should ensure that you are either a member of or at least a consultant to this board.

**6.2 The Planning Board for Training (PB4T)** is a related committee. As a member of this group, you will ensure that the nature and scope of squadron training encompasses both the personal career requirements (i.e., advancement, specialty training, etc.) of squadron personnel, as well as the needs of the Navy. You will help design, select, implement and even conduct some of the training.

**6.3 Safety Meetings** are the primary venues for discussion of squadron safety issues and are required by instruction. There are two types of safety meetings, one for officers, and the other for enlisted personnel. This duality is based on practical experience, for as professionals, each community may be reluctant to air their grievances in the presence of the other. Further, it has been observed that "down-in-the-dirt" issues can be more expeditiously addressed by those directly involved at the same level. Intermediaries can communicate these issues to members of the Safety Council. In the case of Aerospace Medicine, it is recommended that a corpsman be assigned to the Enlisted Safety Counsel. This individual can, in turn, report any major concerns requiring your attention. OPNAVINST 3750.6R 205 d.

**6.4 The Anymouse Program** has been established to allow anonymous comments to get directly to the Commanding Officer. The CO usually answers the question or comment and provides the answer through an all hands event or through the Plan of the Day. Some of the issues received through this system may have aeromedical significance. Work with the Safety Officer to ensure you are part of the routing of Anymouse submission. This will ensure that you have opportunity to respond to aeromedical comments.

**6.5 Aircrew Evaluation Meetings and Boards** are held on a routine basis and are essential in ensuring the safety of a command. A ***Human Factors Council*** (HFC) is a regularly scheduled meeting of various senior squadron personnel (i.e., CO, XO, Department Heads). Its' purpose is to identity and assist those aviators with problems before they have reached the point where a human factors board (HFB) or subsequent FNAEB or FFPB would become necessary. (More about this later) **This council must be held as a stand-alone meeting.** OPNAVINST 3750.6R 205 f.(2)

A ***Human Factors Board*** (HFB) is a locally assembled board designed to help the Commanding Officer assess and manage an aviator who has been identified as having a professional deficiency. You will then be involved in interviewing the aviator in an attempt to determine the etiology of his troubles. Once done, you will work with the board to help develop a route of "treatment" whereby the individual will hopefully improve his performance. Each case will have to be documented and reviewed to facilitate progress. Confidentiality of all proceedings must be ensured. (More on this later.)

The ***FNAEB and FFPB*** are Navy and Marine Corps (respectively) "marginal performance" review committees. OPNAVINST 5420.109 governs the conduct of the board. They are called to determine the future of an aviator whose performance has been judged "not up to standard". The immediate Commanding Officer of an aviator (to include NFOs) shall convene a FNAEB/FNFOEB when: the aviator has demonstrated faulty judgment in a flying situation, the aviator has demonstrated a lack of general or specific flying skill, the aviator has demonstrated certain habits, traits of character, emotional tendencies or lack of mental aptitude or motivation that make it questionable to continue the member in flying status. This may be the final step before the aviator is grounded and/or transferred out of the squadron. As the FS on this type of board, you will be asked to assess the aviator from an aeromedical standpoint; to discuss those private as well as professional variables that may be negatively influencing his ability to perform. This procedure can, in part be a major determinant in the aviator's Naval career, so do not underestimate the gravity of this duty.

Remember that letters from the Commanding Officer of each of your squadrons must document your membership on these committees. You must maintain these letters in your files.

# 7 AEROMEDICAL CLEARANCE PROCEDURES FOR TRACKING CLEARANCE STATUS **Reference OPNAVINST 3710.7 Appendix A**

How do you monitor the aeromedical status of your aviators? How are you administratively to process new crewmen checking on board? How do you and your folks keep track of aircrew aeromedical status? The Flight Surgeon must consider all these issues to ensure that all aircrewman are physically and emotionally fit and property trained to assume or continue their flight duties.

Question? How do your aircrews know when they must get their annual flight physicals, or when their physiology training is due? Often, the Safety Office will distribute the heads-up dates for these evolutions other via word-of-mouth or the squadron Plan of the Day (POD) or email. In some squadrons, these and other important dates are displayed prominently on a grease pencil board mounted either in the Schedules Office or in the Ready Room. This is a great idea, as it gives everyone the opportunity for a "heads-up" for his or her physical. If your squadron doesn't use such a board, consider creating one. It should be large and obvious, located where all can see it. It should list all aviation personnel (alphabetically), noting those dates of various flight-related activities. Once created, the Schedules Officer or Squadron Duty Officer should update the board.

You may have already heard about the pilot who, for two years, was able to falsify his aeromedical up-chit. He had a heart problem that would have normally grounded him permanently, but he forged his physician's name and hand-carried each up-chit directly to his NATOPS officer for inclusion in his jacket. His status was never questioned. Sadly, the truth about this pilot's health was revealed during the investigation following his crash (due to an in-flight heart attack). It is possible to slip through the cracks in the system, as this pilot did. As the FS for a number of aviators, you will be responsible for monitoring their aeromedical status. Even if you did not conduct the annual physicals on your people, you will be held accountable for the outcome. It is therefore strongly recommended that you compare aeromedical records with NATOPS jacket administrative (up & down) chits for all newly reported personnel. When the up-chits for annual physicals are received, be sure that the examining FS has both signed and stamped his/her name on the chit. In addition, it is highly recommended that a copy of the chit be sent via guard mail directly from the examining FS to the squadron NATOPS Officer. This will preclude using the aviator as courier. In the near future, we expect electronic management of up and down chits. Direct communication to squadron Training, Operations, XO and CO will eliminate some of the routing concerns. Review NATOPS jacket periodically to ensure waiver letters and up-chits are filed correctly.

Finally, you may come upon a circumstance where an aviator has been grounded because of an aeromedical problem. Rather than wait for the results of a waiver request to NAMI, you have the option of holding a Local Board of Flight Surgeons and submitting an Aeromedical Summary. The decision of the Local Board of Flight Surgeons stands until BUMED then BUPERS renders a decision. Thus, even though the Local Board may determine the aviator not physically qualified (NPQ), in a significant number of cases they will be able to recommend a waiver to the Commanding Officer. If approved, this will allow the aviator to continue flight duties until the lengthier waiver process can be completed.

# 8 WRITTEN COMMUNICATIONS: IS YOUR DISSEMINATION OF INFORMATION ADEQUATE?

One way to ensure that you are known to your people, is to contribute to various squadron or Wing-generated safety publications. These include the Plan of the Day (POD), safety newsletters (printed or electronic), health newsletters, and related handouts. This activity is especially vital if you cannot personally be in squadron spaces as often as you might prefer. You might for instance, jot a few

aeromedical reminders into each Plan of the Day (POD). Topics can be as diverse as wearing seat belts, smoking hazards, or watching ones diet. To make life a bit easier for yourself, spend about 1-hour per month creating a series of these "The Doc says ... " notes, and send them to each of your squadrons via guard mail or email. You should similarly try to contribute short articles of timely interest to any safety-related newsletter published by your squadron or wing. These too, will help to enhance your credibility, ensure wider exposure, and make your name recognizable to squadron personnel.

Another way to communicate with your squadrons is to create a local Aeromedical web page. In the age when a lot of personnel have access to the internet, a web site can provide your schedule, clinic schedules, TRICARE information, aeromedical threat topics and general health information and links to other sources of medical/aeromedical information.

In addition, in an age when more and more people read less and less, your unit publications and web site may become one of the most important sources of general health information for your people. Never assume that they know about general health matters. One of your jobs is to inform them.

# 9 COMMAND READINESS MONITORING: DO YOU ADEQUATELY MONITOR SQUADRON READINESS?

Readiness...There's that word again. You will see and hear it repeatedly during your career, but are you sure you know what it really means? The most obvious definition is that aeromedical readiness means having the aircrew fit and alert ready to go into action at a moment's notice. Monitoring the aeromedical status of your squadron is far more complex than merely performing physicals. First (as has already been said), you must ensure that every member of the squadron knows who you are and how to contact you if necessary. When a new member checks on board, make sure that the squadron sends him to meet you. Your name or title should appear on the check-in sheet for all new squadron personnel. **Take the initiative and confirm that your home and office telephone numbers appear in the Pre-Mishap Recall Plan (both the Duty Officer and Safety Officer have copies), on the squadron social roster, and in the POD. When you are away from the unit, let them know where you are (a note on your web site, office door, or a schedule posted in the ready room is sufficient). Ensure you arrange for squadron aeromedical support in your absence and publish this while you are gone. Insure your CO/XO/Safety Officer can always contact you.**

There are a number of aeromedical and non-non-aeromedical programs that you will be intimately involved with. These include (1) maximum flight hours, (2) circadian disturbances, (3) weight control, (4) physical readiness training (PRT), (5) flight simulator time, (6) self medication/alcohol, and (7) NAVOSH programs.

**9.1 MAXIMUM FLIGHT HOURS** The general NATOPS instruction (OPNAV 3710) establishes flight time ceilings, dependent on the aircraft community (multi or single piloted) and its particular mission. Single piloted maximums: 65 hours in a single 30-day period, will rarely become a problem (except in time of war). Multi-engine, multi-piloted aircrews quite frequently report attaining flight time near their Ceiling (120 hours). Training squadrons often request waivers to exceed the maximum flight hours. So, this must be continuously monitored. Operational tempo is critical; there is a direct correlation between flight hour and mishap occurrence. With increased op-tempo, the potential for a mishap increases. Severe decrements in flight performance by fatigued aviators have been extensively researched and documented. Ensuring that individual aircrew do not exceed max flight hours can help minimize the chances for mishaps.

**9.2 Circadian rhythm disturbances** are likely to occur when aviators fly swing shifts, TRANS-LANTs, TRANS-PACs, OUTCONUS (outside of the continental US), or any extended duration day/night missions. OPNAV 3710.7R, Chapter 8.3.2.1.1 covers the recommendation for this condition. Most aviators already know something of the "biological clock" and have experienced mission-related disruption of sleep patterns. Most aviators take this in stride. The Navy's mission is a round-the-clock task, and our folks must be ready at any time. The best way to monitor this situation is by establishing a preventive program; give lectures about circadian rhythms and what happens when they are disrupted. There are special sleep techniques (so-called "combat naps") that might help. Learn about them and pass the information on to your crews.

**9.3 Weight Control**, Along with overall physical fitness is a primary requirement throughout the fleet. The Navy has established physical fitness standards that require all members to maintain their body fat at a level not to exceed a designated ceiling, 22% (based on height and girth). These levels are described in the Navy's Physical Fitness (PFT) Program Instruction (OPNAVINST 6110.1G). An individual found to be overweight is placed on a formal, stringently monitored, weight control program. An exercise and diet regime is established and the member's progress is tracked over time. If no significant improvement is made, administrative procedures are instituted. These may lead to involuntary discharge. As the FS, you should expect to participate and help monitor the fitness program at your squadron(s), particularly overseeing the medical aspects of those in a weight control program.

**9.4 Physical readiness,** in addition to weight control you will be required to ensure that your people can participate in the Physical Fitness Training program. Currently, Navy instruction requires all members to perform (twice a year) a designated number of sit-ups, push-ups, and to run 1.5 miles or swim 500 yards within a certain length of time. The performance envelopes for these exercises can be found in the PFT instruction noted above. The Navy requires its members to complete a pre-PFT screening form. It asks the member if he/she suffers from any physical malady, especially noting ones that may adversely affect PFT performance. You will be required to review these screening questionnaires and to address any problems noted by your personnel. You must ensure that they qualify to participate in the PFT. If you deem them a health risk, you must follow administrative procedures as outlined in the PFT instruction. Further, you should ensure that a CPR trained individual is present during the PFT and the local MTF has been notified of the activity. Communications with EMS should be available in case of emergency. Despite all precautions, there have been cases where a participant in PFT has suffered from a medical problem. Even highly fit runners have experienced cardiac problems during the PFT. This makes it especially vital that you know the health of your people prior to letting them participate. Bluntly, cover your "six" - be available and be prepared for emergencies.

A final thought on exercise and aviation. Vigorous exercise can result in fatigue and dehydration. OPNAVINST 3710.7S recommends aviators be provided with an adequate rest period (12 hours) prior to flying following competitive or particularly tiring exercise programs.

**9.5 FLIGHT SIMULATOR PROGRAMS This** program may at first sound a bit odd. Why would the Flight Surgeon be interested in the use of the fight simulators? One big reason is simulator sickness (See OPNAVINST 3710.7 Chapter 8.3.2.17). It is not often encountered, and many have never heard of it. Yet it can be a debilitating and potentially dangerous phenomenon. It usually is confined to those simulators that have visual capability, especially dome-type and rotary wing trainers. Simple instrument trainers are unlikely to cause the syndrome. Aviators with many flight hours typically experience it, while the "nugget" with limited flight hours is often spared. The seasoned pilot knows the dynamics of his aircraft and can anticipate the somatosensory and visual experiences during actual flight. He matches what he sees with what he feels, and establishes a "dynamic visual-visceral expectation" of

flight (i.e., positive and negative G. turns, etc.). However, even the most advanced simulators can't exactly mimic the feeling of actually flying. This has lead some to believe that simulator sickness is the result of a perceptual mismatch between expectation and reality. While the actual etiology of simulator sickness remains unknown, its symptoms are dramatic. These include spatial disorientation, fatigue, sweating, nausea, and vomiting; in short, a11 of the symptoms normally associated with motion sickness. These symptoms can occur during the simulated flight or as much as 18 hours later. If they occur during the simulator flight, it can be terminated without problems. You should be immediately contacted, and a consult with the crewman should be arranged to establish a cause. It may be nothing more than a greasy hamburger "slider" before the hop, of it may be an actual case of simulator sickness. Regardless, if symptoms are experienced and this is the first episode, OPNAVINST 3710.7, Chapter 8 requires that pilots not fly on the same day. If the aircrew member has had previous simulator sickness, he/she should not fly for at least 24 hours following simulator exposure due to the increased risk of recurrence.

This phenomenon's onset can be delayed as much as 18 hours. There have been reports of aviators experiencing no in-simulator symptoms, but subsequently feeling extremely disoriented. For example, one aviator reported no discomfort during his simulator hop. But, while driving home 4 hours later, he suddenly felt as if he were being catapulted off the bow of USS Boat. The disorientation made him lose control, and he drove the car off the road into a ditch. His mishap was reported to his flight surgeon who diagnosed it as a case of simulator sickness. The real danger is that the delayed onset could potentially affect aviators during flight if they are scheduled to fly shortly after simulator events. The sudden onset of motion sickness symptoms and disorientation could result in a catastrophe. The current guidelines in OPNAVINST 3710.7S are the only official regulations. A doctrine to cover the possibility of delayed onset for those who have never had symptoms has yet to be written. Until such time, we strongly recommended that you promulgate a local policy of not flying anyone for 24 hours after a "first time" simulator hop regardless of whether or not symptoms occur. This may not be a simple undertaking, as operational requirements (especially at RAG squadrons) may preclude a lengthy delay from simulator-to-aircraft hops. However, with experience in the simulator, an aviator free of symptoms during previous evolutions, might be scheduled to fly with a shorter interval. If you suspect that you may have a case of simulator sickness in this latter category (i.e., a case of probable simulator sickness experienced for the first time in an individual with delayed onset of symptoms), you should report it to your Command, and strongly consider reporting it via the Physiologic Episode Hazard Report (HAZREP) Message format to the Naval Safety Center, Code 144 OPNAVINST 3750.6R Paragraph 419.

**9.6 Self-medication and alcohol use** can significantly degrade flight performance. Inevitably, some aviators will self-medicate to conquer a cold or headache, aware that OPNAVINST 3710.7S prohibits this practice. However, operational requirements and the need to succeed often push this regulation into the background. Antihistamines, dietary supplements, headache tablets, and all of the over-the-counter medications may seem harmless to the aviator. Yet they can severely impact flight performance. The same is true for alcohol. Thus, the rule prohibiting drinking within 12 hours of flight planning. Both medication and alcohol restrictions are sometimes ignored, and tragedy has occurred (remember the Nimitz mishap?). Strictly enforce these regulations, and make efforts to ensure that your folks do not violate either. Frequent POD reminders and lectures about the effects of drugs and alcohol on performance are strongly advised.

**9.7 NAVOSH PROGRAMS** There are other aeromedically-related programs run by your squadron, which do not fall directly under your management. These are usually delegated to other officers or senior enlisted personnel. Some come under the heading of NAVOSH (Navy Occupational Safety and Health) programs while others are related to physical fitness.

Your squadron NAVOSH Officer is directed to conduct a formal, documented program of instruction designed to ensure personnel safety. Some of the specialized areas covered in this program include sight conservation, hearing conservation, and head/back injury prevention. A set of lectures is usually provided to personnel checking on board. Refresher classes are given as required. You should be aware of the content of these lectures, and ensure that your people are following the requirements of the NAVOSH program (OPNAVINST 5100.23E and OPNAVINST 5100.19D). If an individual is injured or medically disabled, the squadron loses an invaluable asset. Your responsibility as the primary health care provider extends to monitoring these allied health programs as well. The NAVOSH Officer is responsible for maintaining all up-to-date instructions on hand. They should be easily accessible and bound together in a volume kept in the Safety or NAVOSH office. The NAVOSH Officer must also maintain a complete file of the lectures provided and when and to whom they were given.

# 10 PREVENTIVE MEDICINE / HEALTH PROMOTION PROGRAMS: DOES YOUR COMMAND MAINTAIN ALL REQUIRED PROGRAMS AND DOCUMENTATION?

There are other squadron Preventive Medicine/Health Promotion programs in which you should participate (or create if none exists). As already mentioned, PFT and weight control are high visibility programs. These are run by the PFT coordinator who will maintain all instructions, records, and files related to this program. OPNAVINST 6100.2 Health Promotion Program, provides guidance on requirements to establish programs on Alcohol and drug abuse prevention, Tobacco use, Physical fitness, Nutrition education and weight control, stress management and suicide prevention, hypertension screening and back injury prevention. You should be working directly with your command on all these issues. Additionally as a medical expert you should be assisting with the CPR program. We have discussed a number of these programs earlier and will talk about a few more in the following paragraphs.

**10.1 Tobacco** addiction has significant long-term health effects. Simply put, you should actively dissuade the use of tobacco as much as possible. SECNAVINST 5100.13B requires squadron commanding officers to create, by personal example and by command climate, an effective program that supports abstinence and discourages use of tobacco products. Smoking is to be prohibited within all buildings and Naval ships except in specified areas (i.e., designated space outside the skin of the ship). Remember, where the rights of a smoker and a non-smoker conflict, THE RIGHTS OF THE NON-SMOKER TO A SMOKE-FREE ENVIRONMENT SHALL PREVAIL! Your efforts should not only include enforcing the use of smoking areas, but you should also actively establish and/or support an anti-smoking campaign. This may at times be difficult, especially if your CO is a smoker. However, by using anti-smoking bulletin board posters, and by supporting ongoing smoking cessation programs, you can improve the health of your command.

**10.2 Alcohol abuse** is another ongoing problem. The combination of education and a heightened awareness program among personnel along with strict enforcement of regulations can help identify and hopefully eliminate cases of DUI, family abuse, and other alcohol-related problems.

**10.3 CPR training** is vital and in general, squadrons try to have as many members trained and qualified as possible. The General Safety Instruction, OPNAVINST 5100.23E, states which personnel are required to be certified. However, CPR is an invaluable lifesaving technique that may be required anytime, anywhere. You should encourage maximum certification; you may want to teach it yourself, if you have the certification. If not, contact one of the trained corpsmen instructors from your clinic to spend a day at the squadron qualifying personnel in basic CPR techniques. Frequently, units will have several trained instructors, including the corpsmen.

**10.4 Suicide** is the second leading cause of death for sailors and marines. The Navy and Marine Corps offer a unique, particularly stressful life-style. Sailors and Marines suffer the same personal and financial problems as any other person. However, unlike the general public, sailors and marines go on deployments that result in extended separation between loved ones, a major stressor that can lead to significant depression. Furthermore, the aviator and his/her family experience the unique, exciting yet stressful, flying milieu. These factors and others can take their toll. The Naval Safety Center receives daily reports of suicide gestures, serious suicide attempts, and tragic number of successful suicides. The problem has been such that the CNO issued a message in 1987. This message requires the establishment of a formal suicide awareness program of education and prevention for all newly reported personnel. This is more than just fodder for your annual "holiday stress" safety stand-down. This message should be used as the basic authority to establish a year round awareness program. The program should stress that all personnel should become aware of the insidious nature of suicide. It should encourage a team effort on the part of enlisted and officer supervisors. Just as in the days of Boot Training or AOCS, a "buddy" system should be encouraged along with better communications. Display crisis intervention telephone numbers in prominent places throughout the squadron. A suicide threat checklist, clearly listing the steps to be taken in the event of a threat should be promulgated. The key element must be treating all suicide threats as serious. Hopefully, such a program will prevent the loss of an individual--***our greatest asset***. Instill in your people the need to maintain this "team" spirit. As the FS, you should have a heads-up to some problems by periodic human factors committee reviews and by word-of-mouth. Take all reports seriously and, most important, **follow up immediately**. Document and report any gestures, serious attempts, or successes that may occur. NAVMEDCOMINST 6520.1A provides guidance for the evaluation and disposition of the suicidal patient. I recommend that you have this in your library.

In an effort to combat this killer within our ranks, the navy and marine corps have teamed up to produce a video training package called "suicide prevention: taking action - saving lives." The package contains an 18-minute video, facilitator's manual, overhead transparencies, and has been designed to help standardize training throughout the fleet. It is for use by navy leaders, in conjunction with chaplains, family service centers, health promotion coordinators, and medical treatment facilities, to meet suicide awareness and prevention training requirements. Preliminary research indicates that this training is best conducted with groups of 15 to 25 people to promote discussion and deal with practical questions. The training package was produced in consultation with nationally recognized subject matter experts from the American association of suicidology. The video uses a variety of scenarios to illustrate practical ways to intervene with people who are at risk. The intent of the training is not to teach sailors to be counselors, but to show how to seek help for shipmates in need by working with the chain of command and local assistance resources.

Copies are available for Navy and Marine Corps commands at the Defense Visual Information website at http://dodimagery.afis.osd.mil. Orders may be placed through the site's Davis/Ditis search option found on the left-side toolbar - then choosing the PIN/ICN search option and entering pin number 806377. To support local computer-aided presentations, facilitators can download copies of the manual and transparencies via NAVPERSCOM (pers-601) website at http://www.persnet.navy.mil/pers601/index.html or from the health promotion section of navy environmental health center website at http://www-nehc.med.navy.mil/hp/suicide

Videotape endorsement of this training by navy and marine corps senior leadership can be found on lifelines quality of life (QOL) broadcast network at www.lifelines2000.org. The point of contact is LCDR. Kevin Kennedy, NAVPERSCOM (PERS-601b), at (901) 874-4256/DSN 882, or (e-mail) p601b@persnet.navy.mil.

# 11 ELECTRONIC SUPPORT

We are in the electronic information age and every flight surgeon should have easy access to email and the internet wherever they are working. Each flight surgeon should have a computer issued to them upon arrival to their new duty station. If you do not have a computer, you should be working with your command to obtain one that has the capabilities you need to accomplish your job and enhance the Unit's operational readiness. The ideal computer is a laptop with CD-ROM and one or more docking stations. The computer should be able to connect with the internet and have the capability of running all current DOD programs. The corpsmen who are attached to squadrons should also have computers capable of running SAMS and running other required programs.

Operational Squadrons that deploy to ships are required to maintain an in-depth database on a computer program called SAMS. It is vital that you spend time with the clinic and squadron corpsmen to ensure that the program is used appropriately. Utilized properly this program provides information on unit operational readiness and is the tool that can ensure all your troops have received the required physicals and immunization. AIRLANT and AIRPAC conduct inspections of medical readiness during your commands work-up cycle.

In squadron spaces you should be able to prepare or download lectures for required briefs. Connection to the hospital CHCS system through a telnet connection has allowed flight surgeons to manage patient information while in the squadron spaces. I have met some flight surgeons who, following a hallway consult, will record that information onto CHCS via the telephone consult form and then have the form printed out in the hospital records room for inclusion in the patient's chart. This not only provides continuity of care but also provides the hospital bean counters with the, sometimes, intangible work that you do. I caution against the wholesale use of CHCS as a floating script-pad without the complete documentation of why the script is being written.

In Clinic you will be recording your patients' data into CHCS. For those of you who deploy to carriers, you will need to ensure that your patients data is entered into a program called SAMS (Ship board Automated Medical System). You should be able to communicate with the squadron via email.

The use of web technology is highly encouraged. We have seen a few highly effective flight surgeons who have created web sites and included current briefs, clinic and squadron schedules and pertinent TRICARE data. I would encourage those of you who set up web sites to work with your local ADP security officer to ensure the site complies with DOD requirements and standards.

For deployments the laptop will permit you to take your squadrons electronic data with you and update it while you are away.

# 12 HUMAN FACTORS SCREENING: DOES YOUR COMMAND HAVE PROCEDURES FOR CONDUCTING HUMAN FACTORS COUNCILS/HUMAN FACTORS BOARDS (HFCs/HFBs)?

It is essential that Flight Surgeons become familiar with the requirement for, and proper conduct of HFCs and HFBs. Flight Surgeons are a required major player in all HFCs/HFBs. Your commanding officer will probably expect you to be the expert on all issues and programs concerning human factors so a word to the wise: get smart about HFCs/HFBs sooner rather than later.

Human factors continue to be the leading causal factor of aircraft mishaps. All to frequently, at least some portion of the mishap crew's human factors issues were known by various supervisors and peers, but only as isolated pieces of the whole picture. Unfortunately, without HFCs, the pieces are typically not assembled until after a mishap.

Numerous studies conducted by the Naval Safety Center have shown that a great majority (about 80%) of our aircraft mishaps are a consequence of "human error", and that the roots of human error mishaps can often be traced to a failure of an organization's established safeguards. We now have in place, through standardized procedures for flight qualifications (NATOPS/SOP), Crew Resource Management (CRM), Operational Risk Management (ORM), and Command Leadership, the means to inform, monitor and assess performance of aircrews and make appropriate decisions to reduce risk associated with their performance of flight and mission tasks. The use of Human Factors Councils and Boards is an additional intervention against a possible aircraft mishap. Proper use of HFC/HFBs will assist the command in reducing mishap risk by providing a process that focuses on identifying and managing aviators who pose an unacceptable risk to successful performance of the Command's mission or to flight safety. "Human factors" is defined in the HFC/HFB instructions as that set of personal and professional circumstances which may interfere with an individual's ability to aviate effectively. Specifically, there are two basic human traits that often contribute to a mishap:

1. Personnel fail to demonstrate the knowledge, skill, or discipline necessary for the tasks assigned. This may result in the development of hazardous conditions, or the performance of unsafe acts.

2. Personnel are often under serious stress from personal or professional human factors problems that are not apparent to the unit's decision-makers. Examples of job-related stressors include poor FITREP or evaluation, failure to promote, behind in qualification progress, assignment to a new position, and other career situations or uncertainties. Examples of unusual life stress include: death or severe illness of a family member or friend, divorce or failed personal or family relationship, newborn child and financial difficulties. These stresses may lead to fatigue, distraction, and degraded performance, including instances of poor judgment, excessive risk-taking or poor aircrew communication and coordination. HFC/HFBs are intended as tools for commanders that will better enable them to make informed decisions concerning the influence of human factors relative to the mission and safety performance of aircrews. Prudent and timely use of these tools should only prevent potential mishaps, but may help to prevent an aviator from failing in other areas as well.

**12.1 Human Factors Council (HFC)** The HFC is a non-punitive forum. All reporting aircraft custodians shall convene, at a minimum, quarterly HFCs (monthly USMC). The HFC shall normally be chaired by the Commanding Officer. Recommended composition includes the squadron Commanding Officer, flight surgeon, operations or training officer, aviation safety officer, and a junior

officer (or an enlisted aircrewman if appropriate). Consideration may be given to include the Leading Chief/MCPOC at the Commanding Officer's discretion. The council shall review the personal and professional characteristics of all aircrew who regularly fly in squadron aircraft (for example, the Carrier Air Wing Staff members). The HFC is intended to be a preventative first step used to isolate and correct aircrew deficiencies.

**12.2 Human Factors Boards (HFB)** The HFB is a non-punitive forum. HFBs are conducted only in Navy squadrons. There are no HFBs for the Marine Corps. USN Commanding Officers shall convene a HFB whenever the ability of an aircrew to safely perform his/her flight duties is in question. HFBs are focused reviews of all known factors potentially affecting the ability of an individual to perform aircrew responsibilities in a safe and efficient manner. The HFB shall provide an individual plan of action tailored to mitigate identified problems and successfully reintegrate the aircrewman back to full performance of assigned duties. Normal board composition includes the Executive Officer (chairman), an Aviation Safety Officer School graduate, Command Flight Surgeon and another experienced officer. In the event an enlisted crewmember is the subject of the HFB, a senior enlisted crewmember shall be a member. Members from outside the command may be used, if deemed appropriate. Examples of situations for which an HFB is appropriate include: (1) A one-time or sustained deficiency in performance, not serious enough to warrant a FNAEB/FNFOEB. (2) Failure to achieve expected milestones established by the command towards achievement of a required qualification or skill (i.e., aircraft commander, plane commander, section leader, etc.). (3) A preponderance of life stressors (death of close family member or friend, divorce, severe financial problems, etc.) or unknown personal stress that may be affecting flying performance. The HFB should provide a detailed evaluation and specific corrective actions to the Commanding Officer.

| | | |
|---|---|---|
| Refs: | OPNAVINST | 3750.6R 205 f.(2) |
| | COMNAVAIRPACINST | 5420.2B |
| | COMNAVAIRLANTINST | 5420.5C |
| | COMNAVAIRRESFORINST | 5420.2 |
| | MARINE CORPS ORDER | 3750.1A |
| | OPNAVINST | 5420.109 |
| | NAVAIRWARCENACDIV | 5420.1 |
| | CNATRAINST | 5420.13D |

# 13 SAFETY PROGRAM ORGANIZATION: DOES THE COMMAND HAVE A DOCUMENTED AEROMEDICAL SAFETY PROGRAM?

**EVERYTHING MUST BE IN WRITING!** The golden rule to remember throughout your career. Make copies of everything and store it all away. You'll probably need it sometime to confirm, deny, or otherwise cover your Six. So too, must your command have everything it does documented for inspection. The primary document of interest to you is the Squadron Safety instruction. It is usually prepared by the Safety Officer and defines the entire unit safety program, its members, their positions, and responsibilities. As soon as you report on board, read the instruction, not only to confirm what your responsibilities are (you should have a good idea from this pamphlet), but also to ensure that they are included in the instruction. You may find little or no reference to the Flight Surgeon as a member of the safety team. (Although this is changing as the Safety Center gets around to more and more units.) Here are some of the things to look for in the instruction:

1. Be sure you are given space on the organization flow chart (usually at the front of the instruction). Your chart box should directly connect to the Commanding officer and the Safety Officer. These lines denote your required direct access to both individuals.

2. Your duties should be specified in detail.

3. Look for the statement that you are "tasked with the aeromedical aspects of the Command Safety Program".

4. Ensure that you are noted here as a member **(in writing)** of the Aviation Safety Council and Aviation Mishap Board (AMB).

5. A statement regarding the membership of a medical representative on the Enlisted Aviation safety Committee should also be included.

If any or all of these statements do not appear in the text, the instruction must be revised to ensure their inclusion. Without them, your position as a safety team member is unsubstantiated and is not in accordance with OPNAVINST 3750.6R.

## 14 SAFETY PROGRAM DOCUMENTATION: DOES THE COMMAND ADEQUATELY DOCUMENT YOUR PARTICIPATION IN SAFETY PROGRAM ACTIVITIES?

This section is a follow-up to the last in that you must ensure that all aeromedically related activities are documented and stored both by yourself and the squadron. This should include all stand-downs, lectures, and demonstrations provided by you and/or by the AMSO or Corpsman. Further, be sure that there are records of your participation in Aviation Mishap Board Training and Drills. These often take the form of quarterly mishap drills wherein the board meets to review mishap procedures as dictated by the Pre-mishap Plan. At times, you may be called by the Squadron Duty Officer (SDO) who will announce a telephone recall drill to ensure that your contact numbers are correct. You need not respond directly to telephone drills other than to confirm that you have taken the call and the number is correct. If the call comes in the middle of the night remember not to verbally abuse the SDO; he's only doing his job.

## 15 MISHAP RESPONSE PLANNING: ARE YOU ADEQUATELY PREPARED TO RESPOND TO AN AVIATION MISHAP?

What if a mishap was to occur right now? Would you be prepared to react correctly/effectively, knowing all of your responsibilities? This situation is described in another document with which you should become intimately acquainted, the Pre-Mishap Response Plan. The SDO and Safety Officer maintain copies. You should review it for accuracy in the following areas:

1. You should be listed as a member of the Aviation Mishap Board.

2. Your most current day and evening telephone contact numbers should be listed.

3. Your duties and responsibilities should be detailed in the document.

In addition, the pre-mishap plan must be in a simple and "user-friendly" format. The plan should have a basic immediate action checklist that takes the user through the initial three hours. It should be so simple that a novice could carry it out without major errors. Each drill should be followed by a "lessons learned" session and the pre-mishap plan modified accordingly. Ensure that the plan covers detachment and deployed responses, since they are frequently quite different.

Remember you are the Aeromedical representative on the AMB and as such you are responsible for the health and safety of those involved in responding to the mishap. The premishap plan should have contingency for biological precautions and control of and protection from HAZMAT. The Naval Flight Surgeon's Pocket Reference to Aircraft Mishap Investigation (5th Edition, 2001) provides guidance in these areas. Additionally, ensure you have plans for remains jurisdiction, coordination with local medical authorities and AFIP is essential in these matters.

Most squadrons will have a prepared mishap kit; a collection of tools, materials, and ancillary equipment necessary to conduct an on-scene investigation of the mishap. While many kits include some pieces of aeromedical equipment (i.e., specimen bottles, gloves, etc.), most are not complete. Your local clinic should have a shared aeromedical mishap response kit. You should consider packing all contents in an "Alice Pack" or backpack as there may be times (such as on mountains or wetlands) when carrying a large, hardened case could be tedious and impractical. The contents of your kit should be procured, periodically surveyed, and maintained based on recommendations from The Naval Flight Surgeon's Pocket Reference to Aircraft Mishap Investigation (5th Edition, 2001) which should also be part of your kit. If you do not have a Copy of this extremely valuable manual, one may be purchased from:

The Society of U.S. Naval Flight Surgeons
P.O. Box 33008
NAS Pensacola, FL 32508-3008

You should also create your own mishap kit containing personal items you might need in the event of a required rapid response to a mishap and keeping it in a convenient location.

Your commands premishap plan should cover contingencies for deployments. You need to ensure that you are able to provide aeromedical support in remote sites as well as at home base. This may involve calling medical personnel at a planned deployment site and determining what local assets are available and what you will need to bring with you.

# 16 SOME FINAL THOUGHTS

Yes, there is much to remember. No doubt, you will encounter situations that have not been covered, either here or at NAMI. Don't despair, for much of what you will learn during your career will come from word-of-mouth encounters with your peers. Here, then, are a few resources that you should tap.

1. Local colleagues: such as older, more experienced flight surgeons, GMOS, Corpsmen, and your Wing AMSO.

2. Other colleagues, if you don't have their contact numbers, call your specialty advisor or your detailer. He can provide you with a list of the numbers you need.

3. Naval Aerospace Medicine Institute (NAMI) This is where you first learned about the art and science of aviation clinical and operational knowledge. Most of the resources for answering many of the questions you will have in the field can be answered by someone at our "alma mater". You can be referred to a needed resource by calling NAMI DSN: 922-2741, Comm: (850) 452-2741

4. The Aerospace Medicine Association (AsMA) This is your professional society. It has a large, diverse membership representing all aspects of Aviation medicine, physiology, and psychology. If you are currently not a member, it is strongly recommended that you become one. Its journal is a fine resource for scholarly articles on many subjects, and the annual meeting is a superb locus for networking with your peers. The AsMA Directory is also an excellent guide for locating others in aerospace medicine. For information about becoming an AsMA member, contact the Society at the following address:

Membership Secretary
Aerospace Medical Association
320 S. Henry St
Alexand4 Virginia, 22314
Phone: (703) 739-2240

5. The Society Of US Naval Flight Surgeons: Located at the Naval Aerospace Medical Institute; The Society forms an important part of our profession. Its newsletter is filled with useful information. ***JOIN NOW***!!

6. Naval Safety Center: The Aeromedical Division of the Safety Center has a staff of specialists in all areas of aviation medicine, human factors, physiology, psychology, and human engineering. The primary task of the Safety Center is mishap prevention and investigation. In this light, the aeromedical staff will be happy to assist you with any aeromedical safety related problem.

| COURSE | a | b | c | d | e | f | g | h | i | j | k | l | m | n | o | p | q | r | s | t |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Level A** | 1 | 2 | | | | | | | | | | | | | | | | | | |
| **Level B** | | | X | X | X | X | X | | | | | | | | | | | | | |
| **Level C** | | | | | | | | X | X | X | X | X | X | | | | | | | |
| **Level D** | | | | | | | | | | | | | | X | X | X | X | X | X | X |

**NOTES:** 1. Required for ejection seat only. 2. Required for non-ejection seat.

Figure E-5. NASTP Adjunctive Training

**NASTP ADJUNCTIVE TRAINING TOPIC GUIDE**

Each course is a stand alone training module. Level A is required annual training. Levels C, B, & D are recommended annual training.

Level A - Required Annual Training

a. Aeromedical aspects of ejection and emergency ground egress

b. Emergency ground egress - impact, acceleration, survivability and egress

Level B - Recommended Annual Mission Training (as applicable for aviators and aircrew)

c. Sensory problems – spatial disorientation/misorientation, visual illusions, visual scanning, induced myopia, situational awareness, spatial strategies

d. Night vision/NVD

e. LASER/LEP

f. CBR

g. Low level flight - NOE, TERF,

Level C - Recommended Deployment Work-up Training

h. Pre-deployment syndrome - AMSO/flight surgeon roles

i. Circadian rhythms/long duration flights/fatigue

j. Sustained Operations/Combat stress

k. Survival/combat first aid

l. Land survival - geographically specific emphasizing hypo/hyperthermia in jungle, mountain, desert and arctic environments.

m. Water survival - geographically specific emphasizing hypo/hyperthermia

Level D - Recommended Annual Safety Briefs

n. Stress management, Self-imposed stress

o. Situational awareness - anomalies of attention/complacency, learning, memory improvement, temporal distortion

p. Exercise/cardiovascular fitness/strength training

q. Nutrition/weight control

r. Simulator sickness/motion sickness

s. GTIP

t. Noise and vibration

## Example of a Marine Corps unit Annual Aeromedical Briefs

Aviation physiological problems
Survival skills - water and land, cold and hot
Low level visual problems/illusions
Stress and fatigue
Self medication, illness, preoccupation
OPNAVINST 3710.7S - Chapter 8 review
Vertigo and spatial disorientation
Night flying, and visual-problems
Pre-deployment / Trans-PAC - Trans-LANT brief

### Other Suggested Briefs

Hypoxia
Disorientation
Alcohol and performance
Exercise, food, and diet
Noise, hearing conservation
Smoking cessation
Off duty health hazards
Circadian rhythm disturbances
Dynamics of family separation and reintegration
Occupational vision problems