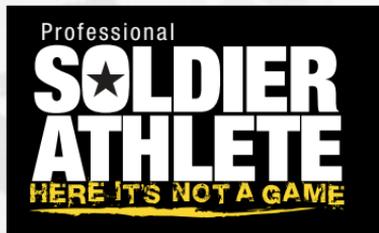


# THE PERFORMANCE TRIAD GUIDE



**Sleep, Activity, and Nutrition**





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**Sleep, Activity, and Nutrition**

# OPTIMIZING

## THE PROFESSIONAL SOLDIER ATHLETE

**SOLDIERS** are the most sophisticated and complex Army weapon system. As members of the Profession of Arms, Soldiers must be ready to defend our nation with optimal performance. Soldiers must be ready physically, cognitively and emotionally. Soldiers, like professional athletes, must perform at very high levels every day. For Soldiers, more is on the line than winning or losing a game. The safety and security of an entire nation is at stake.



Status as a Professional Soldier Athlete is achieved through a combination of physical, emotional, and cognitive prowess, optimal performance during sustained operations, the establishment of a strong and healthy social, family and spiritual support network, and maintenance of all of these areas for sustained Soldier readiness and resilience. The Performance Triad provides Soldiers with the tools and knowledge to achieve high levels of performance as a Professional Soldier Athlete.



### PHYSICAL DOMINANCE



### COGNITIVE DOMINANCE



### EMOTIONAL DOMINANCE



### SUSTAINED OPERATIONS



### SOCIAL, FAMILY, SPIRITUAL SUCCESS



### OPORD FOR LIFE



Performance Triad



THE  
**PROFESSIONAL SOLDIER ATHLETE**

IS A STRONG, FIT, FIGHTING MACHINE ABLE TO PHYSICALLY DOMINATE THE ENEMY

HERE IT'S **NOT A GAME**

THE **PROFESSIONAL SOLDIER ATHLETE** IS A STRONG, FIT, FIGHTING MACHINE ABLE TO PHYSICALLY DOMINATE THE ENEMY. HEALTHY SLEEP, ACTIVITY, AND NUTRITION COMBINE TO OPTIMIZE SOLDIERS' PHYSICAL ABILITIES AND STRENGTH.

THE **PROFESSIONAL SOLDIER ATHLETE** MUST OUTTHINK, OUTSMART, AND BE MORE EFFICIENT THAN THE ENEMY. HEALTHY SLEEP, ACTIVITY, AND NUTRITION COMBINE TO OPTIMIZE SOLDIERS' COGNITIVE AND DECISION-MAKING ABILITIES.

THE **PROFESSIONAL SOLDIER ATHLETE** IS A RESILIENT FORCE ABLE TO KEEP IT TOGETHER DURING ANY SITUATION. HEALTHY SLEEP, ACTIVITY, AND NUTRITION COMBINE TO OPTIMIZE SOLDIERS' EMOTIONAL STRENGTH AND RESILIENCE.

THE **PROFESSIONAL SOLDIER ATHLETE** HAS TO APPLY ELITE HEALTHY LIFESTYLE SKILLS DURING SUSTAINED OPERATIONS. DOING SO WILL BEST PREPARE THEM FOR AND SUSTAIN THEM DURING THE MISSIONS AND CHALLENGES THEY FACE.

THE **PROFESSIONAL SOLDIER ATHLETE** IS A STRONG ROLE MODEL FOR FAMILY, FRIENDS, AND COMMUNITY MEMBERS. ENGAGING OTHERS IN A HEALTHY LIFESTYLE NOT ONLY SUPPORTS SOLDIERS' HEALTH, BUT THE HEALTH OF THOSE AROUND THEM.

**ONCE A SOLDIER, ALWAYS A SOLDIER.** IT'S IMPORTANT TO MAINTAIN HEALTHY SLEEP, ACTIVITY, AND NUTRITION HABITS FOR LIFE.

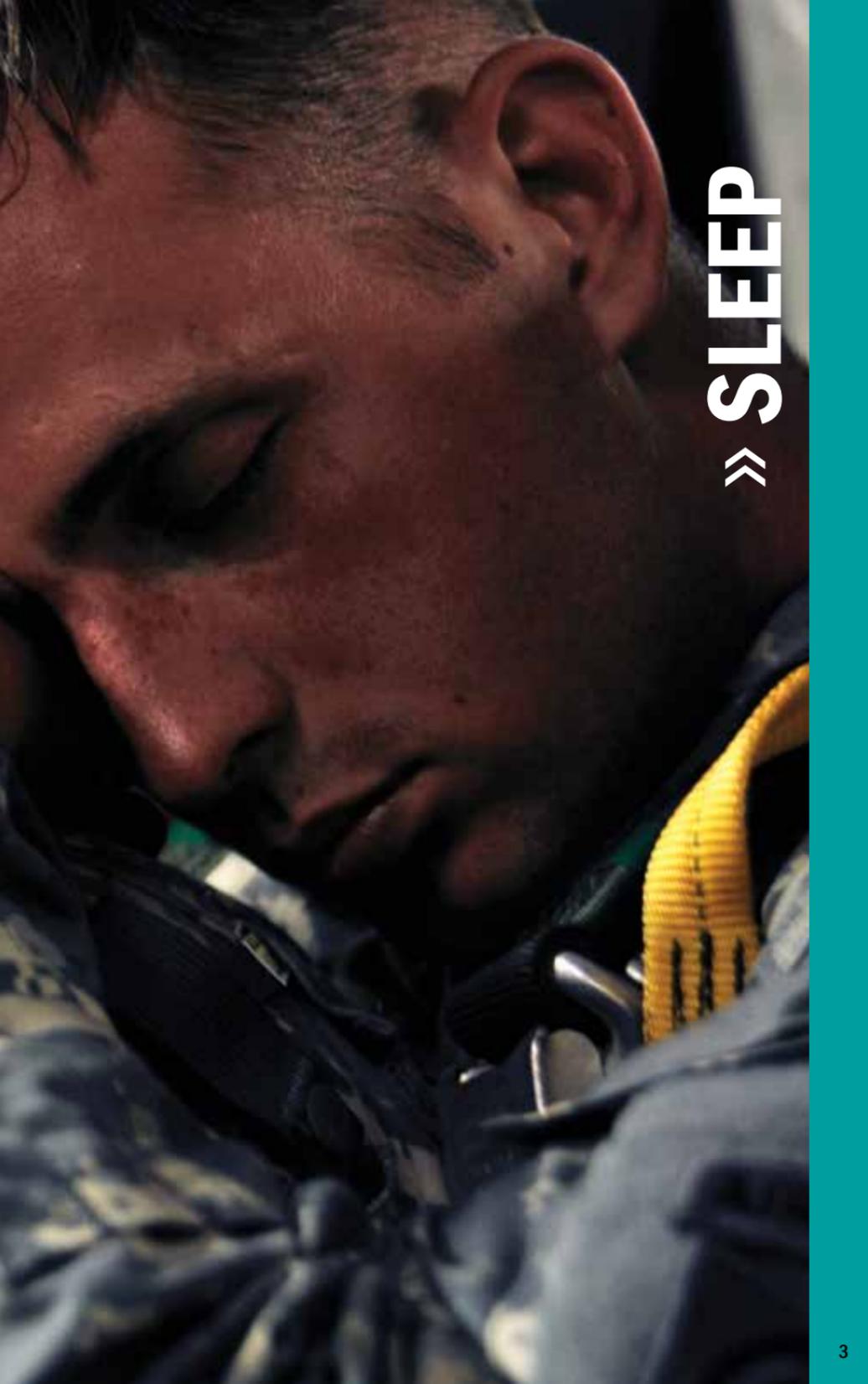
**PROFESSIONAL  
SOLDIER  
ATHLETE**



**STATUS AS A PROFESSIONAL SOLDIER ATHLETE IS ACHIEVED THROUGH A COMBINATION OF PHYSICAL, EMOTIONAL, AND COGNITIVE PROWESS, OPTIMAL PERFORMANCE DURING SUSTAINED OPERATIONS, THE ESTABLISHMENT OF A STRONG AND HEALTHY SOCIAL, FAMILY AND SPIRITUAL SUPPORT NETWORK, AND MAINTENANCE OF ALL OF THESE AREAS FOR SUSTAINED SOLDIER READINESS AND RESILIENCE.**

THE  
**PROFESSIONAL SOLDIER ATHLETE**  
HERE IT'S **NOT A GAME**





» SLEEP «



# introduction

## Introduction:

Sleep is vital for health, performance, and well-being. It sustains the brain's capabilities for success on and off the battlefield. With quality sleep, Soldiers are able to excel mentally and physically.

Sleep is a biological need for brain function. Soldiers require 7–8 hours of quality sleep every 24-hours to maintain their mental edge. When Soldiers do not get enough sleep, their mental acuity suffers—putting themselves and fellow Soldiers at risk for making errors that lead to accidents and mishaps. Insufficient sleep is a safety risk and a threat to mission success.

## Why is Sleep Important?

Getting enough quality sleep helps to maintain your physical and psychological health, quality of life, and safety. Sleep is the only time when the brain can recover from the wear and tear of daily life—the brain cannot recover during wakefulness, even if you are resting.

Your brain needs sleep to restore and repair, grow new brain connections to work efficiently, form memories and process new information. So prioritize sleep when planning training or when learning a new skill or task. Sleeping well before learning will help with attention and understanding; sleeping well after learning, will improve your ability to both remember and use the newly-acquired skills and information.

The amount of sleep that adults need vary according to age and genes inherited. Most adults need 7–8 hours of sleep every 24 hours. Very few people can perform optimally on less than 7–8 hours.

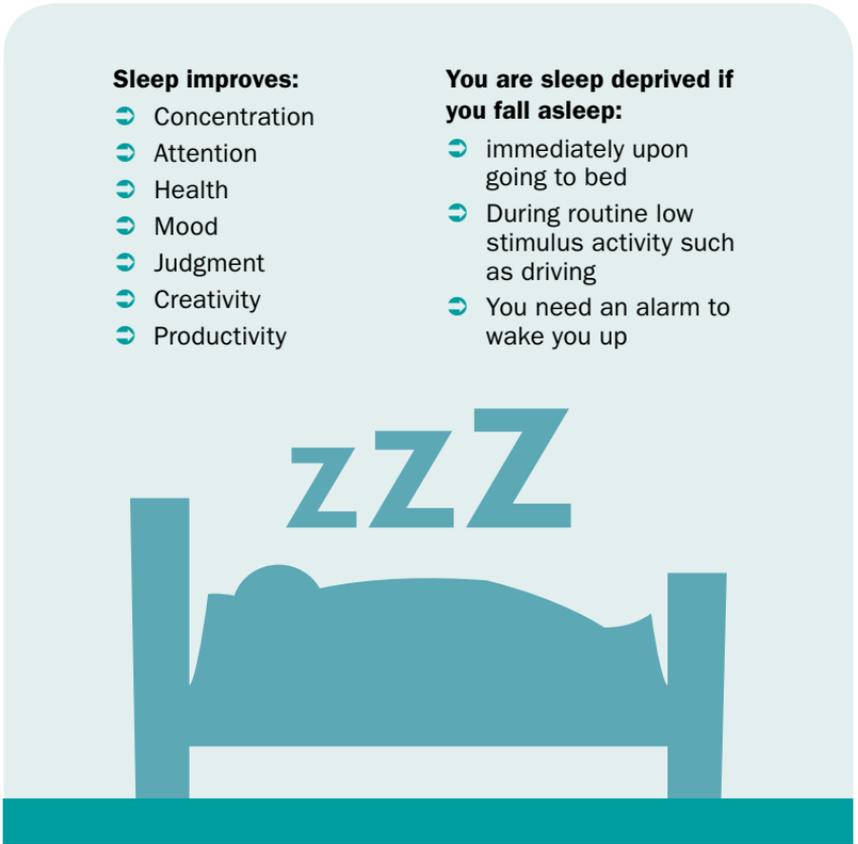
Soldiers **overestimate** their own proficiency with insufficient sleep. This is, in part, because insufficient sleep impairs the brain's fundamental ability to function efficiently—a physiological change that cannot be overcome by motivation, initiative, willpower or caffeine.

### **Sleep improves:**

- Concentration
- Attention
- Health
- Mood
- Judgment
- Creativity
- Productivity

### **You are sleep deprived if you fall asleep:**

- immediately upon going to bed
- During routine low stimulus activity such as driving
- You need an alarm to wake you up



## **Sleep, It Does the Body Good**

To obtain quality sleep for optimized performance there are some tried and true practices that can get you to dreamland. The first thing to do is establish and maintain a bedtime routine.

A routine is a predictable sequence of events. What is important is that bedtime activities follow each other in a regular and predictable pattern. The purpose of the routine is to optimize your sleep so you can be productive, mentally sharp, emotionally balanced, and full of energy all day. Tweak the timing of activities so that it works for you.



## **Bed Time Routine**

1. Establish a target bedtime and adhere to it.
2. Have a comfortable, cool, quiet, dark, and safe sleep area.
3. Relax and wind down to get ready to sleep (30–60 minutes before lights out).
4. Establish a consistent bed/wake time, even on weekends.

## **Set a bedtime:**

When setting bedtime, backwards plan to set the appropriate number of hours of sleep you need. This ensures your ability to have adequate time to wind down, bathe, brush your teeth, and prepare for the next day.

## **Sleep Area:**

Having a comfortable sleep area is essential for quality sleep. Comfortable means different things to different people. Take a look at your sleep area, is it soothing, relaxing, and comfortable? For some, comfort is a freshly made bed with soft sheets. For others it is a mattress and pillow that supports their sleep positions.

Whatever your interpretation, ensure your sleep area is sleep friendly for you. Your sleep area should be dark, cool, and quiet. Use room darkening curtains or blinds to make the room dark and block out distracting light. Have soft ear plugs or soothing white noise to assist with sleeping.

A safe sleep area will depend on where your mission takes you. In the U.S. and most garrisons in the western hemisphere, your housing is generally considered to be in a safe area. In a deployed setting, safe is a relative term. It will depend on your location, current operations, and operational environment. In such situations, getting as much sleep whenever you can will be important. Despite the danger, it is still important that you sleep in relative safety, taking appropriate force and individual protection measures.

In an operational or training environment put safety first. Sleep away from vehicular traffic and do not sleep in front of or behind trucks, tracked vehicles, etc. Avoid and protect against environmental hazards and pests. Take care to ensure snakes, spiders etc., are not in your sleeping area, bag, or shoes.

## How do I get good sleep?

- ➔ Select a bedtime
- ➔ Keep the same bed/  
wake time
- ➔ Maintain a  
comfortable, quiet,  
dark & safe sleep  
area
- ➔ Practice wind-  
down activities  
prior to  
sleeping



### 3. Winding Down:

Give yourself 30–60 minutes every night to transition to sleep. The process of winding down for the night may include a warm bath or shower, listening to relaxing music, or reading books. Other relaxing activities may include journaling, breathing exercises, meditation, or connecting with your bed partner if you have one. During this period, your routine should not include watching television, playing video games, getting online for endless hours, or using other electronics.

### 4. Lights Out:

The last and most important part of the bedtime routine—turn out the lights and go to bed! Most people fall asleep within 15 minutes of going to bed. Adhering to a consistent bed and wake time is an equally important part of your bedtime routine. On the weekends it may be tempting to sleep in, however, this will disrupt your circadian rhythm, resulting in social jet lag. Social jet lag occurs when you stay up late on Friday and Saturday night and sleep in on Saturday and Sunday. This puts your body in a state similar to being in a different time zone or jet lag. It will make it even more difficult to get up on Monday morning and adjust to a regular weekday schedule.

When you get the right amount of sleep you are able to wake up without an alarm clock. Some people experience challenges getting to sleep or staying asleep. If this is you, review the sleep habits section below for additional suggestions on how to get the best possible sleep.





### **Winding Down Suggestions:**

- Take a warm bath or shower
- Do some easy stretches
- Wind down with a favorite hobby (knitting, drawing, puzzles, Soduku (not on an electronic device)
- Listen to audio books or soft music
- Read a book or magazine by a soft light (not electronic version)
- Make simple preparations for the next day
- Take out clothes for the next morning
- Plan and prep for breakfast
- Set the coffee maker timer to brew
- Walk through the house and turn off all the lights one by one
- Brush/pet your dog or cat; watch your fish swim

## Sleep Habits

If you want quality sleep you can count on night after night, well-planned strategies are essential. Discover and develop your personal tactics for a good night's sleep. Stick with this routine and it will become a habit. Remember, a predictable approach will result in an easy transition to sleep. Also, learn to avoid common sleep thieves and try a variety of healthy sleep-promoting techniques.

- Caffeine stays in the body for 4–6 hours, NO caffeine at least 6 hours prior to bedtime.
- Go to the bathroom to prevent sleep interruption.
- Physical activity results in a cognitive boost that lasts up to 3 hours afterwards. Finish PT at least 3 hours before lights out.
- Read or listen to relaxing music instead of watching TV, computer or other electronics. Turn off, cover up, or better yet, remove electronics that will disrupt or interfere with your sleep.
- Use soft foam ear plugs or a fan to block sounds. Use a sleep mask or blackout curtains to block light
- While alcohol may help you fall asleep, it reduces sleep quality. Stop alcohol at least 6 hours before bed.
- Avoid heavy meals within 2 hours of bedtime.

## Ten Effective Sleep Habits

1. Create a quiet, dark, comfortable sleeping environment. Cover windows with darkening drapes or shades, or wear a sleep mask to block light. Minimize disturbance from environmental noises with foam ear-plugs or use a room fan to muffle noise. If you can, adjust the room temperature to suit you. If you cannot, use extra blankets to stay warm. Use a room fan both to muffle noise and keep you cool.
2. Use the bedroom only for sleep and intimacy. Remove the TV, computer, laptop, and other electronic distractions from your bedroom. Do not eat or drink in bed. Keep discussions or arguments out of the bedroom.
3. Stop caffeine consumption at least 6 hours before bedtime. Caffeine promotes wakefulness and disrupts sleep.

4. Do not drink alcohol before bed. Alcohol initially makes you feel sleepy, but disrupts and lightens your sleep several hours later. In short, alcohol reduces the recuperative value of sleep. Nicotine, and withdrawal from nicotine in the middle of the night, also disrupts sleep. If you need help quitting drinking or using nicotine products, see your healthcare provider for options.
5. Complete your exercise by early evening. Exercising is great, just be sure to finish at least 3 hours before bedtime so that you have plenty of time to wind down.
6. Do not go to bed hungry. A light bedtime snack (eg, milk and crackers) can be helpful, but do not eat a large meal close to bedtime. Empty your bladder just before you go to bed so that the urge to urinate does not disrupt your sleep.
7. Maintain a consistent, regular routine. Start by setting a fixed time to wake up, get out of bed, and get exposure to light each day. Pick a time that you can maintain during the week and on weekends, then adjust your bedtime to target 7–8 hours of sleep.
8. Get out of bed if you cannot sleep. Only go to bed (and stay in bed) when you feel sleepy. Do not try to force yourself to fall asleep; it will tend to make you more awake, making the problem worse. If you wake in the middle of the night, give yourself about 20 minutes to return to sleep. If you do not return to sleep within 20 minutes, get out of bed and do something relaxing. Do not return to bed until you feel sleepy.
9. Nap wisely. Napping can be a good way to make up for poor or reduced nighttime sleep, but too much napping can cause problems falling asleep or staying asleep at night. If you need to nap for safety reasons such as driving, try to do so in the late morning or early afternoon, perhaps right after lunch, to take the edge off your sleepiness.
10. Move the clock from your bedside. If you tend to check the clock two or more times during the night, and if you worry that you are not getting enough sleep, cover the clock face or turn it around so that you cannot see it (or remove the clock from the bedroom entirely).

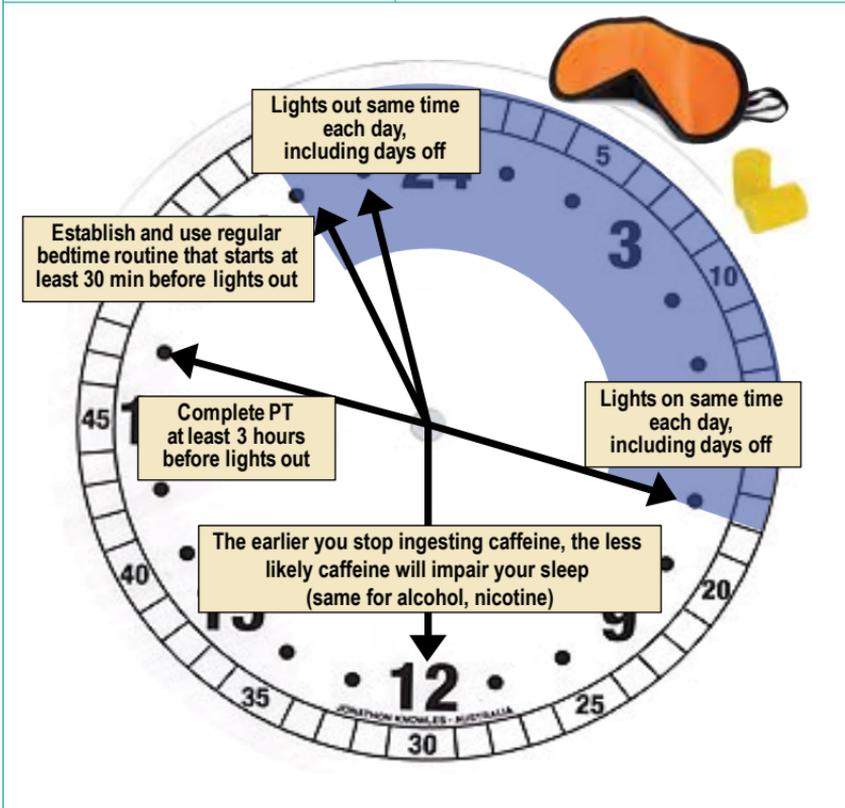
**The Ten Effective Sleep Habits** were assembled by the Army Surgeon General's Performance Triad Sleep Working Group.



## Example Of Bedtime Routine Incorporating Sleep Habits

### Practice Good Sleep Hygiene

Protect your sleep time	Protect your sleep environment
No TV/music,etc. during sleep time	QUIET—use foam earplugs or room fan
No late-night texting; internet	DARK—block windows or wear sleep mask
No phone calls	Comfortable temperature



Establishing a bedtime routine helps you get quality sleep. Quality sleep supports your ability to be disciplined and to think clearly in order to meet all of your responsibilities as a Soldier, Family member, and friend.

Adjust this recommended schedule according to your individual needs. Your schedule will depend on your unit, mission, operational environment, and whether you live on or off post.

## Example Of Bedtime Routine Incorporating Sleep Habits

Backward Planning Example

Morning:

➔ What time do you need to be at work?	6:00 AM
➔ When do you leave your home/room?	5:40 AM
➔ Time to get out of bed and get ready to leave?	5:15 AM
➔ Alarm goes off	5:00 AM

Evening:

➔ No Caffeine after	3:00 PM
➔ No Gym after (NLT 3 hours before bed)	6–7 PM
➔ Have dinner no later than	6–7 PM
➔ Stop TV/Emails/Facebook	7–8 PM
➔ Wind down (30–60 min)	8–9:30 PM
➔ Bed time (NLT for 7–8 hours of sleep)	9–10 PM

## Things to consider when planning...

- ➔ Commute time
- ➔ Personal hygiene, breakfast
- ➔ How long does it take to PT or work out?
- ➔ Do you need a few minutes to become alert?
- ➔ Household chores
- ➔ Putting children to bed
- ➔ Taking the dog out for last walk
- ➔ Time for yourself and/or partner
- ➔ Prayers, meditation, relaxation etc.



## What About My Room?

Take the time to look at your room and determine if it is sleep friendly. Depending on where you live, there will be varying ability to make some changes to enhance sleep friendliness. Focus on what you can change and do it. Some areas to address when looking at sleep friendliness:

- ➔ **Light:** Make your room dark. Block unwanted light with curtains or blinds.
- ➔ **Sound:** Is there noise that is disrupting your sleep or is there sufficient disturbance that you need white noise to block unwanted sounds?
- ➔ **Touch:** Room temperature should be cool around 65–72°F. Think about your sheets, your bed, pillows, and pajamas. All should feel comfortable for you and your sleep positions.
- ➔ **Smell:** Offensive or soothing smell? Does the bedding smell fresh? 77% of Americans say they get a more comfortable night's sleep on sheets with a fresh scent.

## What About My Bed?

Getting good quality sleep may be less about your bed and more about your mattress. Research shows that people sleep better, suffer less back pain and experience fewer symptoms of stress when sleeping on newer beds. You may need a new mattress if:

- ➔ Your mattress is five to seven years old
- ➔ You wake up with stiffness, numbness, aches and pains
- ➔ You had a better night's sleep somewhere other than your own bed (such as a hotel or friend's guest room)
- ➔ Your mattress shows signs of overuse (it sags, has lumps, etc.)





## Sleep and Children

A good night's sleep is essential to children's health, development, and performance in school. Children's sleep needs depend on their age group. Babies need the most sleep and spend about half of their sleep time dreaming. Teens need at least 9–10 hours.

Children AND their parents benefit from a consistent bedtime routine as it provides children with structure and a sense of order that is both reassuring and predictable. Establishing a regular and relaxing bedtime routine helps children to calm down and become quiet in preparation for sleep. Parents benefit as it helps to transition children to bed, leaving parents with some time to themselves. Parents whose children have a consistent bedtime get to bed earlier themselves.

Inadequate sleep in children lead to moodiness, behavioral problems, and problems learning in school. In the 2014 Sleep in America Survey, setting boundaries around electronics use, enforcing sleep related-rules and setting a good example helped children get more sleep. These rules specifically address:

- ➔ Child(ren)'s bedtime
- ➔ Caffeine consumption
- ➔ How late children watch television
- ➔ Use of smart phones in the evening

The result? Consistent routines and enforcement of the rules help children get more hours of sleep and better quality sleep.

### Bedtime Routine for Children:

Use the backward planning techniques to establish bedtime routines for children. Determine the amount of sleep needed based on your child(ren)'s age and start a routine.



AGES	REQUIREMENT
Newborns (0–3 mths)	14–17 hours of sleep
Infants (4–11 mths)	12–15 hours of sleep
Toddlers (1–2 yrs)	11–14 hours of sleep
Preschoolers (3–5 yrs)	10–13 hours of sleep
School-Age Children (6–13 yrs)	9–11 hours of sleep
Teenagers (14–17 yrs)	8–10 hours of sleep
Young Adults/Adults (18–64 yrs)	7–9 hours of sleep
Older Adults (65+ yrs)	7–8 hours of sleep

- Have a set bedtime and stick with it. Backwards plan and include time needed to wind down.
- Have relaxing and soothing activities to transition and prepare them for sleep. Be prepared to help your child(ren) to calm down. Use age appropriate activities that have significance for your child(ren) or your family.
- Determine what bedtime routine and activities work best for your child(ren) by experimenting with different activities. For example, try a shower if a bath is too busy, or consider puzzles, drawing, reading, or listening to music if playing with toys is too lively.
- To wind down successfully from an active day, move activities around. For example, instead of a bath right before bed, try a bath after dinner, then quiet time, before bedtime.

## Teens...

Teens have unique challenges for getting adequate sleep during the school week and need 9 or more hours of sleep every 24 hours. However, most get less than 9 hours because of the choices they make and biologic factors. Not only do teens have multiple social and extracurricular activities or work, but their circadian rhythm shifts, making it more difficult for them to go to sleep until later at night and making it more difficult for them to awaken early in the morning. But they still need 9 hours or more hours of sleep each night. Given early school start times, teens accumulate a sleep debt.

While many teens appear zombie-like in the morning, they are not lazy, but sleep deprived. It is difficult for them to be alert in the morning.

## What can parents do?

The solution for teens is the same for adults: develop a sleep schedule and stick to it. In one study, the difference between getting grades of As and Bs and Ds and Fs was 33 minutes of sleep.

- Consider planned naps to help make teens more alert and efficient. Naps should not be very long (30 min or less).
- Stick to consistent bed and wake time—even on weekends—as it will help to synchronize the brain to be able to fall asleep and awaken at the appropriate times.
- Follow all the previously mentioned sleep habits.
- Have strict enforcement of bed-wake times (including weekends), use of electronics in the bedroom, and caffeine use.
- Re-examine your teen's extracurricular activities. Are they really essential?
- If your teen goes to school early, works late or has late activities, consider dropping them off or picking them up and not allow them to drive drowsy.

## Why are teens so sleep deprived?



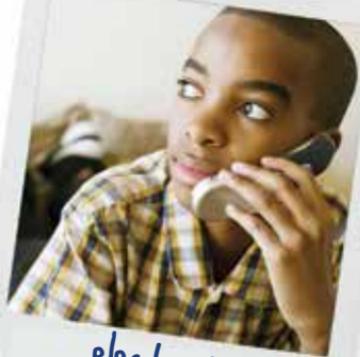
social life



homework



inconsistent bedtimes



electronic distractions

*Keep these out of the bedroom!*



## **Sleep Deficiency**

Our brains cannot function without sleep. You can't train your brain to do more with less sleep and there are no shortcuts, not even taking in more caffeine. The brain only works as well as the amount of sleep it is fed. Remember, "Sleep is ammo for your brain." The more you get, the more mentally sharp your brain and YOU will be.

## **Purposely Going Without Adequate Sleep**

Purposely going without enough sleep is often seen as a sign of strength (and needing sleep a sign of weakness)—but when you don't get enough sleep there is a tendency to become irritable, distracted, and stressed more easily. The ability to perform your mission, do well at school, work, or home improves when you get the right amount of sleep. With adequate sleep, productivity increases, your energy improves, and you think more clearly while being more efficient at work.

## **Problems Getting to Sleep or Staying Asleep (Insomnia)**

Problems sleeping, is one of the most common complaints among Soldiers, particularly those who return from deployment. From 2000 to 2009, the diagnosis of insomnia in active duty Army personnel increased 19-fold. This is significant because insomnia is associated with anxiety, depression, PTSD, chronic pain, alcohol abuse, and even with suicide.

We all have either seen someone or been that person who did not get enough sleep the night before. You tend to look tired, be a bit grumpy, and choose your caffeinated beverage of choice to "get going." People who get insufficient sleep are less motivated, less likely to make healthy food choices, are less active, and less productive.

## Consequences of Sleep Deficiency

Common short term consequences of sleep deficiency include: decreased physical and mental performance, impaired memory, impaired concentration, decreased reaction time, poor decision-making, decreased testosterone production, and diminished emotional control. Over the long term, insufficient sleep has been linked to increased risk for developing several medical conditions such as obesity, diabetes, hypertension, and cardiovascular disease.

Insufficient sleep also impairs one's ability to self-monitor. This means a person who is sleep-deprived tends to overestimate their ability to function. This is the same for Soldiers and leaders. Their own proficiency is overestimated under sleep-deprived conditions. This is because the ability to self-monitor also relies on sufficient sleep. These physiologic deficits cannot be overcome by motivation, initiative, or willpower—and can only be TEMPORARILY overcome by caffeine.

## Performance and Safety

The so-called “adrenaline rush” during combat or training does not offset insufficient sleep. A sleep deprived Soldier might shoot a “friendly,” enter the wrong coordinates, or give the wrong dose of medicine. In general, sleep-deprived Soldiers have a higher potential to make wrong tactical decisions and this could mean the difference of life or death. For these reasons, leaders must prioritize sleep for their Soldiers AND themselves.

Soldiers who routinely get less than 7 hours of sleep perform much like a person who is legally drunk. They lose their situational awareness, lose the ability to exercise good judgment and increase risky behaviors. They also are at risk of uncontrolled and unintentional sleeping. Micro-sleep can occur during critical events such as driving, speaking and even walking. Put simply, accidents increase when the total amount of sleep you get each night decreases overtime.

Common combat tasks compromised by insufficient sleep include (but are not limited to):

- ➡ Requesting indirect fire
- ➡ Detecting and appropriately determining threat level
- ➡ Coordinating squad tactics
- ➡ Combat activity such as firing from bounding vehicle and observing the terrain for enemy presence



## Drowsy Driving

According to the National Highway Traffic Safety Administration (NHTSA), fatigue-related crashes are the leading cause of “fatal to the driver” truck crashes. According to the Center for Disease Control (CDC), approximately 25% of motor vehicle accidents are related to drowsy driving.

The total number of the sleep-deprived crashes are equal to the number of drug and alcohol related crashes put together. This means drowsiness is the principal cause in at least 100,000 police reported traffic crashes each year, killing more than 1,500 Americans and injuring another 71,000.

In one survey, adults who reported unintentionally falling asleep during the day, were more likely to fall asleep when driving, snore, and slept less than, or equal to 6 hours per 24 hour period. The most common drowsy drivers are men, young drivers, binge drinkers, and people who rarely or never wear seatbelts. Adults between 18–24 years old are more likely to drive drowsy than any other age group and therefore are at high risk for being killed in drowsy driving-related accidents.

Based on safety data collected by the Army from FY 11 until August of 2014, 569 Soldiers were killed or injured in accidents that mostly occurred during the day as a result from fatigue. The emotional cost of these fatigue-related accidents is huge and the dollar estimate is approximately \$3.5M. This is almost half of the cost of all accidents in the Army during the same timeframe.

## Sleep Debt and Performance

The demanding nature of military operations often creates situations in which obtaining enough sleep on a regular basis is difficult or impossible. Such chronic, insufficient sleep (anything less than 7–8 hours per 24 hours) produces a sleep debt—a chronic state of sleep need characterized by impaired performance and readiness. The rate at which the sleep debt (and performance deficits) grows depends upon how much nightly sleep is restricted and how much sleep an individual needs. The only way to eliminate the debt is to get sleep.



## How Much Sleep Do I Need?

To determine how much sleep your body needs, certain conditions must exist to get the best picture possible. First, pick a time when there are no restrictions such as during a vacation or during an extended period of time off from work. Do the following to understand how much sleep you really need:

1. Sleep until you feel rested and restored
2. Repeat this until you can wake up without an alarm
3. Once you know how many hours you need, begin to establish a sleep routine with the same sleep and wake times.
4. Ensure you practice good sleep habits (see page 10).

## Sleep Debt

A sleep debt occurs when you get less sleep than you need. You can recover recent sleep loss by going to bed a little earlier each night. It is impossible to train your brain to function better with less sleep. There are no shortcuts for sleep. Your brain only work as well as the amount of sleep you feed it; the more sleep you get, the more mentally sharp you are. You cannot recover sleep lost as a result of chronic sleep deficiency in only one or two nights. The best recommendation for someone in this situation is to get as much sleep possible until the sleep need becomes stable. You will know this when you start thinking better, acting better and having more energy.



## Sleep Debt

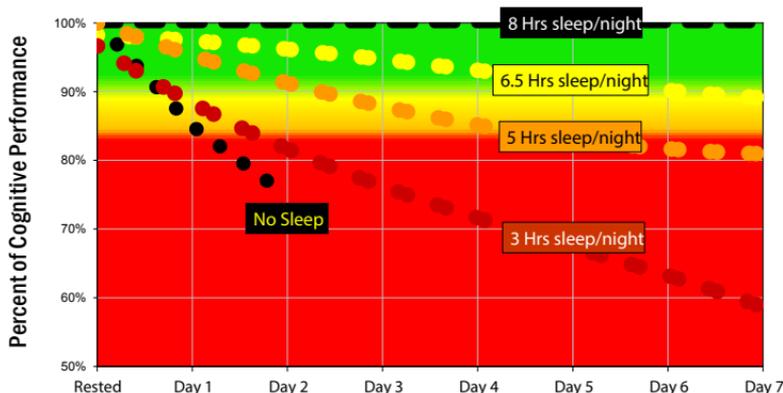
This figure shows the relationship between hours of sleep per night and performance. You can use this chart to gauge the impact of nightly sleep duration on performance. As shown, anything less than 7–8 hours of good-quality sleep per 24 hours negatively impacts performance—impairment increases as nightly sleep duration decreases.

With 7–8 hours of sleep per 24 hours, Soldiers sustain optimal performance for the entire waking day (**Green zone**).

When Soldiers get less than 7–8 hours sleep, performance degrades over time. Getting 4–6 hours of sleep every 24 hours will keep Soldiers in the **Amber zone** for several days, then they fall into the **Red zone**. Getting less than 4 hours of sleep guarantees that Soldiers immediately fall into the **Amber Zone** and quickly progress into the **Red Zone**.

Less than 5% of Soldiers can sustain performance on less than 7–8 hours sleep per 24 hours. If a Leader is in this 5% group, it may be difficult to understand that most Soldiers are not in this group—and to foster a unit environment where 7–8 hours is considered normal.

PERFORMANCE DECREMENT ACROSS DAYS OF INSUFFICIENT SLEEP



A long-exposure photograph of a tank at night. The tank is positioned in the lower half of the frame, with its main gun barrel pointing to the left. The turret and various sensors are visible, some illuminated with a green light. The background is a dark night sky filled with numerous white, diagonal streaks representing star trails. The foreground shows a dark, textured ground surface.

Less than 5% of Soldiers can sustain performance on less than 7–8 hours sleep per 24 hours.



## Signs of Inadequate Sleep

The best way to evaluate a Soldier's status is to observe his or her behavior. Indications of inadequate sleep include:

- Struggling to stay awake during briefings, classes, etc.
- Difficulty understanding or tracking information
- Lapses in attention
- Decreased initiative or motivation
- Irritability

Or, ask the obvious question: "How much sleep have you had over the last 24 hours?" Leaders should also ask themselves this question.

## Countermeasures for Sleep Deprivation

Soldiers who routinely get 5–6 hours of sleep perform much like a person with a blood alcohol content of 0.08. After just one week of sleeping five hours or less each night, a man's testosterone levels drop as if he's aged about 11 years. Testosterone fuels muscle and impacts decision-making abilities. Lapses in focus from sleep deprivation can result in accidents or injury. Alterations in mood affect our ability to acquire new information and subsequently to remember that information. Given the Army's 24/7 operations, particularly during sustained or continuous operations, what is a leader or Soldier to do?

To achieve maximum sleep in a continuous operating environment there are several strategies that can be used to counter the effects of sleep deprivation.

## **Sleep Banking:**

Up to 2 weeks prior to operations or the start of mission, Soldiers can pay down their sleep debt AND bank sleep by getting 8 or more hours of sleep. This will help to start the mission with a full bank.



## **Naps:**

- Research has shown that banking sleep slows the decline in performance and speeds sleep recovery.
- Use naps to achieve your 7–8 hours of sleep every 24 hours.
- A nap will improve alertness and performance. It also reduces mistakes and accidents.
- Sleep inertia (grogginess upon awakening) is almost NEVER a problem for most people and is NOT a good reason to avoid napping.
- If immediate responsiveness is required upon awakening, caffeine gum can be used immediately upon awakening to more rapidly restore performance.
- Only use naps to achieve 7–8 hours of sleep every 24 hours, otherwise it may disrupt your nightly sleep.
- In sustained or continuous operations, GET AS MUCH SLEEP AS POSSIBLE in as large chunks of time as operations or mission allows.
- Teens and adults may use naps to counter those times when sleep debt was incurred and to ensure maximum alertness.



## Caffeine:

Caffeine is found to have positive effects on alertness, observation, and physical performance.

- Caffeine is the most widely used stimulant in the world and it has a proven track record. After taking in caffeine, it peaks in the blood after 1 hour, although if gum is used, caffeine peak time can be shortened.
- You can order caffeine gum through the Army's supply system (NSN 8925015301219 Stay Alert Energy Caffeine Gum). One stick contains approximately 200 mg of caffeine. Use the gum according to the dosing schedule. NOTE: Caffeine use is most effective when there is no sleep debt.
- Caffeine is found in a wide variety of food items, so it is important to monitor caffeine intake to maximize your ability to sleep.
- Caffeine does NOT replace sleep. Only sleep can replace sleep.
- Caffeine doses ranging from 200–400 mg is shown to be effective and is often utilized to sustain performance in the context of sleep deprivation, sedation, and sleep restriction. Up to 500 mg of caffeine can be found in commercially available 16-oz servings of brewed coffee. NOTE: Monitor caffeine intake to maximize your ability to sleep.

## Managing Sleep Countermeasures

Countermeasures such as energy drinks, soda, supplements, and coffee can only provide so much stimulation and should be used in moderation. Over use or misuse of these countermeasures will ultimately have a negative impact your performance and your sleep.

## Naps

Naps should be used when you are not able to get 7–8 hours of sleep per 24 hours. Typically these are situations with extended wakefulness or where sleep is restricted.

Using Caffeine	
Sustained Ops (no sleep):	200 mg @ 0000
	200 mg again @ 0400 and 0800 h, if needed
	Use during daytime (1200, 1600) only if needed
Night Ops with Daytime Sleep:	200 mg @ start of night shift
	200 mg again 4 hours later
	Last dose: at least 6 hrs away from sleep period
Restricted Sleep (6 or fewer hrs of sleep):	200 mg upon awakening
	200 mg again 4 hours later
	No caffeine within 6 hours of lights out

## Caffeine

It is highly recommended to not have caffeine 6 hours before bed time. “Sleep is ammo for the brain” and it is important to maximize the quality and quantity of sleep that can be obtained. It is equally important to understand that the effects of caffeine are reduced if it is over used.

If you notice any of the following, you may need to lower your daily caffeine intake.

- ➔ Problems falling asleep or staying asleep
- ➔ Nervousness
- ➔ Restlessness
- ➔ Irritability
- ➔ Stomach upset
- ➔ Fast heartbeat
- ➔ Muscle tremors
- ➔ Jitteriness



Using caffeine to cover up sleep deprivation can create an unwelcomed cycle. For example, you may drink caffeinated beverages because you have trouble staying awake during the day, but the caffeine actually could disrupt your sleep (and create more sleep debt). Check to see if any foods or beverages you consume contain caffeine—many products that contain caffeine do not list exactly how much caffeine they contain.

**50 mg =** 1 16-oz. bottle of Coke®

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**60 mg =** 1 squirt (1/2 tsp) MiO® Energy Water Enhancer

**60 mg =** 1 16-oz. bottle of Diet Coke®

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**80 mg =** 1 8.3-oz. can of RedBull®

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**100 mg =** 1 piece of Stay Alert® chewing gum

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**160 mg =** Monster® Energy Drink

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**200 mg =** 1 tablet of NoDoz®

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**330 mg =** 1 16-oz. Starbucks PikePlace® Roast coffee

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High doses of caffeine from caffeine containing beverages has led to the doubling of caffeine-related emergency room visits from 2007–11.



Use of trademarked name(s) does not imply endorsement by the U.S. Army but is intended only to assist in identification of specific products.

## Light

- There is some evidence that sources of light found in office and at home (e.g. light from computers, smart phones and other hand-held electronics), boosts alertness.
- While this alertness boost may be useful for night and shift workers, this can lead to poor sleep quality and duration.
- There are several tools that can be used to minimize light exposure to maximize ability to sleep. To date, only these three devices have evidence that they block light and improve sleep:
  - <https://justgetflux.com/> (screen saver)
  - <http://bit.ly/testedandprovenbluelightblockers> (led lamp)
  - <http://bit.ly/lowbluelight> (glasses and lamp)
  - Use the bright electric light to boost alertness particularly for shift workers. Research has shown that using this lighting improves alertness and reduces accidents.

## Sleep Management Plan

Sleep is a critical item of resupply like water, food, fuel, and ammunition. Planning for sleep in training and tactical environments is a core leader competency. Leaders must know the sleep-work cycles of their Soldiers, particularly when they are working shifts, are in operational environments, or are outside standard duty hours.

## Considerations

- Sleep loss and insufficient sleep associated with Charge of Quarters (CQ), Staff Duty, and shift work places Soldiers at risk for motor vehicle or work-related accidents and impairs decision-making and alertness. For those sleeping during the day, locate the sleep zone away from noise and traffic. Reduce or redirect traffic away from areas where shift workers sleep and understand shift work personnel need more time allotted for sleep.
- Separate sleep areas based on shifts minimizes disruptions.
- Enforce “lights out” and quiet hours policies.
- Coordinate with dining facility to ensure shift workers are able to get their meals so their sleep is not disrupted.
- The brain’s alertness clock (circadian rhythm) is at its lowest point (circadian trough) during the hours of 0500–0900. During this period, Soldier alertness is compromised and Soldiers are at greatest risk of lapses in attention and uncontrollable sleep episodes. CQ and Staff duty should NOT end during the 0500–0900 timeframe because doing so places Soldiers on the road at a time when they are at greatest risk for POV accidents.
- Recommendation: End staff/CQ duty at 1100 hours. This is the ideal circadian/physiological time to end an extended/overnight duty.
- Encourage personnel on CQ to sleep if the mission allows.
- After 24-hour duty, employ risk mitigation strategies such as napping after duty as well as prior to driving home. Another option is to drive the Soldier home by an alert staff duty driver or spouse.
- See Suggested Guide for Staff Duty or CQ 12 Hour Shifts.



## Suggested Guide for Staff Duty or CQ

### 12 Hour Shifts

SHIFT	TIME	PRIMARY BENEFIT	SECONDARY BENEFITS	ALERTNESS TACTICS
1	1100 - 2300	Commute to/from CQ duty outside of circadian trough	Delayed reporting to duty allows personnel to sleep in and attend to personal matters before duty starts.	Encourage Soldier to sleep in on morning of duty and delay reporting to work until beginning of CQ/Staff duty.
2	2300 - 1100	Commute to/from CQ duty outside of circadian trough	Driving to and from duty occurs during period of decreased motor vehicle traffic and minimizes risk of POV accidents.	Encourage Soldier to nap in the late afternoon or early evening prior to reporting to duty shift.

Shift 1: next-day return-to-duty possible with late arrival (e.g., 1000) to allow for sleep recovery.

Shift 2: 1 day off prior to return-to-duty to allow sleep recovery.

SHIFT	TIME	PRIMARY BENEFIT	SECONDARY BENEFITS	ALERTNESS TACTICS
1	1100 - 1100	Commute to/from CQ duty outside of circadian trough	Delayed reporting to duty allows personnel to sleep in and attend to personal matters before duty starts. Driving to and from duty occurs during period of decreased motor vehicle traffic and minimizes risk of POV accidents.	<p>Dose caffeine starting At approximately 2300h if the mission does not permit on-duty sleep. Stop caffeine at least 6 hours prior to post-CQ sleep.</p> <p>If on-duty sleep is possible, sleep as long as possible. Best sleep periods are in the early to mid-afternoon lull and morning circadian trough. Use alternative sleeping facilities for those on duty.</p> <p>Afternoon sleep prior to duty (more sleep is better).</p>

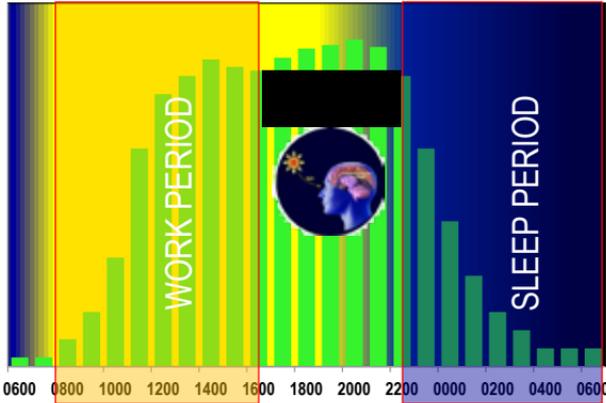
1 day off prior to return-to-duty to allow sleep recovery



## Night Operations and Performance:

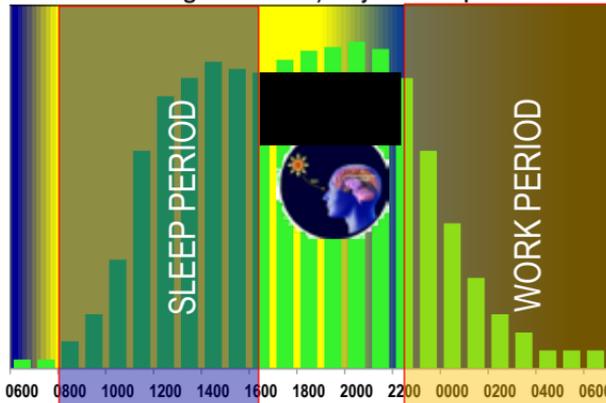
The figure below shows how the brain's biological clock impacts sleep/wake and performance. The brain's clock is programmed to boost alertness during the day and sleepiness during the night.

Daytime Work / Nighttime Sleep



The figure below shows what happens on night shift work. This clock is slow to adjust and often never adapts to night time operations. Soldiers working across the night are trying to stay alert when their brain clock is programmed to sleep. During the period from about 0600 to 0800, leaders and Soldiers are especially error-prone. After the night shift, Soldiers are trying to sleep when their brain clock is programmed to be awake. Their ability to sleep is impaired, resulting in a sleep debt.

Nighttime Work / Daytime Sleep



## Managing Sleep to Maintain Performance:

Sleep does not have to be taken in one continuous period to be effective. It is preferable to give Soldiers uninterrupted sleep time at night when the brain clock is programmed for sleep. Two periods that add up to 7–8 hours of sleep also works. Naps can compensate for insufficient nighttime sleep. The figure below shows an example.

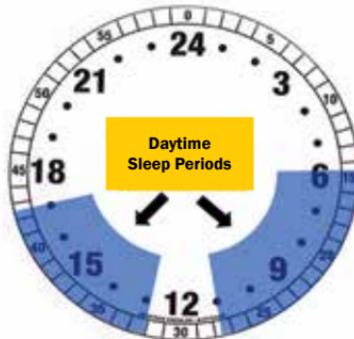


**Bottom line:** Do not create schedules or situations in which Soldiers are forced to choose between adequate sleep and other off-duty activities (personal hygiene, calling home, etc.) They will always sacrifice sleep in these situations.

## Strategies for Daytime Sleep for Shift Workers

Leaders and Soldiers who must sleep during the day need to allow more time in bed (e.g. 9–10 hours) to obtain 7–8 hours of sleep. This extra time is needed to compensate for sleep disruptions due to the brain's biological clock.

Daytime sleep can be divided into 2 periods: one in the early morning shortly after coming off duty, and a second period in the afternoon during the mid-afternoon lull in alertness.





## If Sleep Must Be Rationed:

Prioritize sleep need by task:

- TOP PRIORITY: Leaders making decisions critical to mission success and unit success.
- SECOND PRIORITY: Soldiers who have tedious or sedentary duties such as monitoring equipment for extended periods or guard duty, and those who judge and evaluate information.
- THIRD PRIORITY: Soldiers performing duties involving only physical work.

## Caffeine Use During Sustained Operations:

Daily use of caffeinated products is very common and can be useful in the morning to promote alertness in sustained operations. In day-to-day life caffeine intake should be restricted to morning use. Caffeinate products **temporarily** reduce sleepiness and maintain performance. Remember, caffeine content varies depending on the product.

Refer to section on Sleep Deprivation Countermeasures for caffeine dosing schedule.

## Sleep Recovery After Sustained Operations

Following any period of insufficient sleep, leaders and Soldiers need extra sleep to fully reset and pay down their sleep debt. Although exact amounts of sleep required to fully recover are unknown, we do know that the longer a Soldier goes or has gone without adequate sleep, the more nights will be needed to fully recover. We also know that recovery from sleep loss over a short period of time is faster than recovery from chronic insufficient sleep.

The following can serve as general rules:

- Most Soldiers will recover if allowed 1–2 nights of as much sleep as needed for recovery sleep.

Chronic, inadequate sleep (4–5 hours) of sleep across 3–6 nights

- Most Soldiers will fully recover following 3–4 nights of getting as much sleep as needed for recovery sleep.

## Still NOT Sleeping Well?

Prioritize sleep need by task:

For most people, changing their sleep habits and adjusting their sleep environment will usually result in improved sleep to the point of developing healthy sleep habits. Sometimes there are environmental issues or even command needs that make it difficult to get good quality sleep. Besides working with your chain of command or those responsible for the area in which you live, what else can you do?

There are two ways you can help yourself improve your sleep. The first is within your control by making sleep a priority. The second is asking for help from your primary care doctor or possibly a sleep or behavioral health specialist.

### In Your Control

There are several things within your control that can be done to help you get good quality sleep. However, there are “sleep thieves” as identified below:

#### Sleep Thieves...

Despite good sleep habits, some people still find it hard to fall asleep.

- ➡ Thinking about things to be done tomorrow
- ➡ Thinking about things that happened during the day
- ➡ Emotionally upsetting conversations right before bed
- ➡ Watching the clock
- ➡ Wandering or busy minds



## Cognitive Techniques

Sleep and thinking are both behaviors, but doing them at the same time makes it difficult to do either well. Many Soldiers report they have tried but just can't shut down their brains to fall asleep. They often replay the day's events, identify things they have to do tomorrow, and worry about the "what ifs." The inability to fall asleep and stay asleep often has underlying component of stress, anxiety, conscientiousness, or worry.

Practicing any of these recommended techniques can help any of us to enhance our relaxation response. These techniques can bring the same level of relaxation to the body that one experiences when asleep but with the twist of being fully alert. Almost all of the techniques have other benefits beyond relaxation and can make us more aware of our thoughts and feelings in a different way. In some cases, these techniques can enhance our performance through the regular practice of focusing our mind.

## Cognitive Behavior Therapy for Insomnia (CBT-i)

There are a few CBT-i programs to help improve sleep. Most are designed to be used in tandem with professional care. A partnership of the DOD & VA created the CBT-i app. The mobile app is designed to help you develop good sleep habits and sleep better.

You can:

- ➔ Record daily sleep and track insomnia symptom changes with a sleep diary.
- ➔ Update your sleep prescription with provider recommendations.
- ➔ Use tools and exercises to quiet your mind.
- ➔ Learn about sleep, the benefits of sleep hygiene and terms used in CBT-i.
- ➔ Set reminder messages with tips, motivation and alarms to change sleep habits.
- ➔ The CBT-i Coach is designed to be used during professional care.

CBT-i Coach can be used on its own, but it is not intended to replace therapy. <http://bit.ly/cbticoach>

## **Fight or Flight**

Most Soldiers have a highly developed survival response called the “fight or flight” response. It is the thing that helps to keep us alive in the face of danger. Everyone has experienced this response through a dangerous or unexpected experience. Our heart races, our breathing increases, and our blood pressure goes up along with other bodily changes. All of this supports our ability to survive in these situations.

Recovering from a “fight or flight” response is equally important, but is often overlooked. The relaxation response helps us to settle down and return our body to normal operations. Essentially, it helps us to gear down.

## **Go Ahead...Relax...**

Just like exercising our muscles, we can exercise our relaxation response. Practicing any of these techniques, even just three times a week, can improve your body’s relaxation response.

Try these out to help settle your mind:

- ➡ Journaling or writing things down
- ➡ Deep breathing exercises
- ➡ Relaxation exercises such as progressive muscle relaxation
- ➡ Visualization or guided imagery exercises
- ➡ Meditation
- ➡ Mental focusing exercises

## **Journaling or Writing Things Down**

Writing things down or journaling helps people to sort out their thinking and feelings by recording the information in writing. Some very disciplined Soldiers journal every night before going to sleep. For others, just the act of writing down their thoughts or tasks allows them to gear down and go to sleep. So, write it all down:

- ➡ in a journal or on a tablet.
- ➡ on a piece of paper or pad—put it aside for tomorrow or another time.

## Deep Breathing Exercises

Breathing is the essence of being and practicing rhythmic breathing exercises helps to regulate a lot of our bodily functions such as blood pressure, heart rate, and blood circulation among others. Consciously slowing our breathing down stimulates the relaxation response; it results in less tension and provides an overall sense of well being. There are many types of breathing exercises, so use the one that works for you. Some forms of deep breathing are:

- ➔ Tactical breathing
- ➔ Try the Breathe2Relax App
- ➔ Chi Breathing: <http://bit.ly/Chibreathing>
- ➔ Mindful Breathing: <http://bit.ly/mindtacticstipcard>

### Tactical Breathing

1. Sit comfortably with back straight (or try lying on the floor or bed).
2. Put one hand on your chest and one on your stomach.
3. Breathe in through your nose-feeling your stomach expand and chest moving very little.
4. Once you have a deep breath, hold for a few seconds and slowly breathe out through your mouth-exhalation should take longer than the inhalation. As you slowly exhale, drop your shoulders.
5. Repeat 5–6 times with the understanding that the more you practice the easier it is to feel relaxed and fall asleep.

## Progressive Muscle Relaxation

This form of relaxation training involves the progressive tensing and relaxing of various muscle groups to create an awareness of tension and relaxation. It moves through all major muscle groups, relaxing them one at a time and this eventually leads to total muscle relaxation. Check out this guide from the Human Performance Resource Center <http://bit.ly/PMRrelaxation>.

**REMEMBER:** People respond differently to various activities. Some feel pleasant or refreshed, and others feel calm and relaxed after an activity like this one. Some people notice little change the first time, but with practice, your control increases as well as the benefits. If you practice this activity, your ability to relax should increase.

## Visualization and Guided Imagery

Guided imagery is a technique that utilizes all the senses combined with mental imagery to achieve psychological and physiological relaxation. Imagery has a profound impact on many biological functions in the body such as breathing rate, heart rate, blood pressure, and cortisol levels.

Visualization script: <http://bit.ly/HPRCvizationalization>

Guided Relaxation-Stairs: <http://bit.ly/walkstairsrelax>

If you want to learn how to use imagery to enhance your performance on the APFT or to improve marksmanship consider writing your own script. You can go to the Human Performance Resource Center or <http://bit.ly/HPRCimageryscript>.

## Meditation

Meditation is an ancient practice and it is found in in both eastern and western religions and cultures. It is considered the cornerstone of spiritual development but you do not have to be religious to meditate. Most religions use prayer as the medium in which meditation is often used.

There are different forms of meditation, but the essential element is being fully aware and paying attention. The process of meditation is to calm the mind by paying attention to the thoughts or images in our head. Here are some links to other forms of meditations:

Download the Mindfulness app or go to: <http://bit.ly/mindfulnesscoach>

➡ Mind-Body Guided Meditations: <http://bit.ly/Navyguidedmp3>



## Mental Focusing Exercises

Mental focusing exercises aid relaxation. These exercises help us focus and become aware of ourselves, our thoughts, and even our feelings.

Use this exercise to quiet your mind. It is deceptively simple as the mind is busy and full of a variety of thoughts that are often outside of our awareness. As you begin your focusing exercise, your mind will drift from what you want to focus on. This is common—Don't get upset! Just notice that your mind wandered and returned to your chosen focus.

Follow this guide to begin practicing mental focusing exercises. Identify what you would like to focus on. This can be the letters of the alphabet, a range of numbers, a poem, or a prayer. Say you choose the alphabet, focus on making the letters (all caps or lower case) in the same design.

1. Bring your focus to the letter you are creating, complete each one in a slow and deliberate manner.
2. Notice that your mind has wandered off.
3. Disengage from that train of thought.
4. Bring your focus back to the letters and continue.

When you notice you are in a relaxed state, you can stop and go to sleep.

Other suggestions continued:

- Letters: Use all caps or all lower case letters. Draw the letters in your mind in the same style from A–Z. Repeat until you achieve your goal.
- Numbers: Pick a range of numbers, i.e. 20–40) Draw the numbers in your mind in the same style. Repeat until you achieve your goal
- Poem or prayers: Repeat each word in the prayer or poem until complete. Alternative: Find a synonym for each word in the poem or prayer or discern the meaning of the poem or prayer in way you could tell your child or friend.

## Final Push...

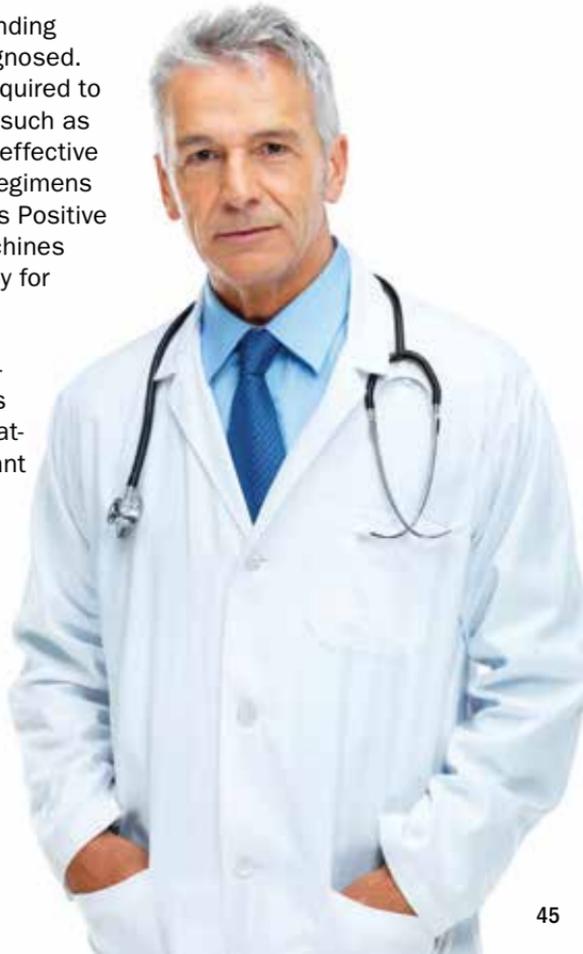
Despite your best efforts, even after using much of the information provided in this guide, you somehow still do not feel rested or are unable to achieve a good night's sleep. It is time to see your primary care provider if:

- ➔ You have tried for over 2 weeks and/or
- ➔ Your roommate or bed partner report you snoring or having episodes where you stop breathing (apnea)
- ➔ You have a sleep diary documenting information about your sleep, your sleep environment and your pre-bedtime activities.

You potentially may have a medical condition that needs to be evaluated and treated as soon as possible. Some of these conditions may need further evaluation by sleep or behavioral health specialists or both. Your specialists may require tests to diagnose this properly.

Treatment also varies depending on the condition that is diagnosed. While medication may be required to treat some sleep disorders such as narcolepsy, there are many effective non-medication treatment regimens such as use of a Continuous Positive Airway Pressure (CPAP) machines or cognitive behavior therapy for Insomnia.

Regardless of the sleep disorder you may have, there is effective evaluation and treatment available. It is important that you seek help so you can address this problem. You deserve to get the best sleep you can.



## Sleep Nuggets to Remember...

- Maintain a consistent, regular routine that starts with a fixed bedtime and wake-up time. Set a fixed time to wake up, get out of bed at that time and get exposure to light each day. Pick a time you can maintain 7 days a week then adjust your bedtime so that you target 7–8 hours of sleep.
- Get out of bed if you can't sleep. Only go to bed (and stay in bed) when you feel sleepy. Do not try to force yourself to fall asleep, it will tend to make you more awake, making the problem worse. If you do not return to sleep within 20 minutes, get out of bed and do something relaxing. Do not return to bed until you feel sleepy.
- Napping is a good way to make up for poor/reduced night-time sleep. But remember, naps that are longer than 1 hour and/or they are taken late in the day (after 1500 hours) can cause problems falling asleep or staying asleep at night. If you need to nap for safety reasons (e.g., driving), try to take a short (30–60 minute) nap in the late morning or early afternoon (e.g., right after lunch), just enough to take the edge off your sleepiness.
- Move your clock so you can't see it. If you tend to check the clock two or more times during the night, and if you worry that you are not getting enough sleep, cover the clock face or turn it around so that you can't see it. Better yet remove the clock from the bedroom entirely.
- If you experience sleep problems for more than 2 weeks, consult a healthcare provider.

## *resources*

### **Resources for more Information on Sleep:**

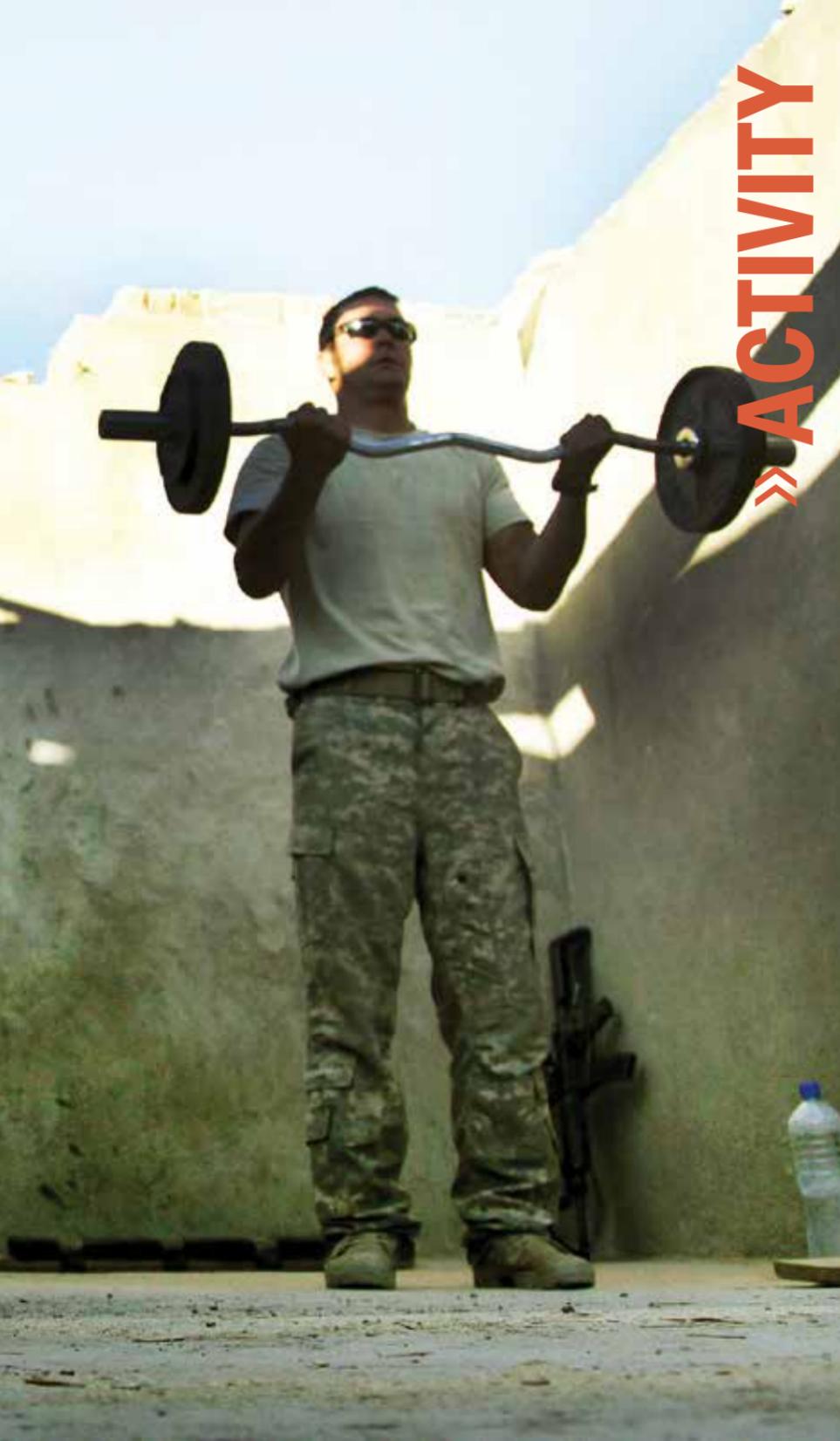
FM 6-22.5 Combat and Operational Stress Control Manual for Leaders and Soldiers <http://bit.ly/FM6-22>

National Sleep Foundation Sleep Myths and Facts:  
<http://www.sleepfoundation.org/sleep-facts-information/myths-and-facts>

Army Medicine information on insomnia:  
<http://www.armymedicine.army.mil/hc/healthtips/06/201002insomnia.cfm>







# » ACTIVITY



# introduction

## **Activity: Fitness and Health**

Physical activity is essential to your performance, your physical readiness, and your health. Your fitness level, your exercise and workout plan, and your movement throughout the day are all parts of activity. This section will describe your activity targets and includes fitness and exercise information you need to perform at your best!

### **Let's start with your three activity targets:**

1. Get at least 10,000 steps per day
2. Get at least 150 minutes of moderate or higher intensity aerobic activity per week
3. Do 2–3 sessions of total body strength training per week

### **Those targets too easy? Then challenge yourself with the Activity Plus Targets:**

1. Get 10,000 steps + 5,000 additional for a daily total of 15,000 per day
2. Get at least 150 minutes per week of moderate aerobic activity + 75 minutes of vigorous aerobic exercise per week
3. Do 2–3 sessions per week of total body strength training + 1 day or more of agility training

### **Step Target: Sit Less and Move More!**

Prolonged sitting increases your risk of an early death. Sitting a lot increases your risk of blood clots, diabetes, heart disease, cancer and obesity. Believe it or not, your daily workout does not protect you from the problems of prolonged sitting. Even people who are very fit have a higher risk of illness if they spend a long time sitting down every day.

### **Fitness alone isn't enough! The key is moving throughout the day!**

Moving during the day, in addition to physical training, is necessary to lower the risk of cardiovascular disease and other health conditions. If you can max your physical training test but still spend over 6 hours per day sitting down, then you are still at risk!

It can be as simple as taking a walk break, standing up to stretch, or taking the long route to the restroom at work. Walking 10–15 minutes every hour increases blood flow, burns calories and helps to maintain a healthy weight.

**Did you know that a 1 mile walk is about 2,000 steps?**

On average, Americans take about 5,000 steps per day; however, researchers recommend taking at least 10,000 steps (about 5 miles) per day for a good health. Researchers suggest closer to 15,000 steps per day if you are trying to lose weight. Children need more—boys between the ages of 6–12 years need 15,000 steps per day, and girls in the same age range need 12,000 steps per day. If you take a 2.5 mile walk every night on top of your regular activity you probably are close to or above the 10,000 step target. For adults, and for most Soldiers, the 10,000 steps daily is a good baseline goal, and for those already reaching that, we have a plus goal of 15,000!

**How can I Sit Less and Move More?**

- ➔ If you sit at a desk, set a timer on your phone or computer that alerts you to get up and move and take a quick walk around the room (when possible). Most scheduling or calendar programs on a computer can be set up to remind you!
- ➔ Park your car farther away from the building when going to work or shopping—you can get more steps both coming and going!
- ➔ Avoid the drive-thru—walk inside the building.
- ➔ If you don't have much time to exercise, build activity into your daily routine; take the stairs (not the elevator); walk and talk when you can, and find ways to keep moving!

**But I'm a Soldier! I get 10,000 Steps Before Breakfast!**

Great job! Soldiers in many units do required physical training—they have an easy time getting to 10,000 a day. However, the goal is to move throughout the day!

So, if you get more than 10,000 steps per day, it's time to set your goal higher! You wouldn't do just the minimum and quit, right? Set your sights on the Plus Goal of 15,000 or even take things a step higher to 20,000 per day if you can make it!

For example, if you run 2 miles in the morning (about 4,000 steps) shoot for the Plus Goal of 15,000 steps that day.

Your phone or a Personal Readiness Device (PRD) can help you log steps and track them over time to see if you are meeting your goals.

Unit and group challenges can keep you motivated to continue exceeding the standard!

Keep track of your fitness level! Visit <http://hprc-online.org/physical-fitness> to use the Army Physical Fitness Test calculator and other great tools.



# aerobic exercise

## **Aerobic Target – A Fitness Foundation**

Aerobic exercise is also called cardiovascular training because it helps build your body's ability to pump blood and oxygen to your working muscles. This is critical for your endurance as a Soldier. This kind of training provides a foundation for your general health and fitness and is called Endurance in FM 7-22 Physical Readiness Training. Training your endurance and staying active with your weekly 150 minutes helps:

- Create staying power. Long days, long nights, and continuous work schedules are challenges every Soldier must face
- Maintain your physical performance throughout long missions and training events
- Build resistance to injury. Soldiers who have greater aerobic fitness are less likely to be injured

Increase the health and strength of your heart, lungs, and blood vessels. This makes fit Soldiers healthier in the long run.

The Performance Triad aerobic exercise goal is 150 minutes of moderate or greater intensity exercise per week. What does 'moderate' mean? It's anywhere from 3–6 METs of intensity. A MET is a Metabolic Equivalent—1 MET is your body's resting level of energy use just to keep your body alive, like idling your car. Exercise from 3 to 6 times that is called 'moderate' intensity.

### **What Counts for my Moderate 150 Minutes?**

- Moderate is about a 40–60% effort level
- Brisk walking
- Light jogging, under about 6 mph
- Hiking or trail walking on easy flat surfaces
- Light cycling—indoors or out
- Light recreational swimming
- Light to moderate weight training or using long rest periods
- Endurance training machines on a low or light setting, like rowers, elliptical trainers, or step machines. See FM 7-22 Figure 10-12 page 10–21 for more examples
- Gardening, grass mowing and light outdoor chores
- PRT Recovery and Prep Drills
- Setting up/taking down tents and field equipment
- Loading and unloading gear continuously, about 40lbs or less



*The Performance Triad aerobic exercise Plus goal is 75 minutes of vigorous intensity exercise per week.*

### **What Counts for my Vigorous 75 Minutes?**

- Vigorous is about a 60–90% effort level
- Running or jogging, at about 6 mph or greater
- Hiking uphill
- Fast cycling—indoors or out
- Fast swimming laps
- Heavy weight training or with short rest periods
- Endurance training machines on a fast or difficult setting, like rowers, elliptical trainers, or step machines. See FM-22 Figure 10-12 page 10–21 for examples.
- Heavy outdoor work, shoveling or digging, moving higher loads of 40 lbs or more
- Competitive sports like soccer, flag football, basketball, wrestling, and combatives training
- Loading and unloading heavy gear continuously; over about 40 lbs

### **I'm too busy to get to the gym for 150 minutes a week or for an additional 75 minutes!**

**Don't worry, no gym needed.**

- FM 7-22 has a lot of conditioning drills and shuttle runs to give you some great 'no-equipment' training ideas.
- Researchers state 75 minutes a week of 'vigorous' exercise can be as good as 150 minutes of moderate exercise. On weeks where you are short on time you can substitute 75 minutes of vigorous activity and at least meet your target. Be cautious about doubling your 75 minutes of vigorous exercise to meet your Plus goal with only vigorous exercise might set you up for an overuse injury like tendonitis.



# *resistance training*

## **Strength Target – Power & Resilience**

Resistance training, or strength training, is defined as any exercise that causes muscles to contract against an external resistance with the expectation of increases in strength, endurance and/or size. Strength training can not only help you build strength and gain some muscle, but also boost your metabolism and help manage your weight.

Resistance training can be a great way to maximize performance and prepare for any task. Physical fitness and activity are crucial to ensuring our Soldiers maintain and improve strength, agility, power, and speed. Adding resistance training to your regimen can help you perform like a Professional Soldier Athlete.

- Strength training combined with aerobic exercise helps you carry heavy loads (like body armor and a rucksack) farther with less fatigue.
- Resistance training increases your bone density and is important for long term bone health—this makes Soldiers tougher and more resistant to injury.
- Improve your body composition to less fat and more muscle—strength training is especially important for heavier Soldiers who routinely are taped at height/weight assessments.
- Women gain strength from resistance training but do not typically add bulk because they have much lower testosterone levels than men. Female Soldiers will improve their strength but do not have to worry about gaining excessive amounts of muscle bulk through resistance training.
- Balance your strength program to reduce the risk of overuse injuries like tendonitis. Make sure you are working all major muscle groups of your whole body and not just working the ‘mirror muscles’ that are most visible! Later in the guide, we will show you the Essential Seven exercise variations to use.
- If you are considering supplements with your weight training, check Operation Supplement Safety (OPSS) at the Human Performance Resource Center website (<http://hprc-online.org/dietary-supplements/opss>) and use the supplement information in this guide.
- Visit the Army Training Network or the US Army PRT App to view FM 7-22 Strength and Mobility Activities to include Strength Training Circuits with kettle bells and climbing drills to build strength.

*The Performance Triad strength training goal is 2–3 sessions per week of a total body strength program.*

### **What counts for Resistance Training?**

- Weight machines at a gym or in a home setup, like the Strength Training Machine Drill in Chapter 6 of FM 7-22
- Free weights like dumbbells, barbells, kettlebells, and medicine balls, like the Strength Training Circuit in Chapter 9 of FM 7-22.
- Elastic resistance bands or straps for ‘suspension training’.
- Bodyweight resistance training such as PRT conditioning or climbing drills, including pushups, pullups, lunges and squats.
- Some kinds of challenging yoga and gymnastic strength moves.

### **Strength Training—The Basics:**

- Working out just 2–3 days per week for a whole body program effectively builds strength and muscle.
- Resistance training can use different kinds of weights (dumbbell, barbell, kettlebell, etc), resistance bands, medicine balls, or your body weight.
- Rest muscle groups about 48 hours between workouts. Get 7–8 hours of sleep to maximize recovery and improvement.

### **Safety:**

- Strength training has a fairly low injury rate—you won’t get hurt if you train smart!
- Warm up with lighter resistance to get your muscles ready. It’s easy to do one or two ‘warm-up sets’ to get yourself ready. Gradually increase the weight and/or reps. Don’t always lift to muscle failure—it can increase your risk of injury and is NOT necessary to get stronger or build muscle!
- Lift with slow, controlled motions—most experts recommend taking about one second to lift the weight up and about 3 to lower it down. Exhale when you lift the weight up and inhale when you lower it down.
- Use a ‘spotter’ or assistant for safety with free weights when you are lifting a weight over your head or face, going to muscle failure, or testing yourself by lifting close to your maximum.
- If you don’t know how to use a machine or perform an exercise, then ask an expert like a certified personal trainer, Master Fitness Trainer, or Physical Therapist.



### **But I like to do bodybuilding, I lift way more than twice a week!**

- ➔ That's great! Just make sure you have a balanced program that works your whole body, you get adequate rest so your muscles can benefit from the training, and you are being smart if you choose supplements!
- ➔ There are many 'split' routines that Soldiers can use to rotate strength exercises so they can lift more often while giving themselves enough rest and recovery.
- ➔ Make sure you are not neglecting the 'Endurance' and 'Mobility' aspects of your fitness—FM 7-22 and this guide can help make sure you have a varied fitness routine.

### **I'd like to start strength training, but I just don't know where to begin.**

- ➔ Get started with the Performance Triad! Our strength training lesson will introduce you to the Essential Seven approach to building a balanced program.
- ➔ Remember that consistency in training is more important than exactly what you end up doing—stick with it!
- ➔ Use the ideas in this guide to start smart.

### **How many sets and repetitions (reps) should I do?**

- ➔ Select a weight you can lift from 6–12 times—that is a starting point.
- ➔ If you are a beginner to strength training, then one set of each exercise is a good start.
- ➔ More experienced Soldiers should use multiple (3–5) sets to get the most out of their program.
- ➔ Use 3–5 sets of 6–12 repetitions as a base to build strength and muscle.
- ➔ There are many ways to progress your program. One method is the '8/10/12' approach. Pick a weight you can do a set of 8 repetitions for, and then move to 10 and then 12 in the workouts to come. When you can do 3–5 sets of 12 reps, advance your weight and start at sets of 8 reps again.

*The Performance Triad Plus Goal is to add at least 1 day per week of Agility training.*

### **What counts for Agility Training?**

- Plyometrics or jumping exercises, like the Tuck Jump and Alternate-Staggered Squat Jump from Chapter 9 of FM 7-22. This can be box jumping and other leaping and hopping exercises used in sports training also.
- Explosive strength exercises like:
  - » Medicine ball throws
  - » Olympic-style weightlifting with a barbell
  - » Long jumps and high jumps
  - » High intensity conditioning exercises like the PRT Guerilla Drill, or combatives training drills
- Shuttle runs, PRT military movement drills, obstacle courses





# *physical readiness*

## **Functional Fitness and Army PRT**

Physical Readiness is the ability to meet the physical demands of any combat or duty position, accomplish the mission, and continue to fight and win.

The Army's Physical Readiness Training (PRT) Program creates a daily opportunity to build the valuable Soldiering skills of strength, power, speed, and agility required to help Soldiers meet their mission. PRT is rooted in established principles of exercise science designed to build the Soldier Athlete and includes training activities that directly support war-fighting and operational tasks. As a result, the program is essential to individual, unit, and force readiness.

**Army PRT is guided by three principles of readiness training:**

- **Precision:** ensures all PRT activities are executed using proper technique in order to reduce injury risk.
- **Progression:** gradually increases the intensity and duration of PRT activities to allow the body to properly adapt to the stresses of training.
- **Integration:** includes a variety of training activities (such as conditioning, climbing, and movement drills) in the program to achieve a balanced development of strength, endurance, and mobility.



### Quick Facts about PRT

- ➔ Increases skills related to warrior tasks and battle drills (such as jumping, crawling, lifting, and negotiating obstacles).
- ➔ Designed to minimize injuries commonly sustained in fitness training.
- ➔ Prepares Soldiers for the Army Physical Fitness Test.
- ➔ Uses aerobic (cardio) and anaerobic (lifting and sprinting) exercises to optimize performance.
- ➔ Includes a four-phase training cycle, designed to train Soldiers recovering from deployment (or extended absence from unit PRT) up to the deployment and/or combat mission standard.
- ➔ Includes a reconditioning program for Soldiers recovering from injury.

### Functional Fitness

The Army's PRT doctrine includes training for functional fitness. Functional fitness training uses drills, exercises or activities that are specific to movements, skills, and physical demands needed for a given task. For example, performing single leg squats, lunges, crunches, and medicine ball throws requires the physical skills needed to react to man-to-man contact. Functional fitness is composed of strength, endurance, and movement skills (agility, coordination, and balance), which will get Soldiers fit for their mission and reduce risk of injury.

### Shoot. Move. Communicate.

Deployed Soldiers have identified that the most important tasks related to physical readiness involve:

- ➔ acquiring and engaging targets
- ➔ conducting individual movement techniques in full combat gear
- ➔ walking long distances under extreme conditions in full combat gear
- ➔ sending and receiving communications during physical exertion
- ➔ lifting and carrying heavy equipment



**The following exercises demonstrate how training with a functional fitness focus can prepare Soldiers for the activities they may perform during deployment.**

## Acquiring and Engaging Targets



Half Kneel Curl & Press



## Conducting Individual Movement Technique



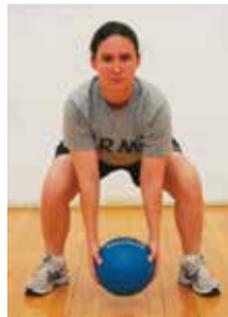
Lateral Hops (Single Leg Alternating)



## Walking Long Distances in Full Combat Gear



Medicine Ball Squats



## Sending and Receiving Communications During Physical Exertions



Jogging





# *injury prevention*

## **Preparation and Injury Prevention**

In order to keep the unit ready, Soldiers need to be injury-free. Appropriate warm-up and exercise preparation and following good injury prevention practices are as important in the Army as they are to a pro sports team. All effective workouts begin with an appropriate warm-up. Dynamic warm-ups use controlled movements to take the body through a large range of motion—lengthening and warming up tissues and preparing the body for activity. Most injuries in PRT are due to inappropriate training and inadequate fitness—train safe and stay in the fight.

### **To implement warm-up and injury prevention practices:**

- The Physical Readiness Training (PRT) preparation drills are an excellent way to warm up. You can read in FM 7-22 (Army PRT) how preparation drills increase body temperature and heart rate, increase pliability of joints and muscles, and increase responsiveness of nerves and muscles.
- A focused and tailored warm-up can increase your performance and decrease the risk of injury. Determine the warm-up based on the workout or mission: Use a few ‘warm up sets’ of lower weight before you do heavy strength training, do light jogging before a run, etc.
- Consider total daily training requirements in your planning. For example, don’t schedule lower body weight training, endurance running and a road march on the same day or on two consecutive days.
- A focused training program may help decrease injury risk for Soldiers with low fitness or with previous injuries—involve your Master Fitness Trainer and/or Physical Therapist!
- Stretching exercises are good for improving mobility but are best used after your workout when muscles are warmed up.
- Stretching before activity is okay but it can’t replace a dynamic warm-up!
- Wear a mouth guard for high-risk activities like combatives and contact sports.
- Wear a semi-rigid ankle brace for high risk activities such as basketball or soccer if you have had a previous ankle injury.
- To minimize injury risks, gradually increase intensity, duration, frequency, and variety of training.
- Injured Soldiers returning to unit PRT should follow the reconditioning program in FM 7-22.



## What Leaders Can Do to Reduce Soldier Injuries

- Know that this is an important problem!
  - » Army research shows musculoskeletal injury (injuries to muscles, bones, tendons, and nerves) was the number one leading cause of medical evacuations (MEDEVAC) from a combat theater during 2002–2010 and the second leading cause of hospitalizations, resulting in 10 million limited duty days per year.
  - » The average Soldier in the active component spends about 16% of his or her time on a limited duty profile. These injuries are the #1 cause of days on profile.
  - » Most injuries like this are due to poor training practices and inadequate fitness, and they can be prevented.
- Select NCOs for the Master Fitness Trainer Course who model healthy behavior and can teach others.
- When planning the intensity and duration of PT, consider factors such as the training cycle, block leave, and new Soldiers.
- Collaborate with healthcare providers to ensure Soldiers have profiles that identify alternatives to prohibited activities—eProfile has standardized templates that can help provide “positive, can-do profiles” for your Soldiers.
- Following the reconditioning program in FM 7-22 is a great way to get Soldiers back from injury and keep them injury-free. Soldiers returning from a profile need to follow the reconditioning program in FM 7-22.



# running

## Safe Running and Shoe Selection

Physical fitness, especially cardiovascular stamina, is a major factor that optimizes Warfighter performance. Running greatly increases aerobic stamina, which in turn increases the chance of survival and decreases the risk of physical injury for military personnel. Running can be done in virtually any environment and location and is an excellent way to achieve cardiovascular fitness. The Army has a long history of running for physical fitness and for unit cohesion. But running, like any other activity, should be done appropriately.

- Various studies of recreational and competitive runners have estimated that between 27% and 70% of runners sustain overuse injuries during any 1 year period. Be alert for signs of overuse (pain in your knees, shins or feet) and modify your program or seek help right away.
- A majority of the injuries Soldiers get from physical training are related to running!

### Appropriate Use of Running

- FM 7-22 has training schedules (Chapter 5) that include great examples you can follow.
- Run for 30 minutes, 3 days per week. Cross train to build strength, endurance, agility, balance and coordination. Running more than 30 minutes, 3 days per week has been shown in military studies to increase risk of injury without continued improvement in fitness.

### Running Shoe Selection

- Typical Running Shoes and Heel Strikers:
  - » Most running shoes have a standardized design: they have an elevated heel to help you move forward, cushioning material built in to soften the impact, and a stiff supportive heel cup area.
  - » These shoes are designed for the most common type of running pattern, landing on your heel first (called 'rearfoot striking' or 'heel striking').
  - » A standard running shoe that fits you well and is comfortable when you run is most important. If the shoes are not comfortable—they won't become more comfortable with time!
  - » While some runners prefer cushioning or motion control shoes, the typical stability running shoe works for most runners.



➔ Minimalist Running Shoes and Forefoot Strikers:

- » Lately, shoes called “minimalist” have been popular.
- » Minimalist running shoes (MRS) are lightweight, low to the ground, flexible shoes with very little cushioning and support.
- » Typical MRS have no elevated heel, no real cushioning material and a very flexible heel cup area.
- » These shoes are thought to simulate barefoot running and promote a different running pattern, landing on the middle of the foot or the toe area (called ‘midfoot striking’ or ‘forefoot striking’).
- » Some shoes are in-between MRS and regular shoes and they are sometimes called ‘transitional shoes.’



## Using MRS Safely:

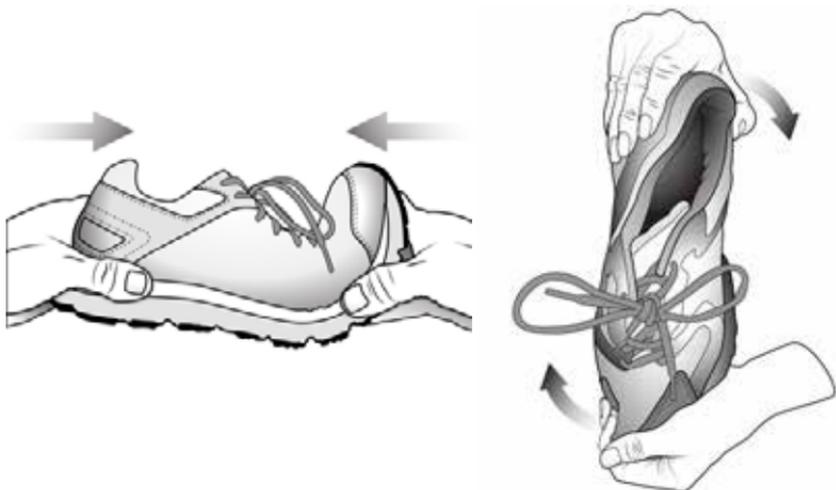
Although the Army has no official stance on the use of MRS or transition shoes, many Soldiers use these shoes during training. If you are thinking about trying MRS, there are a few things you should know about running in these shoes.

- Switching from traditional running shoes to MRS does not necessarily mean you'll automatically change your running pattern from a heelstrike (landing on the heel) to a forefoot strike (landing on the toe area). There are recent studies that show that over 50% of runners switching to MRS still heelstrike despite over 6 weeks of training.
- Some studies have shown an increased injury rate in runners wearing transitional minimal shoes compared to traditional shoes. An increased risk of injury may be due to:
  - » The lack of cushioning in MRS relative to normal running shoes
  - » Failing to transition from a rear-foot strike to a mid-foot strike (which may cause stress on the lower extremities)
- “If it ain't broke, don't fix it!” MRS may be the new craze in running, but remember to not fix what isn't broken. If you are not having any issues with running and you are happy with your performance, then just change your shoes every 6 months or 500 miles, whichever comes first.
- If you are having pain when running and considering changing your running form—see a physical therapist first! Some injury patterns may benefit from changing running form, but doing so will most likely require running analysis and retraining. If you are having running issues and pain, make sure you get it checked out.
- If you do decide to try running in MRS, it should be done slowly and carefully by following the steps below. Listen carefully to your body for injury warning signs during the transition phase to MRS.
  - » Run in MRS before you buy – choose the shoe that feels the best.
  - » Avoid blisters by wearing synthetic blend socks.
  - » Run only 10 percent of your normal distance in MRS for your first 2–3 weeks. For example: If you run 10 miles per week, run only 1 mile per week in MRS.

- » Land softly on the ball of your foot or the middle of the foot, then let the heel down gently.
- » Increase your distance 10 percent or less each week for at least 8 weeks.
- » It may take up to 6 months to get used to running in MRS.

### Running Shoe Replacement

- ➔ Replace shoes about every 6 months or 350–500 miles.
- ➔ Replace them if an examination shows they are worn out.
  - » When you place your old shoes on a table and look at them from behind, they are worn and leaning to one side.
  - » The midsole material (cushioning) is creased in areas of high load (under the heel or the ball of the foot).
  - » The shoe twists more easily than a new shoe (worn out cushioning).
  - » The tread or sole is worn (usually the cushioning wears out first, so if the tread is worn, your shoes need to be replaced!).





# ECPs

## Extreme Conditioning Programs (ECPs)

Extreme Conditioning Programs (ECPs), like CrossFit®, P90X®, and Insanity® are workout programs that combine high-intensity exercises with short rest periods between sets. They are also known as high intensity circuit training or high intensity interval training (HIIT). ECP workouts are often popular and can help improve physical performance in a shorter period of time.

ECPs and HIIT can help Soldiers burn calories, build muscle, decrease body fat, increase strength and stamina, and improve coordination and agility. However, like any new training activity, if done improperly they can lead to injuries such as muscle strains, torn ligaments, stress fractures, tendinitis or other serious conditions.

Here are some general rules of thumb before engaging in an ECP. First, study the movements and exercises if they are new to you. Focus on movement and correct form before you increase the intensity or weight – just like principles of PRT! Look through FM 7-22 for proper technique on body weight movements and kettlebell training. If you are not familiar with certain movements, ask a Master Fitness Trainer, Physical Therapist or other professional.

### Benefits of ECPs:

- Burn calories quickly with a continued caloric “afterburn”
- Improve aerobic conditioning in a shorter duration of time than traditional endurance activities
- Build tolerance for high intensity exercise
- Improve coordination, agility, and athleticism
- Often include functional movements
- Combine cardio and resistance training in one workout
- Some require little equipment and can be done almost anywhere

### Risks of ECPs:

- Injuries may include:
  - » Muscle strains
  - » Torn ligaments
  - » Fractures
  - » Tendonitis
  - » Other serious or life threatening conditions

- Some exercises or lifts are challenging and require training from a certified professional to do safely. These include Olympic Weightlifting exercises (snatch, clean, jerk and related explosive barbell movements).
- Many ECP workouts have a short duration of rest or recovery, which can cause early fatigue and may increase the risk of injury.

ECPs, when done well, can provide an exciting new exercise regimen that many Soldiers can participate in together. However, it's important to remember that if they are done poorly without appropriate coaching and supervision, they can push Soldiers beyond their limits and can lead to injuries. Don't be overzealous and push Soldiers beyond their capabilities. Remember it is not about "smoking" Soldiers, it's about improving fitness and having fun. Also, if your Soldiers do ECPs in addition to PRT, they could be at risk for overtraining.

- Overtraining can cause fatigue, sickness, a decrease in performance, and injury.
- Avoid training the same muscles groups in consecutive workouts. Require at least 48 hours before retraining that muscle group.
- Consider avoiding back-to-back training days or alternating between high and low intensity training days.

### **How to incorporate ECPs and minimize Injury risk**

Engage your Master Fitness Trainer and ask them to program in ECP workouts in your regular PRT cycle. You can also ask experienced Soldiers in your unit to help others with coaching, correcting form and watching for overexertion.

ECPs are individual fitness programs and do not replace prescribed Army PRT as described in FM 7-22. They have not been validated to improve warrior task and battle drill performance and are not tied to warfighter functions such as Army PRT. The Army's PRT Program is designed to help Soldiers achieve physical fitness and prepare them for the challenges of combat operations. ECPs can be a fun addition to a fitness program when done safely.

For more information on ECPs visit: <http://1.usa.gov/1uOBQRW>



# *body armor*

## **Wearing Body Armor and Road Marching**

During field training, operational or combat deployments, and combat training center rotations, you will be wearing body armor and carrying equipment. Many Soldiers struggle with the extra load and get injuries and pain problems that make them 'combat ineffective' during this time. Why does this happen? They were not fit and trained for the task!

Soldiers must practice carrying loads and wearing equipment just as they practice marksmanship, battle drills, and MOS tasks. Some Soldiers, like light infantrymen and cavalry scouts, will be required to carry more than intelligence analysts and network communications technicians. Even Soldiers who have technical or supervisory jobs have some requirement for these tasks—there are no exceptions on the battlefield!

Field Manual 21-18, Foot Marches, is the Army's resource for conducting this training. You should take into consideration your unit's mission, the MOS tasks required of Soldiers, and your weekly physical training schedule when conducting foot march and load carriage training.

For Soldiers who aren't used to road marching or are returning to the unit after injury, having a suggested program to start with is important—try this sample once per week schedule to get started. You can build up distance and weight as you go—but don't increase both weight and distance at the same time. Start slow and work yourself and your team up as you adapt. Don't do a lot of distance running the day before or after a foot march.



**Sample Foot March Beginning Program\***

WEEK	WEIGHT	DISTANCE
1	Body Armor Only	2 Miles
2	Body Armor Only	3 Miles
3	Body Armor Only	4 Miles
4	Body Armor + Pack (20 lbs)	2 Miles
5	Body Armor + Pack (20 lbs)	3 Miles
6	Body Armor + Pack (30 lbs)	3 Miles
7	Body Armor + Pack (30 lbs)	4 Miles
8	Body Armor + Pack (40 lbs)	4 Miles

\* Adapted from Building the Soldier Athlete: Profile Physical Training Supplement, US Army Office of the Surgeon General.







# » NUTRITION



# *introduction*

## **Nutrition for Performance**

Soldiers form the centerpiece of our formations; they require sleep, activity and nutrition to perform optimally for sustained periods of time. Napoleon's famous quote, "An Army marches on its stomach," refers to the importance of the supply line, however, it also refers to the fact that Soldiers can only fight or function effectively if they have been well fueled.

A Professional Soldier Athlete (PSA) is an expert and a volunteer certified in the profession of arms who constantly strives to improve one's skills and abilities. A PSA is also totally fit—physically ready, nutritionally sound, mentally strong, and confident in their own abilities and in those of the members of the team. The Army Operating Concept states "the Future Army forces require the ability to identify, access, retain, and develop Soldiers with unsurpassed cognitive, physical, and social (moral-cultural) capabilities." The Performance Triad is designed to fuel, enhance, and sustain human performance. Soldiers are like a complex weapons system. They need to understand both the performance benefits of positive nutrition behaviors and the loss of performance caused by poor nutrition habits.





Soldiers must perform and excel at a professional level, just like any world-class athlete. Performance is a word Soldiers hear frequently throughout their military careers. They are rated on performance in training, on the job, and on Army Physical Fitness Tests. Fueling for success optimizes Soldiers' training and performance in combat or garrison.

Transforming the Service member into the most lethal weapon in the DoD arsenal requires "performance fueling" to maximize mental and physical performance and resiliency without compromising long-term health.

Soldiers are our most complex weapons. Eating or fueling for performance enables top level training, increases energy and endurance, shortens recovery time between activities, improves focus and concentration, and helps Soldiers look and feel better.



# overview

## Nutrition for Performance

The quality and quantity of food you eat plays a role in your physical, mental and emotional performance in the gym, during the mission, at home, and everywhere in between. Your body is like a high performance car—premium fuel gets you premium results.

Performance fueling requires “nutrient rich meals” and builds on nutritional fitness. Choosing nutrient rich foods supports muscle growth, recovery, tissue repair, immune function, and will improve mental and physical performance. In addition, good nutrition can help Soldiers maintain an appropriate weight and help reduce the risk of chronic disease. By eating the right balance and variety of foods, Soldiers will get all the nutrients (carbohydrate, protein, fat, water, vitamins, and minerals) they need for performance and health.

Another component of performance fueling is “nutrient timing,” which applies to the tactical timing of fuel (nutrients and fluids) matching the work performed. Eating regular meals along with pre/post training (exercise) fueling helps your brain and muscles receive the energy they need to perform at their best.



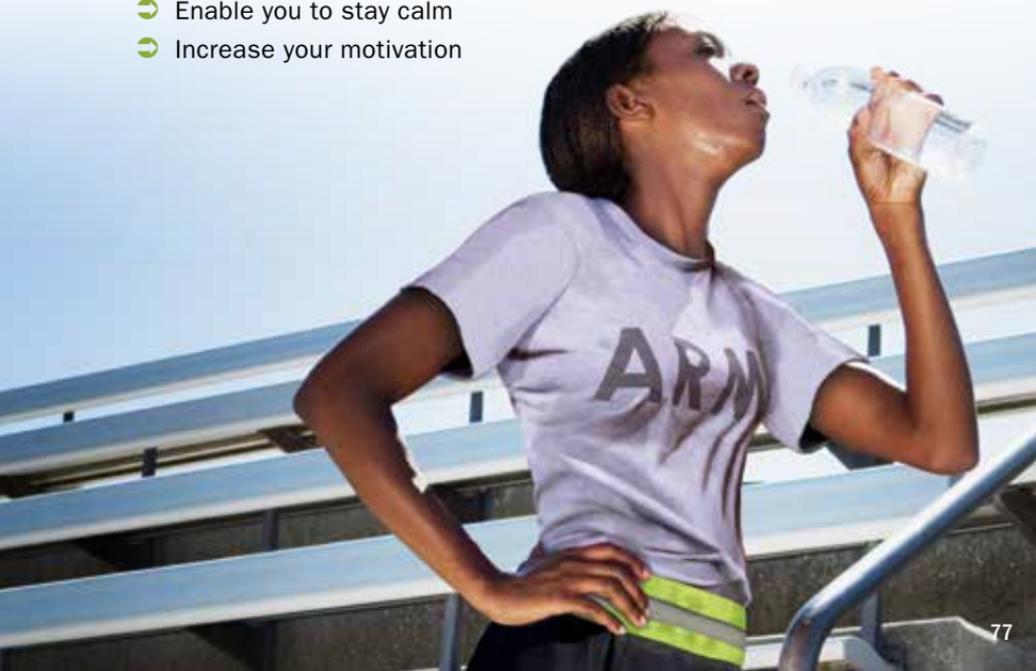
### **The Physiology of Refueling After Exercise**

Exercise is catabolic (it breaks things down)—energy is used and micro-tears occur in the muscle. The recovery phase is the anabolic or building phase. During this phase, you recover what was used (muscle is refueled, repaired, and built). Exercise and proper recovery nutrition makes the body stronger through this breaking down and building up process.

During the recovery phase, hormone levels (like testosterone) are in the right combination and at the right levels to help the body's rebuilding and refueling process. If this window of opportunity is missed (30–60 minutes after a workout), recovery will take longer, performance will be degraded, and it will negatively impact the next day's performance. Repeatedly missing this recovery window will limit your performance gains.

#### **Eating for Performance will:**

- Enable you to train and perform at your top level
- Increase your energy
- Increase your endurance
- Shorten your recovery time between activities
- Increase your focus
- Enable you to stay calm
- Increase your motivation





Just as it takes weeks or months to build your strength and endurance, nutritional fitness is the result of consistent good eating habits. An ideal eating plan supports you through daily activities and exercise. An ideal plan will incorporate the correct type and amount of food as well as your personal eating habits (how often, how fast, and how consistently you eat).

Having a strategy to eat for performance and health doesn't mean giving up the foods you like, and it doesn't mean you have to eat foods you dislike.

### **An eating strategy means:**

- Knowing what foods and eating habits contribute to optimal performance
- Evaluating your food choices
- Building a performance nutrition plan that fits your schedule, training regimen, food availability, and preferences
- Knowing what barriers are preventing you from eating right and how to overcome them

### **Nutrients**

There are six major classes of nutrients that are essential for our bodies—carbohydrates, proteins, fats, water, vitamins, and minerals. If you eat the right balance of food, you will get all the nutrients you need for performance and health. Nutrients work as a team to help with digestion, travel to the right places in your body, produce energy, and repair tissue. Proper nutrition can:

- Improve mental and physical performance
- Speed recovery from training and injury
- Prevent chronic disease like diabetes and high blood pressure
- Help maintain appropriate weight

Three of the six nutrients provide your body with energy or calories—carbohydrates, protein and fat. A performance nutrition plan provides a proper balance of these three macronutrients, as well as the right amount of vitamins, minerals, and water, through optimal food and beverage choices.

Your performance nutrition plan should consist of approximately:

- 55–70% Carbohydrate
- 12–15% Protein
- 20–25% Fat
- Balance of other nutrients (vitamins, minerals)
- Water



### The Strategy:

- Fuel your engine. Eat enough calories to be lean and energetic but not gain undesired body fat. Your body needs enough calories to support your minimum health requirements (called the resting metabolic rate). You can estimate this calorie need by taking your weight in pounds and multiplying by 12 (for men) or 11 (for women). Then include the calories needed for daily activities and exercise to estimate your total for the day.
- Eat carbohydrates (especially complex carbohydrates). They are your body's first choice for energy.
- Choose healthy fats in moderation: They are good for your heart, your cholesterol levels and your overall health. Too much of the bad fat feeds your fat cells, not your muscles or brain.
- Fine tune your protein intake; enough, but not too much. Protein is required to support growth, repair, and maintenance of body tissue. Studies have shown that you can only absorb about 20–30 grams of protein at a time, so spacing it out is important.
- Stay hydrated with water to maintain body fluid levels.
- Shoot for three meals and two planned snacks a day. Try not to skip meals or go more than 4–5 hours go by without refueling.
- Escape the rut: Eat a variety of foods to get a balance of nutrients.



# carbohydrates

## **Carbohydrate: The Energy Nutrient**

*Adequate carbohydrates are critical for optimal physical and mental performance.*

### **Carbohydrates:**

- Provide a quick start
- Deliver endurance fuel
- Increase alertness
- Fuel short bursts of energy
- Ensure quick recovery
- Provide energy that lets you do the work to build muscle size and strength

Carbohydrate is the ultra-premium energy fuel and is vital for endurance and strength activities. Foods high in carbohydrates include pasta, bread, vegetables, fruit, legumes (like beans, peas, lentils and peanuts), and even milk and yogurt. When you digest them, they become blood sugar. Blood sugar is then converted into a substance called glycogen, which is stored in your muscles and liver as your body's premium source of available energy.

Glycogen is a high performance fuel but it burns quickly—and your body can't store that much of it. After about 90 minutes of continuous exercise or during a day of intermittent strenuous physical activity, your muscle glycogen gets low. High heat and high intensity activity also increase the rate of glycogen depletion.

On the other hand, training increases your body's ability to store glycogen. As you get into better shape, your muscles are able to store more glycogen to keep you going longer. When you are fit, your muscles are also better at replacing glycogen right after exercise. That's one reason why when you are in better shape, you don't seem as tired as you did when you began training.

Your body makes glycogen from unprocessed carbohydrate-rich sources. Good sources of unprocessed carbohydrates include grains (rice, barley, whole grain bread, pasta, cereal), legumes, vegetables (spinach, zucchini, broccoli), and fruits (blueberries, bananas, and cantaloupe).

## Results of not eating enough carbohydrates include:

- Lack of endurance: you might fall out before an activity ends
- Decreased muscular strength
- Harder to recover: no energy left for later in the day or for the next day
- Slower speed: you have to slow down to make it to the end
- Reduced concentration: your brain gets fuzzy
- Reduced coordination
- Chronic fatigue
- Lack of motivation
- General fatigue and increased irritability

Consuming enough carbohydrate each day is necessary to meet the demands of physical training and refill muscle and liver glycogen supplies in between training sessions. Use the chart below to determine how many grams of carbohydrate you need each day.

**TABLE 1. REQUIRED CARBOHYDRATE INTAKE CALCULATOR**

TYPE OF ACTIVITY	RECOMMENDED CARBOHYDRATE INTAKE, G/KG	RECOMMENDED CARBOHYDRATE INTAKE, G/LB
Low to Moderate-intensity training PT, ≈ 30 min/day	3–5	1.36–2.27
Moderate-intensity training PT, ≈ 60 min/day	5–7	2.27–3.18
Moderate to high-intensity endurance training, 1–3 hr/day	6–10	2.72–4.55
Moderate to high-intensity training, 4–5 h/day	8–12	3.64–5.45



**EXAMPLE:**

Tim does moderate-intensity PT for at least 30 minutes each day. He weighs 150 lbs.

Convert weight in lbs. to kg by dividing weight in lbs. by 2.2 (skip this step if using pounds)

$$150/2.2 = 68 \text{ kg}$$

Multiply weight in kg by 3 and 5 or weight in pounds by 1.36 and 2.27 (since he does PT 30 min/day)

$$68 \times 3 = 204 \quad \text{or} \quad 150 \times 1.36 = 204$$

$$68 \times 5 = 340 \quad \text{or} \quad 150 \times 2.27 = 340$$

**Tim needs between 204 and 340 grams of carbohydrate each day.**

**MY CARBOHYDRATE NEEDS:**

DAILY ACTIVITY LEVEL: \_\_\_\_\_

CARBOHYDRATE RANGE (BASED ON ACTIVITY): \_\_\_\_\_ TO \_\_\_\_\_

MY WEIGHT IN KG (optional): \_\_\_\_\_  $\div$  2.2 = \_\_\_\_\_

DAILY CARBOHYDRATE NEEDS: \_\_\_\_\_ TO \_\_\_\_\_

# protein

## Protein: For Working Muscles

Dietary protein is considered the body's building blocks and helps repair the body's tissues. Protein is a necessary component of any performance nutrition plan because it:

- Builds and repairs muscles and connective tissue
- Builds red blood cells
- Builds hormones and enzymes
- Is a back-up source of energy

Protein is essential for performance. When you are physically active, you work your muscles and connective tissues hard. You need protein to build and repair injuries to those tissues. In addition, when you run out of carbohydrate stores, your body burns protein for energy. Those who are physically active need more protein than those who are more sedentary.

As mentioned before, protein is a backup energy source, but don't rely on protein for energy. When you burn protein it is because you are low on carbohydrates. Too few carbohydrates and calories causes you to burn valuable lean tissue, which weakens your muscles and can decrease overall strength.

How much protein do I need? The Recommended Dietary Allowance (RDA) for protein is 0.36 grams per pound body weight. Individuals in intense PT may need 1.5–2 times the RDA to repair tissues and build the muscle strength and size required for top performance. This does not necessarily mean you need to eat twice the amount of protein that you do when you are not in training. Most people eat this amount and more without even trying.

**TABLE 2.** HOW MANY GRAMS OF PROTEIN DO YOU NEED?

ACTIVITY LEVEL	PROTEIN RANGE (grams/lb)
Sedentary adult	0.4
PRT 3-5 x per week	0.5–0.7
PRT + strength athlete	0.7–0.8
PRT + endurance athlete	0.8



You can get all the protein you need from food. Protein is found in foods like beef, pork, poultry, fish, beans (such as pinto or black), dairy products, soy, and nuts/seeds. You don't need protein supplements to get enough protein for top performance. In fact, too much protein can actually hurt performance. It can dehydrate you, put a strain on your kidneys, and cause a loss of calcium. For best use of protein, include a small serving (no more than 20–30 grams) in your daily meals and planned snacks in order to meet your daily protein needs.

**TABLE 3. PORTION SIZE AND GRAMS OF PROTEIN FOR SPECIFIC FOODS**

FOOD	SERVING SIZE	PROTEIN (grams)
Meat (beef, poultry, fish)	3 oz cooked (size of a deck of cards)	21–25 g
Milk or Yogurt	1 cup	8 g
Soy Milk	1 cup	10 g
Cheese	1 oz	7 g
Egg (white)	1 medium	6 g
Beans	1 cup cooked	12 g
Peanut Butter	2 tablespoons	8 g
Nuts or Seeds	¼ cup	5 g
Tofu	3 oz (1/5 block)	10 g
Grains (pasta, rice)	1 cup cooked	6 g
Vegetables	½ cup cooked	2 g

### **MY PROTEIN NEEDS:**

ACTIVITY LEVEL: \_\_\_\_\_

PROTEIN RANGE (BASED ON ACTIVITY): \_\_\_\_\_ TO \_\_\_\_\_

MY WEIGHT: \_\_\_\_\_

DAILY PROTEIN: \_\_\_\_\_ TO \_\_\_\_\_

## *fat* **Fat**

Fat is a vital part of the diet, provides taste to foods and satisfies hunger. Fat is also essential to a performance nutrition plan because it:

- Provides energy in endurance activities
- Helps the body maintain insulation from the cold
- Transports fat-soluble vitamins



Some fat is necessary for performance. Fat supplies energy, but it takes a while to kick in. Body fat doesn't burn easily—it needs more oxygen than carbohydrates to be used for energy, so it is not an ideal fuel for high-intensity activity. It also takes time for your body to transport fat from your fat cells to your muscles. This means that fat cannot fuel quick bursts of activity. Fat does, however, provide an important fuel source for prolonged activities. Unlike glycogen, your body can store more fat than you will ever need.

The bad news is that too much fat, especially saturated fats, can hurt your performance and health. Highly processed, fatty foods, such as fast food, stay in your stomach longer than carbohydrates. This means that if you eat a high-fat meal before heading out to the obstacle course, the fat will sit heavy in your stomach and make you feel sluggish.

A high-fat diet also contributes to obesity. Excess body fat can lower your potential to reach optimum performance and negatively affect your physical appearance. Excessive dietary fat also increases your risk of developing heart disease, stroke, and cancer—being physically active (or meeting the Army weight standards) does not make you exempt from these conditions.

For top performance and to maintain a healthy body weight, you should limit your fat intake to 20 to 25 percent of your daily calorie intake, or the amount of calories remaining after carbohydrate and protein needs have been accounted for. Choose healthier sources of fat such as nuts, olive oil, peanut butter, and avocados, which not only provide important nutrients, but also have added health benefits.



# hydration

## Hydration

It doesn't take much water loss for performance to suffer. A 1% dehydration (as measured by change in body weight) has been shown to have a slightly negative influence on mental function—slowed working memory, increased tension/anxiety and fatigue, and increased errors on visual vigilance. A 2% dehydration more severely impacts mental function, mood, and fatigue.

One can become easily dehydrated regardless of fitness level, body composition, or age. It happens quickly with physical activity, especially in extreme climates. The slump one feels in the mid-afternoon could be from the consumption of a large meal or the affect of inadequately hydrating throughout the morning.

Weight loss can be used to measure water loss. Weight lost over several hours of physical activity is body water lost in the form of sweat. In a 150 lb person, a 1.5 lb weight loss would be a loss of 1% of body weight and about 3 cups of sweat.

### • Water Consumption Table

Heat Category	WBGT Index, °F	Easy Work	Moderate Work	Hard Work
		Water Intake (Quart/Hour)	Water Intake (Quart/Hour)	Water Intake (Quart/Hour)
1	78° - 81.9°	½	¾	¾
2	82° - 84.9°	½	¾	1
3	85° - 87.9°	¾	¾	1
4	88° - 89.9°	¾	¾	1
5	> 90°	1	1	1
Body Armor = +5°		Easy Work – walking on a hard surface at less than 2 mph with less than a 30 pound load, weapon maintenance, marksmanship training; drill and ceremony	Moderate Work – patrolling, walking in the sand at 2.5 mph with no load, calisthenics; patrolling; individual movement techniques (i.e., high/low crawl)	Hard Work – walking in the sand at 2.5 MPH with a load, field assaults
MOPP 4 = +10°				
Rest - sitting or standing in the shade if possible				
The fluid replacement volumes will sustain performance and hydration for at least 4 HOURS of work in the specified heat category. Fluid needs can vary based on individual differences and exposure to full sun or full shade.				
<b>CAUTION:</b> Hourly fluid intake should not exceed 1.5 quarts. Daily fluid intake should not exceed 12 quarts.				

USAPHC 1-800-222-9698 <http://phc.amedd.army.mil>

TA-091-0810 (Also available as a poster.)

**General Tips**

- ➔ Monitor fluid loss (weighing before/after physical activity, urine color).
- ➔ Consume water throughout the day regardless of the environment or situation.
- ➔ Minimize or discontinue use of energy drinks.

To avoid dehydration that can harm your performance and health, you might have to make yourself drink when you are not thirsty. Follow these steps to prevent dehydration:

- ➔ Make water your first choice of fluids. Cool, plain water is the best performance fluid replacer for any physical activity that lasts less than 60–90 minutes. Water is always better than soda, energy drinks, coffee, beer or full-strength fruit juice, and equal to sports drinks for replacing the fluid you lose. Cool water is absorbed into your bloodstream quickly and has none of the drawbacks that other fluids can have.

**Don't wait until you are thirsty to drink.**

- ➔ By the time you feel thirsty you are already dehydrated.
- ➔ Drink beyond your feeling of thirst. If you stop drinking when your thirst is satisfied, you have replaced only about two-thirds of the water you have lost.
- ➔ Sip frequently rather than gulp all at once; drinking small amounts of fluids at a time is more effective than large amounts only occasionally.





## Monitor Fluid Loss

- ➔ Monitor urine color—when you are hydrated, urine is clear or pale yellow. It is dark yellow or brown when you are dehydrated.
- ➔ Weigh yourself before and after activity to see how much water you have lost. Drink 2–3 cups for every pound you lose during physical activity.

Drink regularly and frequently. Drink at least 8–10 cups of water a day at regular intervals. In extreme climates you will need even more water to prevent dehydration.

## Alcohol

Alcohol (beer, wine, or spirits) is not a performance-enhancing beverage and contributes to dehydration. Alcoholic beverages add empty calories that may contribute to weight gain and some nutrient deficiencies.

If you decide to drink alcohol, do so in moderation. The Dietary Guidelines for Americans recommend that if you choose to drink alcoholic beverages, do not exceed one drink per day for women or two drinks per day for men.

A standard drink is equal to 12 ounces of beer, 8 ounces of malt liquor, 5 ounces of wine, and 1.5 ounces or a “shot” of 80–proof distilled spirits or liquor (e.g., gin, rum, vodka, or whiskey).



## nutrient timing

### Nutrient Timing for Peak Performance

Nutrient timing involves proper fueling strategies before, during and after physical training sessions and other strenuous activity. Solid strategies for eating and hydrating before, during and after exercise are essential. Follow these tips and recommendations.

**BEFORE** strenuous activities, build up your energy stores and hydrate 2–4 hours before by:

- ➔ Eat a snack or small meal
  - » *Note: if training first thing in the morning, eat a small carbohydrate snack, such as a banana one hour before exercise*
- ➔ Drink a minimum of 2–3 cups of water.

**DURING** your workout:

**Sessions lasting 60 minutes or less:**

- ➔ Drink ½ to 1 cup of water for every 15–20 minutes during your workout. If you are sweating heavily, consume fluids at the rate lost (not to exceed 1.5 liters or 1½ canteens per hour) or as much as you can tolerate.

**For sessions lasting 60–90 minutes or more:**

- ➔ Glycogen levels start to dwindle, especially if you are only drinking water. Starting at the 20–minute mark, consume 10–20 grams of carbohydrate (banana, sports drink, commercial sports bar or granola bar, gel shot, etc...) every 20–30 minutes.
- ➔ Continue drinking ½ to 1 cup of fluid every 15–20 minutes. Sports drinks can have added performance benefits during activity lasting longer than 60 minutes as they provide carbohydrates that help refuel glycogen stores and blood sugar levels. They also contain electrolytes like salt, which help you retain body water.

**Alternatives to sports drinks:**

Dilute any 100% fruit juice with an equal amount of water. Add 1/8 teaspoon salt per quart (four 8-oz cups). This mix closely approximates the carbohydrate, sodium, and potassium of commercially available sport drinks.

Mix 1/3 cup sugar and 1/8 teaspoon salt per quart (four 8-oz cups) of water. Flavor with unsweetened beverage base.



**AFTER** your workout:

After heavy work or exercise, refuel to replenish your energy and start preparing your body for the next training session.

**Fuel:** Focus on eating protein and a carbohydrate-rich food within 30–60 minutes after exercise.

Suggested carbohydrate/protein snacks include low-fat chocolate milk, 100% fruit juice (8 oz) and a handful of nuts, whole-grain bread with peanut butter and banana, low-fat yogurt plus fruit, or a commercial sports bar.

Optimize glycogen refueling by consuming 50–100 grams of carbohydrate in your beverage or food within 30–60 minutes of exercise and every 2–4 hours thereafter.

**Fluids:** Continue to drink fluids and rehydrate.

Drink 2–3 cups of fluid for every pound lost during activity. As indicated before, drinking small amounts of fluid at a time is more effective than large amounts occasionally.

Drink until urine is clear or light yellow.

Avoid alcohol as a fluid replacement. If you do drink beer after activity, drink 1–2 cups of water or diluted juice at the same time to counter the dehydrating effects of alcohol.

The post-workout fuel choices along with a complete balanced meal within 3–4 hours of activity will replace electrolytes.

## *Supplements* Dietary Supplements

Many Soldiers use dietary supplements to enhance their performance or for weight loss. Dietary supplements are products taken that contain a “dietary ingredient” such as vitamins, minerals, amino acids and herbs or botanicals. They come in many forms, including tablets, capsules, powders, energy bars, and liquids. It is important to know



that dietary supplements are not tested or approved by the FDA prior to market, are often unnecessary, and can be dangerous and expensive. The most commonly tainted dietary supplements are those intended for bodybuilding, weight loss, diabetes, and sexual enhancement. Dietary supplements cannot offset the unfavorable effects of poor food choices. Consume whole foods as the best source for an edge on performance.

If you do decide to take a supplement, BE SMART! Educate yourself and seek advice from a healthcare professional first.

### **HELPFUL DIETARY SUPPLEMENT RESOURCES:**

**Human Performance Resource Center (HPRC)**—Dietary Supplements. HPRC is a human performance optimization (HPO) website for U.S. Warfighters, their families, and those in the field of HPO who support them. The dietary supplement tab provides the information and tools necessary to help you make an informed decision about dietary supplements. For more information visit: <http://bit.ly/hprcsupplements>

**Operation Supplement Safety (OPSS)** is an initiative of the Human Performance Resource Center (HPRC) and the DoD to inform military personnel, their families, and retirees about dietary supplements and how to choose them wisely. Find information sheets, videos, answers to frequently asked questions about supplements, print materials and more at: <http://bit.ly/hprcopss>

**Natural Medicines Comprehensive Database** provides scientifically reliable answers to questions about dietary supplements and alternative therapies. The database includes information on the safety, benefits, side effects, and drug interactions of dietary supplements. You can access the database via HPRC-online or OPSS website.



# *energy drinks*

## **Energy Drinks**

Many Soldiers reach for energy drinks for a mid-day pick-me-up or to make it through a long night shift. But do energy drinks help Soldiers do their job, or do they hinder their ability to perform? Energy drinks are not the same as sports drinks and should never be used for hydration — cool, plain water should always be a first choice for hydration. Energy drinks generally contain large quantities of caffeine and may contain other ingredients, most of which do absolutely nothing to enhance health. Also, the large quantities of caffeine and other stimulants many energy drinks contain can actually increase dehydration, and may also lead to increased anxiety, upset stomach, shakiness, headaches, and sleep issues. These potential side effects can actually reduce Soldiers' ability to perform, NOT enhance it.



If you are consuming something that advertises itself as an energy product, such as energy drinks or energy shots, you are probably helping yourself to a hefty dose of stimulants.

The main active ingredient in these products is caffeine. Caffeine is a drug and should be respected, not abused. Caffeine can be used to enhance and extend performance, however, too much can degrade performance.

Beware, “energy” products contain other stimulants besides caffeine, such as guarana, taurine, ginseng, l-carnitine, creatine and/or glucuronolactone.

Performance degradation from too much/many stimulants:

- ➔ Dehydration and upset stomach (readiness)
- ➔ Anxiety (mental health)
- ➔ Shakiness (marksmanship)
- ➔ Headaches (mental ability)
- ➔ Death from overdose (some may not vomit before they reach toxic levels)

Instead of reaching for energy drinks, it’s best to feed your body energy throughout the day:

- ➔ Snack on carbohydrates and energy-rich foods such as dried fruits, nuts, trail mix, a commercial sports bar or low-fat chocolate milk.
- ➔ Drink cool, plain water frequently, even if you aren’t thirsty.
- ➔ Get at least 8 hours of sleep if you anticipate a long work day or a late night shift the following day. With a full sleep bank, you’ll feel more alert and able to stay awake naturally.

If you do decide to use caffeine, be smart about it. Caffeine is most effective when taken in 100–200 mg doses, although much less may be effective for individuals who do not regularly consume caffeine. Take one hour before needed and discontinue taking within 6 hours of sleep time (lights out). Choose natural sources of caffeine, such as coffee, or sources where caffeine is the only ingredient and the amount per serving is clearly indicated (e.g., caffeine gum).



## Nutrition in the Field

Deployments and field operations demand a properly fueled and nutritionally maintained body—this could mean the difference between top performance and mission failure. Poor nutrition in extreme conditions (hot, cold, or high altitude) can lead to fatigue, rapid weight loss, injury, illness, and dehydration. Focus on eating foods that provide top mental and physical performance without compromising long-term health. View your mind and body as a weapon system. To be the most lethal weapon in the arsenal you need to be “nutritionally” fit.

**Readiness Begins in Garrison/FOB:** Maintain a performance diet and a healthy weight by practicing healthful dining. The foods you choose to eat affect energy, concentration, and memory. Optimize your nutrition before, during, and after deployment/field operations.

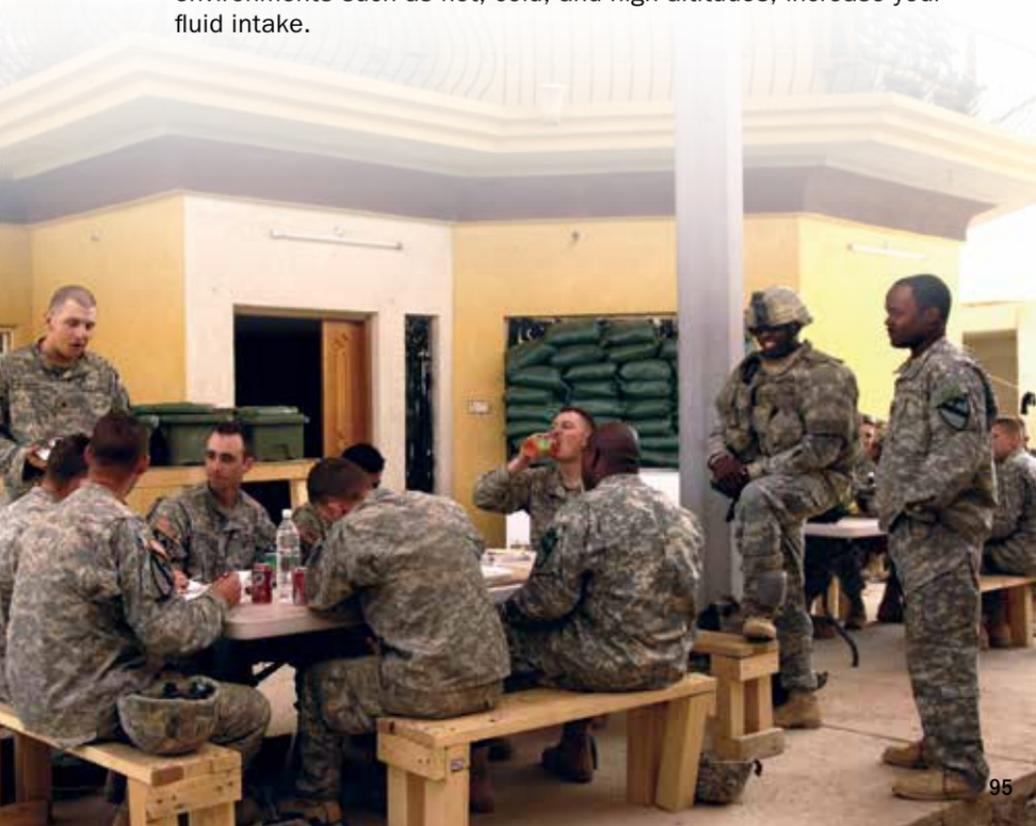
Primary ways to be nutritionally prepared for all missions:

- ➔ Maximize energy stores! Low energy stores = fatigue!
  - » Eat a high carbohydrate diet.
  - » Avoid skipping meals—refuel every 4–5 hours at a minimum.
- ➔ Stay well hydrated.
- ➔ Minimize intake of heavily processed, high fat foods.

**Performance Nutrition Tactics During Missions:** When on continuous operations it is important to fuel (eat). Energy stores run down after several hours and need to be restored with food regularly. Ideally, fueling should occur every 3–5 hours—avoid going more than 5 waking hours without eating. Warfighting requires you to expect the unexpected. An “empty tank” after a strenuous mission will be detrimental to the next mission.

**Nutrition tactics during missions include:**

- Make time to fuel. Energy stores run down after several hours and need to be restored with food regularly. Refuel often—every 3–5 waking hours.
- If you don't have a lot of time to eat or won't get a break for a while, make it a point to eat a small amount when you have the chance. Focus on eating the most calorie- dense items in your ration, such as the main entrée.
- Snack when you can—include carbohydrate and energy-rich choices such as dried fruits, nuts, and trail mixes when choosing pogeey bait or save unopened snack items from rations to eat on the run.
- Eating calorie-dense and nutrient-rich foods is even more critical when you're exposed to cold and high altitudes. Your energy needs will be higher and your appetite may decrease.
- Drink fluids frequently, even when you are not thirsty. Monitor the color of your urine and watch for signs of dehydration. In extreme environments such as hot, cold, and high altitudes, increase your fluid intake.





## **Plan for the Operational Use of Caffeine for High OPTEMPO Environments:**

Caffeine in moderate doses improves mental performance, mood, and marksmanship in the most stressful environments and has operational utility.

If you want to use caffeine for extended operations and you normally have a high caffeine intake, it won't help you when you need it. Caffeine is not useful to those already consuming over 300 mg per day.

The recommended "optimal dose" for caffeine is 200 mg—more is not better. Doses over 200–300mg may produce initial symptoms of restlessness, anxiety, increased heart rate, and insomnia.

Higher doses can lead to more severe adverse reactions to include increased blood pressure, heart palpitations, dizziness, irritability, nausea, nervousness, jitters, and in some cases, death from caffeine overdose.

The chart below provides guidance about proper caffeine dosing. If you decide to use caffeine dosing, remember to limit dose to approximately 200mg and stop dosing at least 6 hours prior to sleep.

**TABLE 3. CAFFEINE DOSING RECOMMENDATIONS**

<b>Sustained Ops (no sleep):</b>	<ul style="list-style-type: none"><li>• 200 mg @ ~ 0000</li><li>• 200 mg again @ 0400 and 0800 h, if needed</li><li>• Use during daytime (1200, 1600) only if needed</li></ul>
<b>Night Ops with Daytime Sleep</b>	<ul style="list-style-type: none"><li>• 200 mg @ start of night shift</li><li>• 200 mg again 4 hours later</li><li>• Last dose: at least 6 hrs away from sleep period</li></ul>
<b>TEMPORARILY RESTRICTED SLEEP (6 or fewer hrs of sleep)</b>	<ul style="list-style-type: none"><li>• 200 mg upon awakening</li><li>• 200 mg again 4 hours later</li><li>• Last dose: at least 6 hrs away from sleep period</li></ul>

Operational Rations are designed for military personnel in a wide variety of operations, in widely varied settings, for limited periods. A variety of rations exist to meet unique mission requirements and include the most familiar ration, MRE™. MRE™ are made with real food and give you the most nutrition in the smallest package (approximately 1200–1300 calories per package). Some parts of the MRE™ may have extra nutrients and Soldiers should be encouraged to eat at least a part of each component of the MRE™ to get a well-balanced diet. The Combat Rations Database (Com-RAD) website provides nutrition information for MREs™ and other operational rations. Visit <http://bit.ly/NatickFactSheets> and check out the First Strike Ration under Combat Feeding for more information. This information can help you determine how much of or how many individual rations you need to meet nutrition needs in the field environment.

The **First Strike Ration** (FSR™) is a compact, eat-on-the-move assault ration designed for high-intensity combat operations. It is substantially lighter and more compact than the MRE™, and is designed to enhance Warfighter consumption, nutritional intake, and mobility. Developed to support operations lasting less than 72 hours, the FSR™ does not meet all of a Soldier's nutrient requirements and should not be used for more than 72 hours. The FSR™ is issued one per day, instead of the MRE™ distribution of three per day. Visit <http://bit.ly/natickfsr> for more information on combat rations or ask your Installation Registered Dietitian about the right ration for your mission profile.

### Local Food and Water

**Sources:** Local foods are those eaten on the economy and/or from sources not approved by U.S. military preventive medicine and veterinary personnel. They are found off-Forward Operating Bases (FOB) and also on-FOB in host country owned and operated food establishments. Consuming food from unapproved sources or food





items that have been improperly stored, prepared, held, or served can result in life-threatening illnesses.

Prevention of illness is key to ensuring military operational readiness. Gastrointestinal illness, such as diarrhea, commonly afflicts deployed U.S. military personnel and can adversely affect operational readiness. Soldiers should be familiar with the health risks of eating local foods and how to make safer food choices.

Check the **USAPHC HIP eCatalog** to download and order a Food Safety Toolkit for Leaders, Leader's Tips for Eating Local, and products for Soldiers—<http://bit.ly/usaphcfoodsafety>

### Meeting Nutritional Needs in the Field Environment

Often during deployments and field training, calorie needs are higher due to increased physical demands and completing missions in extreme environments. Soldiers need to be aware of their need for more calories and ensure they are properly fueling their bodies. Use the charts below to estimate daily nutrition needs and additional calorie requirements for field-related activities.

## ESTIMATE YOUR DAILY ENERGY NEEDS

### Step 1:

**Men:** Weight (lbs) x 12 = \_\_\_\_\_

**Women:** Weight (lbs) x 11 = \_\_\_\_\_

### Step 2:

Answer from Step 1: \_\_\_\_\_ x **AF** x **ENV** = \_\_\_\_\_ = daily energy needs

#### Activity Factor (AF):

1.25—Sedentary

1.50—Light to moderate activity

1.75—Heavy activity

2.20—Exceptional activity

#### Environment Factor (ENV):

1.0—Normal

1.1—Heat

1.25 - 1.5—Cold

1.15 - 1.5—Altitude

1.2—Water Immersion

**[example (male):** 145 lbs x 12 = 1740 x 1.5 x 1.1 = 2871 calories per day.]

## CALORIES BURNED FOR ONE HOUR OF ACTIVITY

ACTIVITY	BODY WEIGHT (LBS)						
	100	130	175	200	230	250	280
walk, 3.5 mph (generally flat course)	430	559	753	860	989	1075	1204
0-25 lb. load	480	624	840	960	1104	1200	1344
25-49 lb. load	570	741	998	1140	1311	1425	1596
≥50 lb. load	630	819	1103	1260	1449	1575	1764
walk, 4.0 pmh (generally flat course)	500	650	875	1000	1150	1250	1400
0-25 lb. load	600	780	1050	1200	1380	1500	1680
25-49 lb. load	700	910	1225	1400	1610	1750	1960
≥50 lb. load	780	1014	1365	1560	1794	1950	2184
walk/jog, 5.0 mph (generally flat course)	830	1079	1453	1660	1909	2075	2324
0-25 lb. load	900	1170	1575	1800	2070	2250	2520
25-49 lb. load	1000	1300	1750	2000	2300	2500	2800
≥50 lb. load	1070	1391	1873	2140	2461	2675	2996
moving/lifting heavy objects	750	975	1313	1500	1725	1875	2100
general physical work	450	585	788	900	1035	1125	1260
calisthenics (push up, pull up, etc)	380	494	665	760	874	950	1064
walk, 3.5 mph (uphill)	670	871	1173	1340	1541	1675	1876
0-25 lb. load	690	897	1208	1380	1587	1725	1932
25-49 lb. load	830	1079	1453	1660	1909	2075	2324
≥50 lb. load	900	1170	1575	1800	2070	2250	2520
walk, 4.0 pmh (uphill)	770	1001	1348	1540	1771	1925	2156
0-25 lb. load	810	1053	1418	1620	1863	2025	2268
25-49 lb. load	890	1157	1558	1780	2047	2225	2492
≥50 lb. load	1000	1300	1750	2000	2300	2500	2800
brisk walk/jog, 5.0 pmh (uphill)	980	1274	1715	1960	2254	2450	2744
0-25 lb. load	1030	1339	1803	2060	2369	2575	2884
25-49 lb. load	1130	1469	1978	2260	2599	2825	3164
≥50 lb. load	1190	1547	2083	2380	2737	2975	3332



# *food choices*

## **Performance Food Choices**

Whether you are eating at home, in the dining facility (DFAC), at a restaurant or in the field, you can maintain a performance diet with proper planning and tools to help you make the best nutrition choices. The following pages provide information to help you make performance nutrition choices anytime, anywhere.



### **Tips to Save Money at the Grocery Store**

- 1. Plan menus and make a grocery list:** Make it fun and involve your family or friends and helping you design a healthy menu.
- 2. Shop seasonally:** Buy fresh fruits and vegetables that are in season to help you get the freshest produce at the lowest cost. Visit your local farmer's market. For produce that is not in season, frozen and/or canned fruits and vegetables (with little or no added salt or sugar) are a nutritious option.

**3. Shop the perimeter; then think meatless:** Stick to the outer edge of the supermarket where you will find fresh produce, meats, dairy products, and breads. Then, shop the aisle(s) with meatless alternatives like beans. Aim for at least one meatless meal/week. For ideas, visit <http://www.meatlessmonday.com/>

4. **Use coupons and inserts:** Clipping coupons or printing them from websites can save you 10–15% on your grocery bill. Consider joining your supermarket's shoppers club to enjoy price specials or to receive additional coupons. If you shop at the Commissary, use your Commissary Rewards Card. You can redeem coupons electronically after you register it online. Visit <http://www.commissaries.com/rewards/> for more information on the benefits of registering your Commissary Reward Card.

5. **Compare unit prices:** Locate the unit price (price per ounce, pound, or pint) on the shelf tag directly below the product. Use it to compare different brands and different sizes of the same brand to help you decide which item is the best buy.

6. **Use MyPlate to guide your food choices when shopping:**

Make  $\frac{1}{2}$  of your plate fruits and vegetables.

- ➔ Choose quality carbohydrates; make half your grain choices whole grains.
- ➔ Select lean proteins; don't forget to include low-fat dairy.
- ➔ Use healthy fats such as olive oil or canola oil.

For more helpful hints, visit <http://bit.ly/MyPlateonBudget>





## Tips For Cooking At Home

### 1. Plan ahead:

- ➔ Write out a weekly menu and corresponding grocery list
- ➔ Try recipes with 5 ingredients or less to save time
- ➔ Use phone apps such as My Family Meal Planner Light™ which includes menus and corresponding grocery lists

### 2. Purchase staples to have on-hand:

- ➔ **Protein Foods:** Boneless, skinless chicken breasts, lean ground beef, frozen fish filets, low-sodium canned beans, eggs, yogurt, cottage cheese, canned chicken or fish
- ➔ **Grains:** Brown rice, whole-wheat pasta, whole-grain breads, baked potatoes
- ➔ **Veggies:** Frozen, canned, or fresh veggies, pre-packaged salad greens, Lower-sodium pasta sauce
- ➔ **Fruits:** Fresh, frozen, or canned fruit in their own juice or water.
- ➔ **Miscellaneous:** Low-fat dressings (or make your own to save money and store in the refrigerator), low-sodium soups (< 600 mg sodium).

### 3. Invest in good-sealing storage containers to keep leftovers:

Pyrex containers, Tupperware, Zip-lock bags

### 4. Choose healthy frozen meals to have on hand for dinner: Read the food label and choose a meal that meets the following criteria:

- ➔ 300–450 calories, <600 mg of sodium, <10 g of total fat.

### 5. Pack your lunch: This saves you money and time in the long-run.

### 6. Find and utilize a cooking buddy (spouse, friend, your child): This is a great time to bond and learn together!

### 7. Break out the slow-cooker:

- ➔ For some meals, you can prep them the night before and then just dump the ingredients in the slow-cooker the next morning.
- ➔ Cook large batches on the weekend and freeze or refrigerate leftovers to use during the work-week.

## When you're shopping for...

### Vegetables and Fruits

Buy a wide variety of fruits and vegetables.

When fresh foods aren't available, choose frozen or canned vegetables and fruits in water without added sugars, saturated and trans fat, or salt.

Buy fruits and vegetables that are good sources of fiber, such as beans, peas, oranges, bananas, strawberries and apples.

Buy more vegetables to snack on including carrot and celery sticks, broccoli, cherry tomatoes and cauliflower.

For desserts, buy fresh or canned fruits (in water without added sugars), dried fruit (without added sugars), and gelatin that contains fruit, instead of baked goods and sweets.

Avoid buying a lot of fruit juice. It doesn't provide the fiber whole fruit does and it's not as good at satisfying hunger.

### Milk, Cheese, Butter & Eggs

Select fat-free (skim) or low-fat (1%) milk.

Choose fat-free, low-fat or reduced-fat chesses.

Use egg white or egg substitutes instead of egg yolks. (Substitute two egg whites for each egg yolk in recipes that call for eggs.)

Instead of buying butter, choose margarines that contain "0 grams trans-fat" (these usually come in in tubs).

Stay away from buying butter, cream, and ice cream. Save it for special occasions and, even then, limit how much you consume. These items contain more saturated fat than whole milk.

Watch out for the saturated and/or partially hydrogenated fats hidden in casseroles, bakery goods, desserts and other foods.



<b>Meat, Poultry, Fish &amp; Nuts</b>	Buy and prepare more fish. You should eat one serving of grilled or baked fish at least twice a week. Avoid fried fish.
	Instead of using cream sauce with fish, use lemon juice and spices to add flavor.
	Buy “choice” or “select” grades of beef rather than “prime,” and be sure to trim off the fat before cooking.
	When buying or eating poultry, choose the leaner light meat (breasts) rather than the fattier dark meat (legs and thighs). Try the skinless version or remove the skin yourself.
	Choose substitutes for red meat such as dried beans, peas, lentils, or tofu and use them as entrees or in salads and soups. A one-cup serving of cooked beans, peas, lentils or tofu can replace a two-ounce serving of meat, poultry or fish.
<b>Bread &amp; Baked Goods</b>	Choose whole-grain, high-fiber breads, such as those containing whole wheat, oats, oatmeal, whole rye, whole grain corn and buckwheat. Choose breads and other foods that list whole grains as the first item in the ingredient list.
	Limit the amount of bakery products you purchase, including doughnuts, pies, cakes and cookies. Look instead for fat-free or low-fat and low-sodium varieties of crackers, snack chips, cookies and cakes.
	Check for store-baked goods that are made with polyunsaturated or monounsaturated oils, skim or reduced-fat milk, and egg whites.
	Instead of buying a raisin bran muffin, buy a loaf of raisin bread and enjoy a slice for breakfast or lunch.
<b>Oils, Dressings &amp; Shortenings</b>	Buy and use fats and oils in limited amounts.
	When buying oils for cooking, baking or in dressings or spreads, choose the ones that has lowest saturated fats, trans fats and cholesterol—including canola oil, corn oil, olive oil, safflower oil, sesame oil, soybean oil and sunflower oil.
	Stay away from buying palm oil, palm kernel oil, coconut oil and cocoa butter—these are high in saturated fats.
	Buy a nonstick vegetable spray or nonstick pan.
	Choose reduced-fat, low-fat, light or fat-free salad dressings (if you need to limit your calories) to use with salads, for dips or as marinades.

## Tips to Increase Fruit and Vegetable Consumption

### Vegetables

- ➔ Plan or choose at least one main meal centered around vegetables (plain baked potato, veggie soup, veggie stir-fry, or a bean dish). Then, add other healthy foods to round out your nutrition intake.
- ➔ Order or pack a main dish veggie salad for lunch topped with lean protein (hard-boiled egg, lean chicken, low-fat cottage cheese, turkey, or ham). Go easy on the dressing.
- ➔ Include a cup of green salad and a cup of cooked vegetables (fresh, frozen, or canned) at dinner every night.
- ➔ Substitute a green salad or a baked potato with low-fat toppings for your fried vegetable when dining out.
- ➔ Pack raw, hardy veggies for a snack (carrot sticks, celery sticks, grape tomatoes, raw broccoli, bell-pepper strips). Bring a side of low-fat dressing, hummus, or nut butter for dipping if desired.
  - » **Save Money:** Prepare veggies ahead of time (peel and/or cut). Store them in zip-lock bags or a well-sealed container.
  - » **Splurge:** Purchase already peeled and cut veggies.

Make your own veggie smoothie at home using spinach or kale. Store extras in the freezer for up to 2 weeks or in the refrigerator for up to 3 days.

### Fruits

- ➔ Top your cereal or yogurt with fresh, frozen, or dried fruit. Drink < 8 oz. of 100% juice per day with breakfast (choose mostly whole fruits).
- ➔ Pack or choose a fresh fruit at lunch or for your snack. Substitute it for your usual afternoon candy-bar!
  - » **Save Money:** Buy fresh fruit in-season and/or frozen fruit. Wash and prep ahead of time.
  - » **Splurge:** Purchase pre-peeled and/or pre-cut fresh fruit.
- ➔ For dessert, have a fruit salad, a piece of fresh fruit, or a serving of canned fruit (packed in its own juice or water).
- ➔ Prepare your own fruit smoothie at home using frozen or fresh fruit. Store extras in the freezer for up to 2 weeks or in the refrigerator for up to 3 days.
- ➔ Make your own trail mix. Combine 1/4 cup of dried fruit with 1 oz. of nuts or seeds. Take it with you for a healthy, mid-afternoon snack.



## EXAMPLE OF A 2200 CALORIE MEAL PLAN

BREAKFAST	CALORIES	CARBS (G)	FAT (G)	PROTEIN (G)	
2.5 Fruits	1 Banana	105	27	0	1
	1 Orange	87	22	0	2
	1/2 cup of 100% Apple Juice	60	16	0	0
2 Grains	1 cup of Unsweetened Cereal	100	20	2	3
	1 slice of 100% Whole Wheat Bread	80	15	1	3
1 Dairy	1 cup of Skim Milk	90	12	0	8
1 oz. Protein	1 Scrambled Egg (large)	91	1	7	6
3 Other	1 tsp. Margarine	34	0	4	0
	1 cup of Black Coffee	2	0	0	0
	Water	0	0	0	0

**Breakfast TOTALS: 649 113 14 23**

MID-MORNING SNACK	CALORIES	CARBS (G)	FAT (G)	PROTEIN (G)	
1 Fruit	1 Fresh, Medium-Sized Apple	72	19	0	0

**Snack TOTALS: 72 19 0 0**

LUNCH		CALORIES	CARBS (G)	FAT (G)	PROTEIN (G)
2 Vegetables	2 cups of Leafy Greens for Salad	15	3	0	1
	1/2 cup Fresh Cucumber (sliced or chopped)	7	1	0	0
	1/2 cup Fresh Tomato (sliced or chopped)	19	4	0	1
2 Grains	1 small Whole Wheat Bun	120	22	2	4
1 Dairy	3 oz. Roasted, Skinless, Boneless Chicken Breast	103	0	2	21
1 oz. Protein	1 cup of Skim Milk	90	12	0	8
3 Other	2 tbsp. Reduced-Fat Ranch Dressing	80	7	6	0
	1 tsp. Yellow Mustard	3	0	0	0
	Water	0	0	0	0
<b>Lunch TOTALS:</b>		<b>437</b>	<b>49</b>	<b>10</b>	<b>35</b>

MID-AFTERNOON SNACK		CALORIES	CARBS (G)	FAT (G)	PROTEIN (G)
1/2 Fruit	1/4 cup Raisins (not tightly packed)	109	29	0	1
2 oz. Protein and 2 tsp. Oil	1 oz. Dry-Roasted Almonds (22 whole kernels)	169	5	15	6
<b>Snack TOTALS:</b>		<b>278</b>	<b>34</b>	<b>15</b>	<b>7</b>



DINNER		CALORIES	CARBS (G)	FAT (G)	PROTEIN (G)
3 Vegetables	2 cups of Leafy Greens for Salad	15	3	0	1
	1 cup of Steamed Broccoli	55	11	1	4
	1 small Baked Potato	128	29	0	3
1 Fruit	1 cup of Fresh Strawberries	46	11	1	1
6 oz. Lean Protein	6 oz. Grilled Tilapia	162	0	3	34
1 Dairy	1 cup of Skim Milk	90	12	0	8
3 Other	2 tbsp. Oil & Vinegar Dressing	150	1	16	0
	1 tbsp. Regular Margarine	101	0	11	0
	Water	0	0	0	0
<b>Dinner TOTALS:</b>		<b>747</b>	<b>67</b>	<b>32</b>	<b>51</b>

	CALORIES	CARBS (G)	FAT (G)	PROTEIN (G)
<b>Daily TOTALS:</b>	2183	282	71	116

## EXAMPLE OF A 2600 CALORIE MEAL PLAN

	BREAKFAST	CALORIES	CARBS (G)	FAT (G)	PROTEIN (G)
3 Fruits	1 Banana	105	27	0	1
	1 Orange	87	22	0	2
	1 cup of 100% Apple Juice	120	31	0	0
2 Grains	1 cup of Unsweetened Cereal	100	20	2	3
	1 slice of 100% Whole Wheat Bread	80	15	1	3
1 Dairy	1 cup of Skim Milk	90	12	0	8
1 oz. Protein	1 Scrambled Egg (large)	91	1	7	6
3 Other	1 tsp. Margarine	34	0	4	0
	1 cup of Black Coffee	2	0	0	0
	Water	0	0	0	0

**Breakfast TOTALS: 709 128 14 23**

	MID-MORNING SNACK	CALORIES	CARBS (G)	FAT (G)	PROTEIN (G)
1 Grain	1 oz. or 20 Unsalted Mini Pretzels	110	25	0	3
1 Dairy	1 container (6 oz.)	90	16	0	5

**Snack TOTALS: 200 41 0 8**



LUNCH		CALORIES	CARBS (G)	FAT (G)	PROTEIN (G)
2 Vegetables	2 cups of Leafy Greens for Salad	15	3	0	1
	1/2 cup Fresh Cucumber (sliced or chopped)	7	1	0	0
	1/2 cup Fresh Tomato (sliced or chopped)	19	4	0	1
2 Grains	1 cup of Cooked Brown Rice	218	45	2	5
4 oz. Lean Protein	4 oz. Roasted, Skinless, Boneless Chicken Breast	137	0	3	27
1 Dairy	1 cup of Skim Milk	90	12	0	8
2 Other	2 tbsp. Reduced-Fat Ranch Dressing	80	7	6	0
	1 tsp. Yellow Mustard	3	0	0	0
	Water	0	0	0	0
<b>Lunch TOTALS:</b>		<b>566</b>	<b>72</b>	<b>11</b>	<b>42</b>

MID-AFTERNOON SNACK		CALORIES	CARBS (G)	FAT (G)	PROTEIN (G)
1.5 Fruit	1 Fresh, Medium-Sized Apple	72	19	0	0
	1/4 cup Raisins (not tightly packed)	109	29	0	1
2 oz. Protein and 2 tsp. Oil	1 oz. Dry-Roasted Almonds (22 whole kernels)	169	5	15	6
<b>Snack TOTALS:</b>		<b>350</b>	<b>53</b>	<b>15</b>	<b>7</b>

DINNER		CALORIES	CARBS (G)	FAT (G)	PROTEIN (G)
3 Vegetables	2 cups of Leafy Greens for Salad	15	3	0	1
	1 cup of Steamed Broccoli	55	11	1	4
	1 small Baked Potato	128	29	0	3
1 Fruit	1 cup of Fresh Strawberries	46	11	1	1
6 oz. Lean Protein	6 oz. Grilled Tilapia	162	0	3	34
1 Dairy	1 cup of Skim Milk	90	12	0	8
3 Other	2 tbsp. Oil & Vinegar Dressing	150	1	16	0
	1 tbsp. Regular Margarine	101	0	11	0
	Water	0	0	0	0
<b>Dinner TOTALS:</b>		<b>747</b>	<b>67</b>	<b>32</b>	<b>51</b>

	CALORIES	CARBS (G)	FAT (G)	PROTEIN (G)
<b>Daily TOTALS:</b>	2183	282	71	116



## EXAMPLE OF AN 1800 CALORIE MEAL PLAN

BREAKFAST		CALORIES	CARBS (G)	FAT (G)	PROTEIN (G)
1 Fruit	1 Orange	87	22	0	2
1 Grain	1 slice of 100% Whole Wheat Bread	80	15	1	3
1 Dairy	1 container (6 oz) Light Yougurt	90	16	0	5
1 oz. Protein	1 Scrambled Egg (large)	91	1	7	6
3 Other	1 tsp. Margarine	34	0	4	0
	1 cup of Black Coffee	2	0	0	0
	Water	0	0	0	0
<b>Breakfast TOTALS:</b>		<b>384</b>	<b>54</b>	<b>12</b>	<b>16</b>

MID-MORNING SNACK		CALORIES	CARBS (G)	FAT (G)	PROTEIN (G)
1 Fruit	1 Fresh, Medium-Sized Apple	72	19	0	0
<b>Snack TOTALS:</b>		<b>72</b>	<b>19</b>	<b>0</b>	<b>0</b>

LUNCH		CALORIES	CARBS (G)	FAT (G)	PROTEIN (G)
2 Vegetables	2 cups of Leafy Greens for Salad	15	3	0	1
	1/2 cup Fresh Cucumber (sliced or chopped)	7	1	0	0
	1/2 cup Fresh Tomato (sliced or chopped)	19	4	0	1
2 Grains	1 small Whole Wheat Bun	120	22	2	4
4 oz. Lean Protein	3 oz. Roasted, Skinless, Boneless Chicken Breast	103	0	2	21
1 Dairy	1 cup of Skim Milk	90	12	0	8
2 Other	2 tbsp. Reduced-Fat Ranch Dressing	80	7	6	0
	1 tsp. Yellow Mustard	3	0	0	0
	Water	0	0	0	0
<b>Lunch TOTALS:</b>		<b>437</b>	<b>49</b>	<b>10</b>	<b>35</b>

MID-AFTERNOON SNACK		CALORIES	CARBS (G)	FAT (G)	PROTEIN (G)
1/2 Fruit	1/4 cup Raisins (not tightly packed)	109	29	0	1
2 oz. Protein and 2 tsp. Oil	1 oz. Dry-Roasted Almonds (22 whole kernels)	169	5	15	6
<b>Snack TOTALS:</b>		<b>278</b>	<b>34</b>	<b>15</b>	<b>7</b>



DINNER	CALORIES	CARBS (G)	FAT (G)	PROTEIN (G)	
3 Vegetables	2 cups of Leafy Greens for Salad	15	3	0	1
	1 cup of Steamed Broccoli	55	11	1	4
	1 small Baked Potato	128	29	0	3
1 Fruit	1 cup of Fresh Strawberries	46	11	1	1
4 oz. Lean Protein	4 oz. Grilled Tilapia	108	0	1	24
1 Dairy	1 cup of Skim Milk	90	12	0	8
3 Other	2 tbsp. Oil & Vinegar Dressing	150	1	16	0
	1 tbsp. Light Margarine	45	0	5	0
	Water	0	0	0	0
<b>Dinner TOTALS:</b>		<b>637</b>	<b>67</b>	<b>24</b>	<b>41</b>

	CALORIES	CARBS (G)	FAT (G)	PROTEIN (G)
<b>Daily TOTALS:</b>	1808	223	61	99



Contact a Registered Dietitian if you have questions or concerns about your specific caloric requirements. For more ideas and to create a personalized meal plan, visit Army H.E.A.L.T.H at <http://armyhealth.pbrc.edu>.

## Tips for Eating Healthier When Dining Out

### General Tactics:

Your target is to eat for performance, whether you are eating in the dining facility, restaurant, snacking in front of the TV, or sitting at the dinner table. Here are some tactics you can use to eat for performance:

- Choose quality carbohydrates like whole grain breads and cereals, pasta, rice, beans, lentils, fruit, milk, and yogurt.
- Make half your plate full of fruits and vegetables.
- Choose lean protein.
- Choose low-fat and fat-free dairy products.
- Eat heart healthy fats like vegetable oil (olive or canola oil), nuts, seeds, and avocados.
- Get vitamins and minerals through food first—don't rely on supplements.
- Make water your first choice for hydration.

### Eating in the Dining Facility (DFAC)—Go for Green®

There is a new food identification system that lets you find foods to advance your performance while eating in the DFAC. Look for the green, yellow, and red labels at the DFAC and pick foods identified as green and yellow while limiting those that are red.

High Performance Foods	Moderate Performance Foods	Performance-Limiting Foods
<ul style="list-style-type: none"> <li>• Premium fuel for the Soldier Athlete</li> <li>• Fresh and flavorful</li> <li>• Nutrient dense</li> <li>• <b>Go for Green®:</b> <b>Choose frequently</b></li> </ul>	<ul style="list-style-type: none"> <li>• Higher in calories</li> <li>• Lower in vitamins and minerals</li> <li>• <b>Use Caution: Select less frequently</b></li> </ul>	<ul style="list-style-type: none"> <li>• Highest in calories</li> <li>• Lowest in vitamins and minerals</li> <li>• <b>Warning: Limit intake</b></li> </ul>



## At Fast Food, Food Court, or Sit-Down Restaurants

- Choose grilled or baked sandwiches and entrees:
  - » Choose sandwiches with < 300 calories (skip the mayonnaise or substitute mustard for mayonnaise/ special sauce and save 100–300 calories)
  - » Choose entrees with < 500 calories
  - » Look for menu items designated as healthier
  - » Look for the “Better for You” logo on menu items in MWR facilities
- Order 1 slice of veggie pizza or thin-crust cheese pizza
- Substitute a side-salad with low-fat dressing, fresh fruit, or baked potato in place of a not-so-healthy side (french fries, onion rings)
- Drink water instead of a sugary beverage (regular soda, sweetened tea, fruit-ade, etc)
- Order a kids’ meal rather than a “value meal” with “light” lemonade, white milk, or ice-water
- Skip or ask for salad dressing and other high-fat condiments on the side (sauces, butter) to better control portions and calories
- Split entrees with a friend, relative, or spouse



- ➔ Limit your consumption of alcohol—Alcoholic beverages contain empty calories and can stimulate your appetite which can lead to over-eating
- ➔ Stop when you are satisfied: Take leftovers with you if you have access to refrigeration

## A Soldier's Guide to Recommended Daily Servings

Recommended Daily Servings by Food Group**	What Counts as a Serving?*
8 Cups of Fruit and Vegetables**	<p><b>What Counts as 1 Cup of Fruit?*</b></p> <ul style="list-style-type: none"> <li>• 1 medium-sized fresh fruit</li> <li>• 1 cup of fresh or canned fruit</li> <li>• ½ cup dried fruit</li> </ul> <p><b>What Counts as 1 Cup of Vegetables?*</b></p> <ul style="list-style-type: none"> <li>• 2 cups of leafy greens</li> <li>• 1 cup of cooked or raw veggies</li> <li>• 1 small baked potato</li> </ul>
3–8 oz. Grains **	<p><b>What Counts as 1 oz?*</b></p> <ul style="list-style-type: none"> <li>• 1 cup dry cereal</li> <li>• ½ cup cooked cereal, pasta, rice</li> <li>• 1 slice of bread</li> <li>• ½ bun or ½ English muffin</li> </ul>
5–10 oz. Proteins**	<p><b>What Counts as 1 oz?*</b></p> <ul style="list-style-type: none"> <li>• 1 oz. cooked meat, fish, poultry</li> <li>• ¼ cup cooked beans</li> <li>• 1 egg</li> <li>• ¼ cup tofu</li> <li>• 1 tbsp. nut butter</li> <li>• ½ oz. nuts (11-12 whole almonds, 24 pistachios, 7 Walnut halves)</li> </ul>
3–4 Cups of Dairy**	<p><b>What Counts as 1 Cup?*</b></p> <ul style="list-style-type: none"> <li>• 1 cup (8 oz) of milk, yogurt</li> <li>• 1 ½ oz. hard cheese</li> <li>• 2 slices of processed cheese</li> <li>• 1/3 cup shredded cheese</li> </ul>
<p><b>Added Oils: Use sparingly (5–8 tsp. /day)**</b></p> <p><b>3 tsp. = 1 tbsp.</b></p>	<p><b>What Counts as Added Oils?*</b></p> <ul style="list-style-type: none"> <li>• Vegetable oil, margarine, butter, salad dressing, mayonnaise, coffee creamer, etc.,</li> </ul> <p><b>1 tsp. = approx. 5 g total fat</b></p>

\*\* Recommended daily servings vary based on calorie needs.

\* For additional examples of portion sizes by food group, please visit [www.choosemyplate.gov](http://www.choosemyplate.gov)



# *fuel for performance*

## **Choose Your Fuel**

### **HIGH OCTANE FUEL: 93**

#### **CARBS**

- Beans (Black, Kidney, Navy)
- Black-eyed peas
- Brown rice
- Corn
- Green peas
- High fiber crackers
- Lentil, black bean and pea soup
- Low fat refried beans
- Sweet potato/Yam
- Whole grain bread
- Whole grain bagels
- Whole grain cereal
- Whole grain tortillas
- Whole grain waffles

#### **PROTEIN**

- 95% Ground beef or turkey
- Beans & peas
- Chicken (white meat/skinless)
- Deli meat (turkey, ham, beef)
- Eggs (especially omega 3 eggs)
- Egg whites
- Lean beef steak
- Lean ham steak
- Lean jerky
- Low-fat cottage cheese
- Yogurt
- Milk: Non-fat and 1%, Nut butters: Almond/peanut
- Non-fried fish
- Tofu
- Trimmed pork chops
- Tuna (in-water)
- Turkey, white meat/skinless

#### **FAT**

- Avocado
- Flax seed and flax oil
- Natural almond butter
- Natural peanut butter
- Olive oil
- Canola Oil
- Peanuts
- Pumpkin seeds
- Raw almonds
- Raw cashews
- Raw pecans
- Raw pistachios
- Raw walnuts
- Sunflower seeds

## REGULAR OCTANE FUEL: 89

<b>CARBS</b>	<ul style="list-style-type: none"> <li>• Baked beans</li> <li>• Baked chips</li> <li>• Boiled new potatoes</li> <li>• Cereal bars</li> <li>• Corn tortillas</li> <li>• Cornmeal/cornbread</li> <li>• Crackers</li> </ul>	<ul style="list-style-type: none"> <li>• Cream of wheat</li> <li>• Flour tortillas, French bread</li> <li>• French toast, Hamburger/hot dog buns</li> <li>• Macaroni, Pancakes, Pasta, Pita bread Pretzels, Ravioli, Rice cakes</li> <li>• Spaghetti, Waffles, White bread, and White rice</li> </ul>
<b>PROTEIN</b>	<ul style="list-style-type: none"> <li>• 85% Ground beef/turkey</li> <li>• Chicken (dark/skinless)</li> </ul>	<ul style="list-style-type: none"> <li>• Milk: 2% and low-fat flavored</li> <li>• Turkey (skinless/dark)</li> </ul>
<b>FAT</b>	<ul style="list-style-type: none"> <li>• Butter (in small amounts)</li> <li>• Dry roasted nuts/seeds</li> <li>• Reduced fat mayo</li> </ul>	<ul style="list-style-type: none"> <li>• Reduced fat salad dressing</li> <li>• Reduced fat sour cream</li> <li>• Reduced fat cheese</li> <li>• Regular peanut butter</li> </ul>

## LOW OCTANE FUEL: 87

<b>CARBS</b>	<ul style="list-style-type: none"> <li>• Biscuits</li> <li>• Croissants</li> <li>• Doughnuts</li> <li>• Fettuccini alfredo</li> <li>• French fries</li> <li>• Hash browns</li> </ul>	<ul style="list-style-type: none"> <li>• Mashed potatoes</li> <li>• Muffins</li> <li>• Pop tarts</li> <li>• Refried beans</li> <li>• Sugary cereals</li> </ul>
<b>PROTEIN</b>	<ul style="list-style-type: none"> <li>• 75% Ground beef/turkey</li> <li>• Bacon</li> <li>• Beef or pork ribs</li> <li>• Bratwurst</li> <li>• Chicken (with skin)</li> <li>• Fried Chicken</li> </ul>	<ul style="list-style-type: none"> <li>• Fried fish/seafood</li> <li>• Frozen pizza</li> <li>• Ham on bone</li> <li>• Regular cottage cheese low-fat</li> <li>• Whole milk/chocolate milk</li> </ul>
<b>FAT</b>	<ul style="list-style-type: none"> <li>• Fried foods</li> <li>• Honey roasted nuts/seeds</li> <li>• Margarine</li> <li>• Mayonnaise</li> </ul>	<ul style="list-style-type: none"> <li>• Ranch &amp; other salad dressing</li> <li>• Regular cheese</li> <li>• Sour cream</li> <li>• Coconut oil</li> </ul>



# Labels

## Food and Ingredient Label Reading

Be a smart shopper! With so many options available in the grocery store, it is hard to know which ones are the healthiest choice. Before making your food selection, take a few moments to read and compare the Nutrition Facts labels and the ingredient lists. The Nutrition Facts label can help you determine foods lowest in sodium and sugar, and those highest in fiber, vitamins, and minerals. Ingredient lists are a great way to learn what is in a packaged food item. Foods and beverages that are minimally processed and contain whole-food ingredients are always the best choice. The following examples can help you identify what to look for when reading and comparing labels.

### Yogurt A

Number of ingredients: 11

<b>Nutrition Facts</b>	
Serving Size 1 container (170g)	
Servings Per Container 8	
Ingredients: Cultured Pasteurized Grade A Low Fat Milk, Sugar, Blackberries, Modified Corn Starch, Kosher Gelatin, Citric Acid, Colored with Beet Juice, Ticalcium Phosphate, Natural Flavor Pectin, Vitamin A Acetate, Vitamin D3.	
<b>Protein</b> 5g	<b>10%</b>
<b>Calcium</b> 20%	

### Yogurt B

Number of ingredients: 2

<b>Nutrition Facts</b>	
Serving Size 1 container (170g)	
Servings Per Container 1	
Cultured Grade A Reduced Fat Milk, Pectin.	
CONTAINS ACTIVE YOGURT CULTURES INCLUDING L ACIDOPHILUS	
<b>Protein</b> 8g	<b>16%</b>
<b>Calcium</b> 30%	

### Notes

**Ingredients:** Look for yogurt with less than five ingredients, no added sugar, and live active cultures.

**Nutrition:** Choose yogurt that has at least 8 grams of protein per 6 oz. serving and at least 30% Daily Value for Calcium. When additives replace real food ingredients, nutrition declines!

## Oatmeal A

Number of ingredients: 1

<b>Nutrition Facts</b>	
Serving Size ½ cup dry (41g)	
Servings Per Container 18	
Whole Grain Oats	
<b>Protein</b> 5g	<b>10%</b>
<b>Sodium</b> 0mg	<b>0%</b>
<b>Dietary Fiber</b> 5g	<b>25%</b>
<b>Sugars</b> 1g	

### Notes

**Ingredients:** Oatmeal should contain one ingredient: oats!

**Nutrition:** Choose oatmeal that has at least 3 grams of dietary fiber per serving and no more than 1 gram of sugar. There should also be zero grams of sodium.

## Oatmeal B

Number of ingredients: 15

<b>Nutrition Facts</b>	
Serving Size 1 container (170g)	
Servings Per Container 8	
Whole Grain Rolled Oats (With Oat Bran), Sugar, Peach Flavoured and Coloured Dehydrated Apple Flakes (Dehydrated Apple Flakes [Sulfites], Artificial Peach Flavour, Calcium Stearate, Citric Acid, Color), Powdered Creaming Agent (Hydrogenated Coconut Oil, Hydrogenated Palm Oil, Corn Syrup Solids, Sodium Caseinate [Milk], Mono and Diglycerides, Sodium Silicoaluminate, Dipotassium Phosphate, Salt, Guar Gum, Calcium Carbonate (Thickener), Artificial Flavour.	
CONTAINS OAT, SULPHITE, MILK, AND SOY INGREDIENTS. MAY CONTAIN WHEAT.	
<b>Sodium</b> 160mg	<b>20%</b>
<b>Dietary Fiber</b> 2g	<b>25%</b>
<b>Sugars</b> 9g	





## Potato Chips A

Number of ingredients: 4

### **Nutrition Facts**

Serving Size 1 oz. (28g)  
Servings Per Container 1

Potatoes, Sunflower Oil and/or Corn Oil, and Salt. No Preservatives.

### **Notes**

**Ingredients:** Ingredients should be simple and easy to pronounce. Potatoes should be the first ingredient and there should be no hydrogenated oil.

## Potato Chips B

Number of ingredients: 37

### **Nutrition Facts**

Serving Size 1 oz. (48g)  
Servings Per Container 14

Rice Flour, Vegetable Oil (Contains One or More of the Following: Corn Oil, Cottonseed Oil, Soybean Oil, and/or Sunflower Oil), Dried Potatoes, Corn Flour, Maltodextrin, Wheat Starch, Modified Rice Starch, Sugar and Triglycerol Mon-Oleate, Contains 2% or Less of: Malted Barley Flour, Wheat Bran, Salt, Dried Black Beans, Whey, Buttermilk, Monosodium Glutamate, Garlic Powder, Coconut Oil, Natural and Artificial Flavors, Onion Powder, Dextrose, Sour Cream (Cream, Nonfat Milk, Cultures), Cultured Nonfat Milk, Citric Acid, Lactic Acid, Apple Cider Vinegar, Nonfat Milk, Vinegar, Disodium Inosinate, Disodium Guanylate, Sodium Caseinate, Modified Food Starch, and Soy Protein.



## Sweetened Iced Tea

Number of ingredients: 11

### Nutrition Facts

Serving Size 12 fl. Oz. (240mL)  
Servings Per Container 2

Water, High Fructose Corn Syrup, Tea, Phosphoric Acid, Sodium Hexametaphosphate (to protect flavor), Potassium Sorbate and Potassium Benzoate (preserve freshness), Caramel Color, Calcium Disodium EDTA (to protect flavor), Natural Flavor, Red 40.

**Calories** 130  
**Total Carb** 34g  
**Sugar** 1g

## Unsweetened Iced Tea

Number of ingredients: 3

### Nutrition Facts

Serving Size 12 fl. Oz. (240mL)  
Servings Per Container 2

Purified Water, Green Tea, Ascorbic Acid (Vitamin C)

**Calories** 0  
**Total Carb** 0g  
**Sugar** 0g

### Notes

**Ingredients:** Choose unsweetened varieties for less ingredients and no added sugar. Ingredients are listed in order from greatest amount to the least. There should not be more sugar than tea in iced tea!

**Nutrition:** Unsweetened tea should have zero calories and zero grams of sugars.





### Chocolate Drink

Number of ingredients: 19

#### **Nutrition Facts**

Serving Size 12 fl. Oz. (240mL)  
Servings Per Container 2

Water, High Fructose Corn Syrup, Whey (From Milk), Corn Syrup Solids, Cocoa (Alkali Process), Partially Hydrogenated Soybean Oil, Tricalcium Phosphate, Sodium Caseinate (From Milk), Nonfat Dry Milk, Salt, Dipotassium Phosphate, Xanthan Gum, Guar Gum, Natural and Artificial Flavors, Soy Lecithin, Mono and Diglycerides, Vitamin A Palmitate, Niacinamide (Vitamin B3), Vitamin D3, Riboflavin (Vitamin B2).

**Protein** 2g  
**Calcium** 10%  
**Vitamin D** 10%

### Chocolate Milk

Number of ingredients: 7

#### **Nutrition Facts**

Serving Size 12 fl. Oz. (240mL)  
Servings Per Container 2

Low fat Milk, Sugar, Cocoa Powder (Alkali Processed), Natural Flavor, Carrageenan, Vitamin A Palmitate and Vitamin D3.

**Protein** 8g  
**Calcium** 30%  
**Vitamin D** 25%

#### Notes

**Ingredients:** Think chocolate milk and chocolate drinks are the same? Think again! Chocolate milk has very simple ingredients and chocolate drinks are highly processed—they are loaded with additives and high fructose corn syrup.

**Nutrition:** Chocolate milk is naturally a good source of calcium and contains 8 grams of protein per cup!



## Wheat Bread A

Number of ingredients: 8

<b>Nutrition Facts</b>	
Serving Size 1 slice (48g)	
Servings Per Container 14	
Organic Whole Wheat Flour, Water, Cracked Wheat, Wheat Bran, Honey, Molasses, Soybean Oil, Salt and Yeast.	
<b>Sodium</b> 45mg	<b>2%</b>
<b>Dietary Fiber</b> 4g	<b>15%</b>
<b>Sugar</b> 1g	
Iron 8%	

## Wheat Bread B

Number of ingredients: 24

<b>Nutrition Facts</b>	
Serving Size 1 oz (28g)	
Servings Per Container 20	
Enriched Wheat Flour, Water, Wheat Gluten, High Fructose Corn Syrup, Honey, Yeast, Contains 2% or Less of: Vegetable Oil (Soybean and/or Cottonseed Oils), Brown Sugar, Salt, Dough Conditioners (Mono- And Diglycerides, Ethoxylated Mono- and Diglycerides, Ascorbic Acid, Azodicarbonamide, Enzymes), Calcium Sulfate, Calcium Propionate (Preservative), Distilled Vinegar, Guar Gum, Yeast Nutrients (Monocalcium Phosphate, Calcium Sulfate, Ammonium Sulfate), Corn Starch, Soy Lecithin, Soy Flour.	
<b>Sodium</b> 135mg	<b>6%</b>
<b>Dietary Fiber</b> 2g	<b>6%</b>
<b>Sugar</b> 3g	
Iron 4%	

### Notes

**Ingredients:** The first ingredient should always be “whole wheat” or “whole grain” flour. Also, look for brands that contain all food ingredients, very little additives and no high fructose corn syrup or hydrogenated oils.

**Nutrition:** Choose bread with at least 3 grams of fiber per slice.





### Soup A

Number of ingredients: 41

#### **Nutrition Facts**

Serving Size 1 cup (243g)  
Servings Per Container 1

Water, Pasta (Flour, Water, Egg), Chicken, Carrots, Celery, Onions, Chicken Base (Chicken, Salt, Chicken Fat, Dextrose, Sugar, Natural Flavor, Roasted Chicken Flavor, Chicken Broth, Turmeric, Hydrolyzed Corn Gluten, Lactose, Onion Powder, Disodium Inosinate, Disodium Guanylate, Autolyzed Yeast Extract and Spices), Modified Food Starch, Vegetable Base (Salt, Hydrolyzed Corn Gluten, Lactose, Sugar, Onion Powder, Disodium Inosinate, Disodium Guanylate, Autolyzed Yeast Extract, Turmeric, Natural Flavorings, Spices) Canola/Olive Oil Blend, Garlic, Spices

### Soup B

Number of ingredients: 18

#### **Nutrition Facts**

Serving Size 1 cup (243g)  
Servings Per Container 1

Chicken Broth, Onions, Carrots, Celery, Cooked Chicken (Chicken Meat, Water, Corn Starch), Brown Rice, Wild Rice, Cornstarch, Roasted Chicken Skin, Chicken Fat, Sea Salt, Onion Powder, Garlic Powder, Spices, Paprika, Turmeric, Rosemary Extract

#### **Notes**

**Ingredients:** Look for soups with all food ingredients and very little additives. Your soup ingredient label should not look like a chemistry assignment!



## Beef Jerky A

Number of ingredients: 16

<b>Nutrition Facts</b>	
Serving Size 1 oz. (28g)	
Servings Per Container 3.5	
Beef, Water, Sugar, Less Than 2% Salt, Corn Syrup Solids, Dried Soy Sauce (Soybeans, Salt, Wheat), Hydrolyzed Corn and Soy Protein, Monosodium Glutamate, Maltodextrin, Flavorings, Sodium Erythorbate, Sodium Nitrite	
<b>Sodium</b> 590mg	<b>25%</b>

## Beef Jerky B

Number of ingredients: 16

<b>Nutrition Facts</b>	
Serving Size 1 oz. (28g)	
Servings Per Container 3.5	
Organic Beef, Organic Sugar, Water, Organic Apple Cider Vinegar, Salt, Yeast Extract, Organic Black Pepper, Seasoning (Celery Powder, Salt, Lactic Acid Culture), Organic Garlic Powder, Natural Smoke Flavoring	
<b>Sodium</b> 470mg	<b>20%</b>

### Notes

**Ingredients:** Look for jerky that contains food ingredients and little to no additives, such as Monosodium Glutamate (MSG) and sodium nitrite.

**Nutrition:** Choose the brand lowest in sodium.





## Optimal Fueling for Performance

Your body is like a high performance vehicle. It needs to be filled with high quality fuel and the right fluids to get maximum performance. Maximize your performance by properly fueling your body before, during, and after your workout.

CHOOSE THIS	NOT THAT
<b>Start Strong</b>	
Turkey Sandwich on Whole Wheat Bread and an Orange	Greasy Burger and French Fries
Cheerios with Banana Slices and 1% Milk	Glazed Donut
<b>Stay Strong</b>	
Water or Sports Drink	Energy Drink
<b>Finish Strong</b>	
Banana and Chocolate Milk	Beer and Chicken Wings
Fruit Smoothie	Bag of Chips
Oatmeal with Fruit and Nuts, Hard-boiled Egg and low-fat Milk	Pancakes with Butter and Syrup with a side of Bacon



A well-balanced performance meal plan should include three nutritious meals with snacks in between. Choose healthy snacks to boost energy maintain your mental edge.

HEALTHY SNACKING MADE EASY	
Choose this	Not That
Granola Bar	Chocolate Chip Cookies
Cup of Fresh Vegetables	Potato Chips
Banana	Candy Bar
½ Peanut Butter Jelly (low sugar jelly) Sandwich	Cheese-flavored Crackers
Yogurt Parfait	Buttered Popcorn
Natural Flavored Sparkling Water	Soda





# weight control

## Weight Control

As a Soldier, meeting body fat standards in accordance with AR 600-9 is a job requirement. Beyond that, maintaining a healthy body fat percentage is critical for optimal performance and good overall health. Managing weight is more than going on a diet or upping the amount of physical activity. Weight loss and weight loss maintenance is a bit more complicated and requires behavior modification and commitment to a lifestyle change.

Only intensive counseling has been effective in achieving long-term weight control. Intensive counseling is defined as multiple face-to-face sessions over a period of time.



Army dietitians offer a standardized weight management program called, ArmyMOVE! to a Healthier Weigh. ArmyMOVE! is a comprehensive, evidence-based weight management program that includes behavior modification, activity and diet.

In addition, self-monitoring (via use of accelerometers/pedometers and food/activity logs) and maintenance of weight loss is emphasized. ArmyMOVE! meets nutrition counseling requirements per AR 600-9.

The program (Phase I) is spread over three months and requires intensive face-to-face contact of six facilitated group sessions followed by two individual sessions with a Registered Dietitian (RD). Upon completion of the Phase I minimum requirements, participants follow-up with an RD monthly for three months with one last contact on or about the nine-month mark.



Keep your weight in check! If you within 2% of body fat standards, be proactive and consider utilizing the Army Move! Program for prevention.

## Weight Loss Tips

1. Set reasonable, achievable and measurable goals. Write them down and post them where you see them every day.
2. Weigh yourself at least once a week. Weigh the same time each day, preferably first thing in the morning, and use the same scale. Track your progress.
3. Replace junk food in your diet with healthier foods—whole grains, fruits and vegetables, lean proteins, and healthy fats from foods like nuts and seeds.
4. Don't skip meals and keep healthy snacks like fruits and vegetables handy.
5. Drink 2 cups of water right before a meal. This helps you feel full and may help reduce caloric intake.
6. Listen to your body. Eat when you feel the first pangs of hunger. Stop as soon as you start to feel satisfied (neither full nor hunger).
7. Eat slowly. Taking at least 20 minutes to eat gives your “fullness signal” a chance to kick in.
8. Reduce the number of times you eat foods prepared away from home. Pack your lunch and cook dinner at home.
9. Reduce calories by decreasing portions a little at each meal. Decrease high calorie food and increase lower calorie foods like vegetables. Try eating on a 10-inch plate or smaller.
10. Learn how to read and interpret food labels.





## Tips for Maintaining Weight Loss

1. Keep your eating patterns consistent. Try to eat meals and snacks at roughly the same time each day.
2. Eat breakfast every day.
3. Don't skip meals. Plan ahead and keep healthy snacks handy.
4. Building exercise into your daily routine. Regular exercise helps prevent weight re-gain.
5. Weigh yourself regularly. Once per week is sufficient.
6. Keep a food diary. Evaluate your calorie intake at least once every two weeks.
7. Stay committed to a healthy diet. Use your food diary to evaluate your daily nutrition choices.
8. Minimize screen time. This promotes sitting and inactivity. Commit to moving more and sitting less throughout the day.
9. Exercise at least an hour a day, almost every day. Spice it up by trying different activities.
10. Watch your calorie intake because as your body becomes smaller, it burns fewer calories. Reassess calorie needs every few months.
11. Eat a variety of foods from all of the food groups to get the nutrients you need. A well-balanced diet will help keep you healthy and your weight in check. Try and choose foods from at least 3–4 food groups at each meal and snack.









# » TECHNOLOGY

# technology

## Technology

### DID YOU KNOW THAT TECHNOLOGY CAN HELP REACH ONE'S FITNESS AND HEALTH GOALS?

Using technology can help you reach your Performance Triad target goals. You can get feedback, social engagement, motivation, and additional information. There are numerous mobile apps and other technology tools that you can use—find the one that works for you!

Your smartphone is a powerful partner in enhancing performance and personal readiness. Over 50% of smartphone users search for health information on their phones and one out of five has at least one health app on their phone. Most individuals surveyed on this topic like apps that focus on exercise, nutrition, and weight loss.

- » The Smartphone is a powerful partner in enhancing performance and personal readiness. Over 50% of Smartphone users search for health information on their phones and one out of five has at least one health app on their phone. Most individuals surveyed on this topic like apps that focus on exercise, nutrition, and weight loss.
- » **Leveraging social media for health and readiness:** Virtual support groups help keep you motivated to meet weight loss goals. People who listened to podcasts, read daily health-related posts, and posted daily Twitter updates on weight loss experienced greater weight loss than those who just reviewed podcasts. Researchers found every 10 tweets posted resulted in ~0.5% weight loss.
- » **Personal Readiness Devices (PRD):** Devices that track user activity, nutrition, and sleep can help them meet their health and performance goals. These devices combine biosensors, web or smartphone applications, and online communities so users can track personal progress, create online competition between friends, and use the data to help motivate change.
- » Evidence supporting the effectiveness of activity monitoring technology for promotion of physical activity behavior is emerging. Self-monitoring through the use of pedometer-based interventions has increased awareness and physical activity during 1–6-month trials. Individuals who used tracking devices increased their physical activity by 26.9% over the baseline.

# websites

## Websites

- » **Army Medicine:** <http://www.armymedicine.mil>  
Army Medicine strives to maintain relevancy in the quickly changing environment to help the organization transform to meet new challenges and demands, while simultaneously maintaining the current global mission. There is the fundamental need to improve readiness in the context of health, resilience and performance. To strengthen the readiness and performance of Soldiers, Army Medicine must optimize health and resilience by improving the quality of sleep, activity, and nutrition. Visit this site for additional information on Performance Triad.
  
- » **ArmyFit:** ArmyFit is an interactive social media resource to help Soldiers and Families reach their health and wellness goals. It is similar to Facebook, but it is focused on enhancing performance and health. Take your Global Assessment Tool (GAT v2.0) on ArmyFit to see where you stand on health, fitness, and resiliency. The GAT 2.0 results integrates electronic resources to help Soldiers and Family members assess their resiliency and health in the areas of Emotional, Social, Family, Spiritual, and Physical domains and scores you on your Performance Triad target behaviors. Join the Performance Triad group on ArmyFit. If you use a PRD or activity monitor app you can now sync and share your data on ArmyFit.
  
- » **H.E.A.L.T.H.:** The Healthy Eating Activity Lifestyle Training Headquarters is a web and smartphone app that helps promote performance nutrition and exercise. It was developed using AR 600-9 and APFT standards, and the expertise from nutrition, fitness, and behavior experts. H.E.A.L.T.H. is designed to help users maintain or lose weight and to improve fitness by providing personalized nutrition and fitness plans. The programs is updated as users meet their goals. Your family can use it too! H.E.A.L.T.H. has been successfully used by over 8,000 Soldiers to lose weight and improve their performance nutrition.

- » **Human Performance Resource Center HPRC:** The Human Performance Resource Center is an online, one-stop clearinghouse for evidence-based information and key resources to help Warfighters and their Families in all aspects of performance to achieve Total Fitness and, ultimately, human performance optimization.
  - **Family & Relationships** includes topics such as relationship enhancement, family resilience, deployment phases, family nutrition and physical fitness, geared towards the specific needs of military families.
  - **Physical Fitness** covers topics such as physical training and exercise, injury prevention, weight management, fitness tools, and resources specifically for women.
  - **Dietary Supplements:** Check out special section, Operation Supplement Safety, to learn in-depth information about dietary supplements and how to choose them wisely..
  - **Nutrition** has topics such as nutrition basics, alerts, resources, interactive tools, and “Fighting Weight Strategies.”
  - **Mind Tactics** addresses topics such as mental focus/toughness, resilience, relaxation, stress management, getting the best sleep, and alcohol, tobacco, and drugs.
  - **Environment** contains information that will help users perform optimally in extreme conditions of heat, altitude, aerospace, water, and more.
  - **Total Force Fitness** highlights information and resources on total fitness, bringing together all the above domains to help Warfighters develop resilience and optimal performance, as well as integrative performance enhancement programs and practices and detailed strategies for pain management.
  - **What does this mean for users?** HPRC translates evidence-based materials on various aspects of performance, creates materials on specific topics, and highlights existing resources. Users can go to any HPRC domain and find pertinent information—anything from brief downloadable “recipe/tip cards” to longer pieces that address specific topics. Each domain has unique information related to its subject area, many related specifically to the military.
- » **Sleep Education:** Along with nutrition and exercise, sleep is one of the three pillars of a healthy lifestyle.  
<http://bit.ly/healthysleepbasics>

# smartphone apps

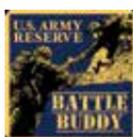
## Smartphone apps

### Performance Triad App



The Performance Triad app helps users learn how to use sleep, activity, and nutrition to optimize performance and improve their health.

### Battle Buddy



This app helps users be a good Battle Buddy by providing the tools and information needed to assist user's buddy during a crisis. It also provides tips and tools to help users intervene before the situation reaches crisis proportions. This app is organized into two primary areas, "My Buddies" and "My Resources."

### CBT-I Coach



The app will guide users through the process of learning about sleep, developing positive sleep routines, and improving their sleep environments. It provides a structured program that teaches strategies proven to improve sleep and help alleviate symptoms of insomnia. CBT-i Coach is intended to augment face-to-face care with a healthcare professional. It can be used on its own, but it is not intended to replace therapy for those who need it.

### Mindfulness Coach



The Mindfulness App helps users to reduce stress and increase wellbeing. Scientific research proves that regular practice for 20 minutes a day brings desired effects.

## Operation Care Package (game)



Operation Care Package is a fun, physics-based game where users use a cannon to shoot care packages at challenging obstacles. Earn gold, silver and bronze medals to unlock additional levels. Score too low to level-up? Users can play any challenge again without losing points. Game play is easy to learn and can be played by all ages. Connect with family and friends by inviting them to play—or challenge them to beat their score!

## Tactical Breather



The Tactical Breather application can be used to gain control over physiological and psychological responses to stress. Through repetitive practice and training, anyone can learn to gain control of their heart rate, emotions, concentration, and other physiological and psychological responses during stressful situations.

## T2 Mood Tracker



T2 Mood Tracker is a mobile application that allows users to monitor and track emotional health. Originally developed as a tool for service members to easily record and review their behavior changes, particularly after combat deployments, it has now become very popular with many civilian users around the world.

## Breathe2Relax



Breathe2Relax is a portable stress management tool. Breathe2Relax is a hands-on diaphragmatic breathing exercise. Breathing exercises have been documented to decrease the body's 'fight-or-flight' (stress) response and help with mood stabilization, anger control, and anxiety management.

**NHLBI BMI Calculator:**

The National Heart, Lung, and Blood Institute's BMI (Body Mass Index) calculator is a useful tool to screen for weight categories that may lead to health problems. The downloadable phone application puts the fully functioning calculator right on the user's phone, along with links to resources on the NHLBI site.

**Army Physical Readiness Training (FM-7-22):**

A Quick and Handy PRT Reference. NOW WITH BONUS CONTENT: NAVY SEAL FITNESS

The conduct of Army PRT follows the principles of precision, progression, and integration. These principles ensure that Soldiers perform all PRT sessions, activities, drills, and exercises correctly, within the appropriate intensity and duration for optimal conditioning and injury control.

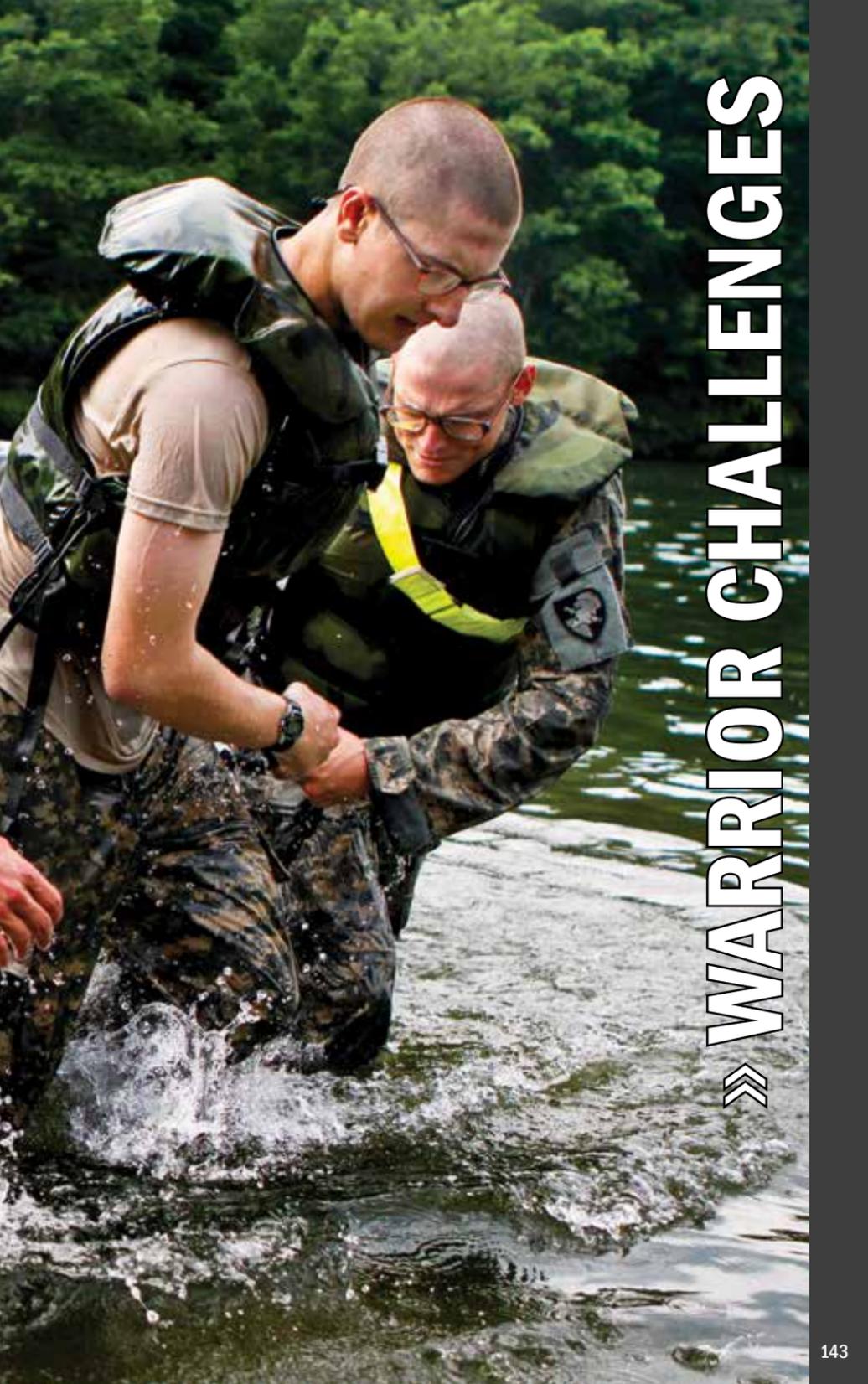
**Platoon Leader Handbook (Android only):**

This application allows a platoon leader to organize a variety of information about their squad in their phone.

**NOFFS—Navy Operational Fitness Fueling System:**

Provides the Navy with a "best in class" physical fitness and nutrition performance resource that provides guidance to Sailors and Navy health and fitness professionals. NOFFS instructs individuals on how to physically train effectively and safely, and how to make healthy nutrition choices in both shore-based and operational environments.





# » WARRIOR CHALLENGES

# Warrior Challenges

## Warrior Challenges

Take a Warrior Challenge! This area of the guidebook has 26 challenges for you and your team to choose from. You can challenge yourself, your team, or a unit such as a company, battalion or even a Brigade!

Unit challenges are highly motivating and build esprit-de-corps. They can also push you to dig deep and achieve what seems difficult. They can help train you to find the mental, emotional and physical reserve when you are in harms way.

Always remember, though, to be careful and stay safe. Do your risk assessment and treat it like any other training event. Check your ego at the door and don't push it when your body is in pain. Have fun, but be smart and remember, Safety First!



## *Building Esprit-de-Corps* **Building Esprit-de-Corps**

### **BASELINE TESTING**

Establish a baseline and track it! You can't measure improvement if you don't know where you started. Start with some "baseline" events with easily accessible standards for age that you can use for comparison.

The APFT is a great example, but don't limit yourself to this alone. Try the Navy Fitness Test or the Marine Combat Fitness Test to challenge yourself to a different standard. Use 1, 3, or 5 repetition maximum powerlifts to test your strength.

### **ORGANIZING INDIVIDUAL, TEAM AND UNIT CHALLENGES**

These challenges can be done individually or as a team.

#### ***Individual Challenges:***

These are designed to be done on their own but can also be done in a group to receive immediate feedback.

#### ***Team Challenges:***

- » *Option 1:* Break down the challenges into distinct pieces. For example, if you have a team of 3 and the challenge is a Sprint Triathlon, you can have 1 person swim, 1 bike and 1 run.
- » *Option 2:* Form teams of 8–10 that perform the entire event, but score only the best 4 or 5 towards the challenge score (see Army Ten Miler team rules: <http://bit.ly/ArmyTenMiler>).

#### ***Unit Challenges:***

You can challenge larger groups, for example Company, Battalion or even the whole Brigade. Combine several of the individual/team challenges and track them over time. Add points to each challenge and the group with the most "points" win.

# Score to Perform!

## Score to Perform!

### SCORING SUGGESTIONS

Here are some suggestions to score your events and make them even more competitive and fun.

#### *Individual and Team Events*

Score each participant in a rank order fashion. For example, whoever finishes first is given a score of “1.” The next person is then given a score of “2,” and so on. If you have 10 people in your squad or group, you will have 10 total scores ranging from 1 to 10 (you can also assign the scores the other way: 10 for the first and 1 for the last).

Ensure you have rules for tie-breakers for each event!

Then collect points over the next 6 months using a combination of challenges.

#### *Unit Challenges*

For Company, Battalion or Brigade challenges, establish a point system for the different events. We recommend choosing multiple challenges and assigning points for each event.

You can assign different levels of points for the level of difficulty for each event and for performance levels. Also, provide points for participation and completion of particular events. At the end of all the events, add them up for the final winner!

A proper scoring system is important to help ensure each Soldier has an opportunity to participate and contribute to the unit’s success, while not being intimidated by the challenges. This way, you can all celebrate together while inspiring teamwork, building camaraderie and reinforcing the Warrior Ethos of the American Soldier.

*I will always place the mission first.*

*I will never accept defeat.*

*I will never quit.*

*I will never leave a fallen comrade.*

— The Warrior Ethos



# Weekly Challenge Options

<b>Challenge</b>	<b>Description</b>	<b>Level (Individual, Team)</b>
<b>“Double Marathon”</b>	Get 104,800 steps in one week (that’s 2 marathons!)	Individual
<b>Medicine Ball Throw</b>	20 lb vs. 14 lb (scored by distance)	Individual, Team
<b>Walking Lunge</b>	400m walking lunge (time)	Individual, Team
<b>Ranger Bench Press</b>	Max repetition bench press at a goal weight of the Soldier’s body weight	Individual
<b>Ranger Run</b>	5 mile run (Goal= under 40 minutes)	Individual, Team
<b>Ranger Deadlift</b>	Max repetition deadlifts at a goal weight of [Soldiers body weight x 1.5]	Individual
<b>Kettlebell Push Press</b>	100 kettlebell push press 35lb for time	Individual
<b>Row</b>	Rowing machine 5 kilometers for time	Individual, Team
<b>Ruck March</b>	4/8/12 mile ruck march with 35lb minimum load	Individual, Team
<b>Bike</b>	6/12/25 miles	Individual, Team
<b>Core Challenge</b>	Longest time in 4 plank positions (front/side x2/bridge)	Individual, Team
<b>Pull-ups</b>	Max repetition pull-ups	Individual
<b>Functional Fitness Workout</b>	400m Run, 21 goblet squats (53lb kettlebells), 12 pull-ups- 3 Rounds	Individual

# WARRIOR CHALLENGES

<b>Challenge</b>	<b>Description</b>	<b>Level (Individual, Team)</b>
<b>SOF THOR-3 Deadlifts</b>	3-repetition max deadlifts	Individual
<b>Shuttle Run</b>	300m shuttle run	Individual
<b>Rope Climb</b>	3 rope climbs (15ft)	Individual
<b>Run</b>	5K/10K/10 mile/13.1 mile/ 26.2 mile	Individual, Team
<b>Burpees</b>	7 minutes of burpees	Individual, Team
<b>Powerlifting</b>	1-repetition maximum of bench press, deadlift, back squat	Individual, Team
<b>Sprint Triathlon</b>	Swim 500 M/Bike 12 miles/ Run 5k	Individual, Team
<b>Swim</b>	15 consecutive minutes for distance	Individual, Team
<b>Ground to Overhead</b>	30 reps for time with a goal weight of [Soldier's body weight x .75]	Individual
<b>Navy Seal PT Test</b>	Swim 500 yards; 2 min push- ups; 2 min situps; Max rep pull-ups; Run 1.5 miles	Individual
<b>Marine Combat Fitness Test</b>	880 yard run, 30 lb ammo lift, 300 yard maneuver run	Individual
<b>Obstacle Course</b>	Design an obstacle course (suggested one in FM 7-22)	Individual, Team
<b>1946 Army PT Test</b>	Try the WWII standards! <a href="http://bit.ly/1946ArmyPT">http://bit.ly/1946ArmyPT</a>	Individual

# *The Finish Line*

## **The Finish Line**

You can also give other non-fitness “bonus” points for promoting health and wellness.

### **Bonus Points:**

- » Attendance at training events and lectures that promote health
- » Army Wellness Center Visit: points for individuals that schedule a visit to determine your baseline fitness level. They can measure your body composition and determine your aerobic capacity
- » Greatest % weight loss
- » Greatest % gain on the weight lifting portion
- » Family Involvement—double the points for involving Family members in any of the challenges
- » Submit videos, photos or essays on the meaning of being a member of the Profession of Arms, Professional Soldier Athlete and the role of the Performance Triad
- » Submit new cadence calls that incorporate the meaning of being a member of the Profession of Arms, Professional Soldier Athlete and the role of the Performance Triad
- » Submit stories on how an individual's or unit's health and performance improved by following the Performance Triad curriculum
- » Lead, organize or participate in a community “fun run,” health fair or other local event

## **Navy Seal Physical Screening Test Standards**

<b>PHYSICAL SCREENING TEST</b>	<b>MINIMUM</b>	<b>AVERAGE</b>	<b>OPTIMUM</b>
Swim 500 yards breast or side stroke	12:30	10:00	09:30
Push-ups in two-minutes	42	79	100
Sit-ups in two-minutes	50	79	100
Pull-ups no time limit	06	11	25
Run 1.5 miles	11:00	10:20	09:30

## Rewards and Recognitions

This area will help you reward individual and team efforts and get recognition for the great things your unit has done!

### Rewards

- » Major General Aubrey 'Red' Newman Award (Forscom Reg 215-8): *Given to a Soldier who has demonstrated the "ability to mentor, coach and/or counsel, subordinates they directly supervise over a period not less than 6 months, and include a measurable impact their abilities had on a team, squad, section, branch, directorate, platoon or unit."*
- » Army Achievement Medal for the organizer or winner of the challenges for the unit.
- » 3 or 4 day pass or a Certificate of Achievement for the winner of an individual/team event.

### Recognition

- » Performance Triad Streamer.
- » Enlist your PAO to help develop stories and postings for social media sites or a news article in your local paper.

## RESOURCES

### Read This!

- » FM 7-22: Chapter 7-Execution of training; Chapter 9-Strength and Mobility Activities; Appendix E: Obstacle Negotiation
- » FORSCOM Regulation 215-8
- » 1946 Army PT Standards: <http://bit.ly/1946ArmyPT>

### Explore This!

- » [www.ArmyPRT.com](http://www.ArmyPRT.com)
- » United States Marine Corp Combat Fitness Testing: <http://www.marines.com/becoming-a-marine/how-to-prepare/cft#>
- » Army Wellness Centers: <http://bit.ly/ArmyWellnessCenter>



Use the following website for more information on Sleep, Activity, and Nutrition as well as other resources.

**Army Medicine:** <http://www.armymedicine.mil> Army Medicine is your one stop location for information about the Performance Triad, public health catalogs of training and education materials, links to social media outlets, .links to Army and DoD resources on wellness, health, fitness, and resilience (such as the Ready and Resilient Campaign [www.army.mil/readyandresilient](http://www.army.mil/readyandresilient)).

**ArmyFit:** ArmyFit is an interactive social media resource to help Soldiers and Families reach their health and wellness goals.

- Create a profile, set up connections such as “Performance Triad” group to get daily blog, and enter or sync your fitness data.
- Under “My Programs,” you can review your plan, enter weight, activity, workouts, food, earn achievements and get support.
- Take the GAT 2.0 and view your results and recommendations as well as your RealAge®.
- Topics on Emotional, Social, Family, Spiritual, and Physical dimensions for overall health.

**H.E.A.L.T.H.:** The Healthy Eating Activity Lifestyle Training Headquarters is a web and smartphone app that helps promote performance nutrition and exercise.

- **Exceeding the standards:** The optimal goal for Soldiers is not just to meet the standards of weight and fitness, but to exceed the standards (achieve better than standards) to ensure compliance at all times.
- **For the Family:** Civilian Family Members can use the program to lose weight, reduce body fat, improve fitness, improve overall health, and support their Soldier in meeting the guidelines in the AR 600-9.
- **Enhancing Personnel Readiness & Warfighter Performance:** A primary online resource for proper nutrition and physical fitness information needed to ensure personnel readiness and increase their Warfighter performance.
- **Army H.E.A.L.T.H. Anywhere:** Visit [armyhealth.pbrc.edu](http://armyhealth.pbrc.edu) on your mobile phone or tablet to experience H.E.A.L.T.H. mobile.

**Human Performance Resource Center (HPRC):** HPRC is an online, one-stop clearinghouse for evidence-based information and key resources to help Warfighters and their Families in all aspects of performance to achieve total fitness and, ultimately, human performance optimization.

- HPRC translates evidence-based materials on various aspects of performance, creates materials on specific topics, and highlights existing resources. Users can go to any HPRC domain and find pertinent information—anything from brief downloadable “recipe/ tip cards” to longer pieces that address specific topics. Each domain has unique information related to its subject area, many related specifically to the military.
- **Sleep Education** Along with nutrition and exercise, sleep is one of the three pillars of a healthy lifestyle. <http://bit.ly/healthysleepbasics>
- **Mind Tactics** addresses topics such as mental focus/toughness, resilience, relaxation, stress management, getting the best sleep, and alcohol, tobacco, and drugs.
- **Nutrition** has topics such as nutrition basics, alerts, resources, interactive tools, and “Fighting Weight Strategies.”
- Check out the special section, **Operation Supplement Safety**, to learn in-depth information about dietary supplements and how to choose them wisely.

**Physical Fitness** covers topics such as physical training and exercise, injury prevention, weight management, fitness tools, and resources for women.

**Total Force Fitness** highlights information and resources on total fitness, bringing together all the above domains to help Warfighters develop resilience and optimal performance, as well as integrative performance enhancement programs and practices, and detailed strategies for pain management.

**Family & Relationships** includes topics such as relationship enhancement, family resilience, deployment phases, family nutrition and physical fitness, many geared towards the specific needs of military families.

**Environment** contains information that will help users perform optimally in extreme conditions of heat, altitude, aerospace, water, and more.

**Operation Live Well:** A DoD program that promotes community health and focuses on integrative wellness, physical activity, sleep, nutrition, tobacco-free living, and mental wellness.

- Improve health and wellness of the entire community. This website contain a set of tools, resources and original content like cookbooks, which you can use to adopt or maintain a healthy lifestyle.
- Offers inspirational blog posts and community-wide social media engagement.
- Health tools include online tools and mobile applications that can help guide, track and measure your journey to wellness: <http://www.health.mil/Military-Health-Topics/Operation-Live-Well/Health-Tools>

**United States Army Public Health Command:** (USAPHC) The U.S. Army Public Health Command promotes health and prevents disease, injury and disability in Soldiers and retirees, their Families, and Army civilians, and provides veterinary services for the Army and Department of Defense.

- Healthy Living
- Active Living
- Alcohol and Substance Misuse
- Behavioral Health
- Health Promotion and Education
- Men's Health
- Nutrition
- Oral Fitness
- Performance Triad
- Responsible Sexual Behavior & Health
- Sleep
- Soldier Medical Readiness Campaign
- Tobacco-Free Living
- Women's Health Portal

See Technology Section for list of Smartphone Apps

Visit: <http://bit.ly/OperationLiveWell-tools>

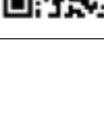
# QR codes

7 Min Workout		Eating on Budget	
Army Fit		Food Nutrition News	
Army Medicine		Goal Setting (Module 15)	
Army Fit Workouts		Setting Goals	
Army Fit Goal Setting		Goal Setting 2	
Army Health		Goal Setting 2_15	
CAPE (Module 1)		Health David Bitterman	
Changing Eating Video		Healthy Family Matters	
CSF2		Healthy Sleep Basics	
Eat Healthy tips		HPRC Program Guide	

<p>HPRC – Family Nutrition</p>	
<p>Family Eating Habit</p>	
<p>HPRC – Nutrition</p>	
<p>HPRC – Program Guide</p>	
<p>HPRC – PT Videos Module 9</p>	
<p>HPRC – Verticalcore</p>	
<p>MFT (Module 15)</p>	
<p>Never Give Up</p>	
<p>Overcoming Obstacles (module 15)</p>	
<p>Personalize Nutrition</p>	

<p>HPRC</p>	
<p>HPRC – Mind Tactics Stress</p>	
<p>PT Tools App</p>	
<p>R2C Module 15</p>	
<p>R2C – main</p>	
<p>ARP6-22</p>	
<p>Scanpg – Sports Nutrition</p>	
<p>War Fighting Nutrition</p>	
<p>Fuel for Performance</p>	
<p>Acsmpublic</p>	

# QR codes

Extrinsic Rewards	
Get Enough Sleep	
Not Recover Sleep Loss	
Take Naps	
Loss of Sleep	
Mind Body Skills	
Sleep Tactics	
Sleep Well poster	
Dr. Dement video	
HPRC - Caffeine Gum	

Assess Sleep Need	
Sleep Deployment	
Army apd	
Catch Up on Sleep	
Caffeine Info	
Stay Alert gum	
Calculate Energy	
Rations	
Calorie Burn Calculator	
Burn Per Hour	

# QR codes

Eating Right poster	
Soldier Nutrition	
Urine Chart	
Motivational Interview	
Motivational Interview – overview	
Motivational Interview – 1	
Motivational Interview – 2	
Motivational Interviewing	
Operation Live Well	
POA Mil Review 1	

POA Video	
Professional Arms Paper (Module 1)	









LEARN MORE ABOUT THE PERFORMANCE TRIAD:  
**SLEEP, ACTIVITY, AND NUTRITION**

AT [HTTP://ARMYMEDICINE.MIL](http://armymedicine.mil)



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