ARMY FAMILY
IS AN UNSTOPPABLE FORCE

Performance Triad

The Total Army Family Guide

A guide to help with enhancing your health with Sleep, Activity, and Nutrition.

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Sleep, Activity, and Nutrition

»SLEEP

INTRODUCTION

Sleep: Vital to Well-being

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

Sleep is a biological need for brain function. Adults require 7–8 hours of quality sleep every 24 hours to maintain their mental edge. When individuals do not get enough sleep, their mental acuity suffers—putting themselves and others at risk for making errors that lead to accidents and mishaps. Insufficient sleep is a safety risk and a threat to personal 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. 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 varies according to age and inherited genes. Most adults need 7–8 hours of sleep every 24 hours. Very few people can perform optimally on less than 7–8 hours.

Individuals 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.

Bedtime Routine

1. Establish a target bedtime and adhere to it.
2. Sleep in a comfortable, cool, quiet, dark, and safe 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.

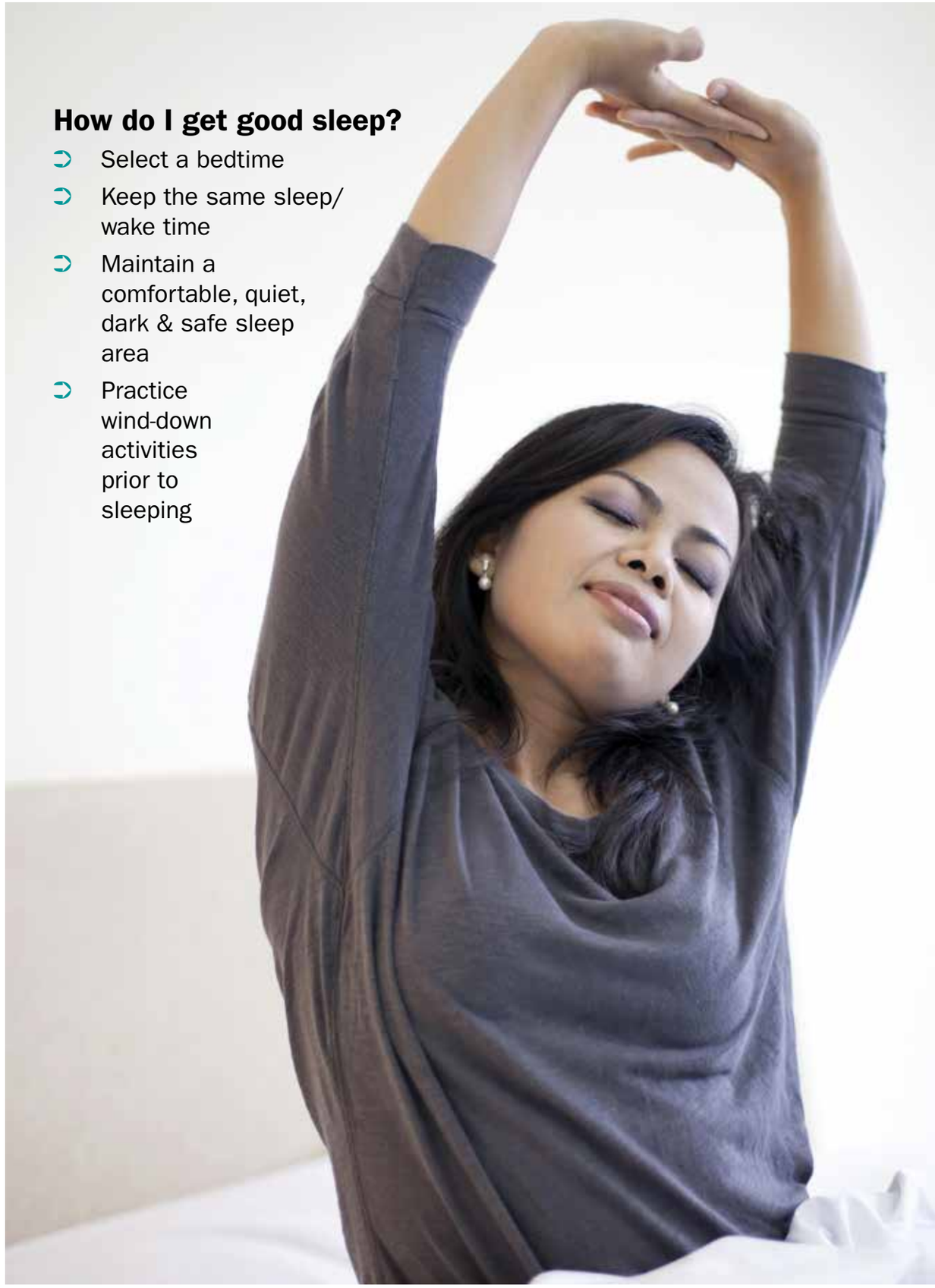
Set a bedtime:

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:

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 bedding (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. Use soft ear plugs or soothing white noise to help you sleep.



How do I get good sleep?

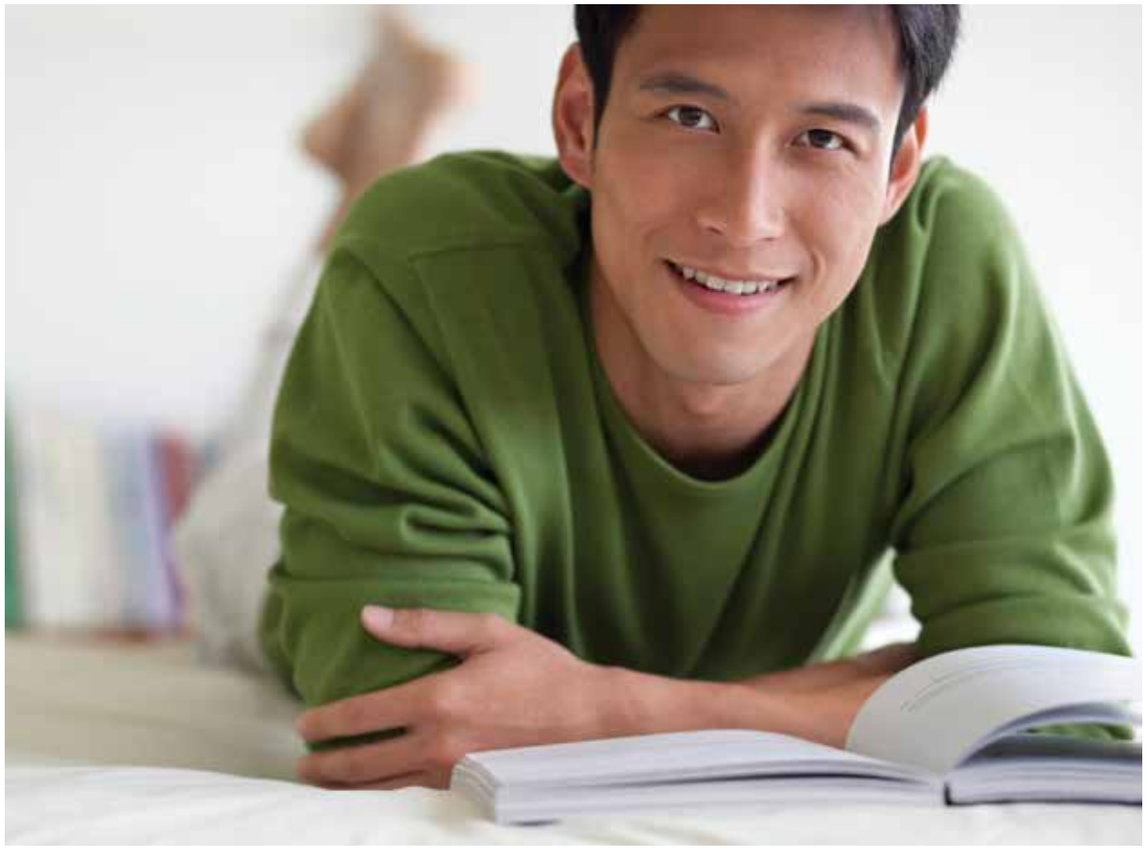
- Select a bedtime
- Keep the same sleep/ wake time
- Maintain a comfortable, quiet, dark & safe sleep area
- Practice wind-down activities prior to sleeping

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 interacting 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.

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 like knitting, drawing, puzzles, and 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.
- Stop caffeine at least 6 hours prior to bedtime.
- Use the bathroom to prevent sleep interruption.
- Physical activity results in a cognitive boost that lasts up to 3 hours afterwards. Finish exercise 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 earplugs 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 or a room fan to 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, worsening the problem (to avoid overuse of make/making). 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.*

What about my room?

Take the time to look at your room and determine if it is sleep friendly. Your ability to enhance your room's sleep friendliness may vary depending on where you live. 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 do you need white noise to block unwanted sounds?
- **Touch:** Room temperature should be cool: around 65–72°F. Think about your sheets, bed, pillows, and pajamas. All should feel comfortable for you and your sleep positions.
- **Smell:** Offensive or soothing? 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 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 fuel 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)

Sleeping problems are a common complaint. Insomnia in Service members has been 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, 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 his or her ability to function. Their own proficiency is overestimated under sleep-deprived conditions. Since insufficient sleep also impairs one's ability to self-monitor, a person who is sleep-deprived tends to overestimate his or her ability to function. Such physiologic deficits cannot be overcome by motivation, initiative, or willpower—and can only be TEMPORARILY overcome by caffeine.

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 Centers for Disease Control (CDC), approximately 25% of motor vehicle accidents are related to drowsy driving.

The total number of sleep-deprivation-related 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, to snore, and to sleep 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.

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, establish a sleep routine with the same sleep and wake times.
4. Practice good sleep habits.

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 works 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.

Signs of Inadequate Sleep

The best way to evaluate an individual'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?"

Overcoming Sleep Deprivation

Sleep Banking:

Individuals can pay down their sleep debt AND bank sleep by getting 8 or more hours of sleep.

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.
- Only use naps to achieve 7–8 hours of sleep every 24 hours, otherwise it may disrupt your nightly sleep.
- Teens and adults may use naps to counter those times when sleep debt was incurred and to ensure maximum alertness.

Caffeine

It is highly recommended to not have caffeine 6 hours before bed time. “Sleep is fuel 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 you daily caffeine intake.

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

Using caffeine to counteract 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®
60 mg =	1 squirt (1/2 tsp) MiO® Energy Water Enhancer
60 mg =	1 16-oz. bottle of Diet Coke®
80 mg =	1 8.3-oz. can of RedBull®
100 mg =	1 piece of Stay Alert® chewing gum
160 mg =	Monster® Energy Drink
200 mg =	1 tablet of NoDoz®
330 mg =	1 16-oz. Starbucks PikePlace® Roast coffee

High doses of caffeine from (caffeine-containing) beverages have 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.

In Your Control

You can do several things to achieve good quality sleep, but be aware of "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

Light

There is some evidence that sources of light found in the office and at home (e.g. light from computers, smart phones and other hand-held electronics), boost alertness.

While this alertness boost may be useful for night and shift workers, it can lead to poor sleep quality and duration.

Several tools can be used to minimize light exposure to help maximize your ability to sleep. To date, only these three devices have been proven to 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.

Cognitive Techniques

Sleep and thinking are both behaviors, but doing them at the same time makes it difficult to do either well. Many individuals 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 an underlying component of stress, anxiety, conscientiousness, or worry.

Practicing any of these recommended techniques can help many 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 and 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 therapy. It can be used on its own but is not intended to replace therapy. http://bit.ly/cbticoach

Fight or Flight

Most individuals 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 individuals 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.

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 be aware that your mind has wandered, and return to your chosen focus.

Follow this guide to begin practicing mental focusing exercises. Identify what you would like to focus on, such as 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; and 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:

- 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.

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 leads 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 months)	14–17 hours of sleep
Infants (4–11 months)	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
Teens (14–17 yrs)	8–10 hours of sleep
Younger adults (18-25)	7–9 hours of sleep
Adults (26-64)	7–9 hours of sleep
Older Adults (65+)	7–8 hours of sleep

- Set a fixed bedtime and stick with it. Backwards plan and include time needed to wind down.
- Use relaxing and soothing activities to transition and prepare children 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.
- Strictly enforce 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 transporting him or her yourself; do not allow your teen to drive drowsy.

Why are teens so sleep deprived?

Final Push…

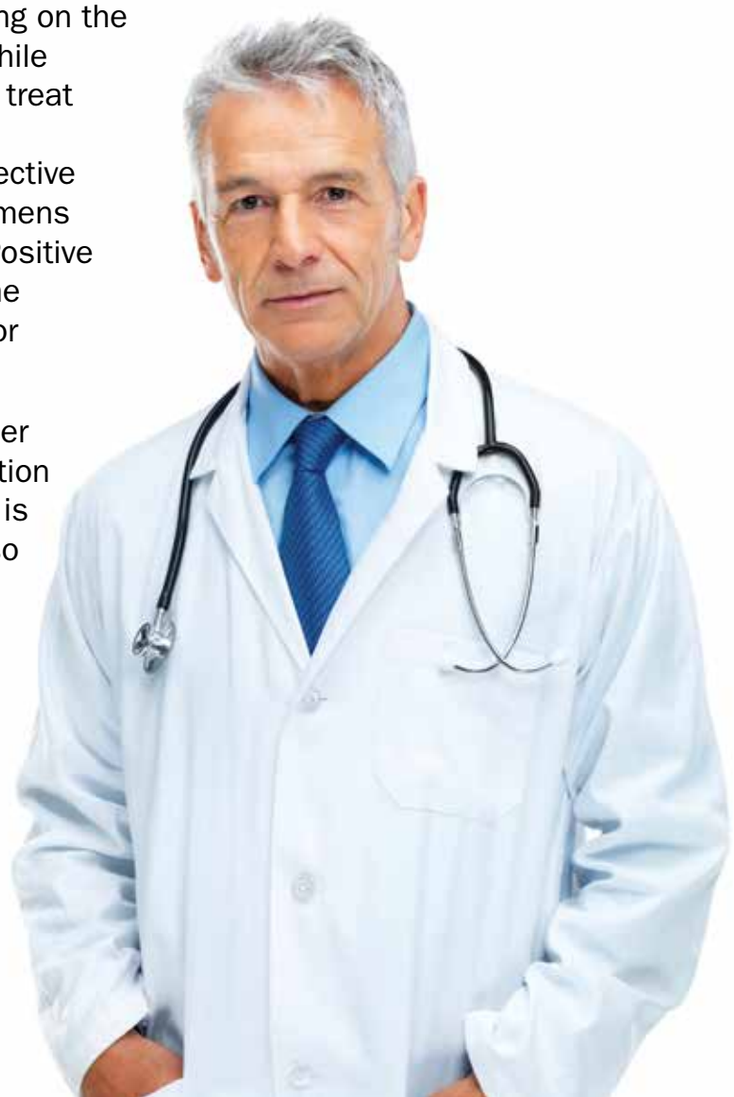
Despite your best efforts, even after using much of the information provided in this guide, you somehow still do not feel rested or are unable to achieve a good night's sleep. It is time to see your primary care provider if:

- You have tried for over 2 weeks and/or
- Your roommate or bed partner reports you snoring or having episodes where you stop breathing (apnea)
- You have a sleep diary documenting concerns 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) machine or cognitive behavior therapy for insomnia.

Regardless of the sleep disorder you may have, effective evaluation and treatment are 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; doing so will tend to make you more awake, worsening the problem. 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 are taken late in the day (after 3:00 P.M.) 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 for more Information on Sleep:

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 of daily activities and your health. Your fitness level, your exercise and workout plan, and your movement throughout the day are all parts of activity. This section describes 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. Take at least 10,000 steps per day
2. Do 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. Take 10,000 steps + 5,000 additional for a daily total of 15,000 per day
2. Do at least 150 minutes per week of moderate aerobic activity + 75 minutes per week of vigorous aerobic exercise
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 spend over 6 hours per day sitting down, then you are 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, 10,000 steps daily is a good baseline goal, and for those already reaching that, we have a plus goal of 15,000!

Category	Steps per day goal
Adults (18 and over)	10,000 (for those already at 10,000 strive for activity plus goal of 15,000 per day).
Boys (6-12)	15,000
Girls (6-12)	12,000
Teens (13-17)	10,000

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 super fit person ! I get 10,000 steps before breakfast!

Great job! Some people 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, Take the kids and the dogs on a walk after dinner. Everyone will sleep better!

Your phone or electronic fitness device or activity tracker can help you log steps and track them over time to see if you are meeting your goals. Personal and group challenges can keep you motivated to continue meeting or exceeding your targets!

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 busy person. 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.
- Maintain your physical performance throughout workouts.
- Build resistance to injury. Individuals who have greater aerobic fitness are less likely to be injured.
- Improve children's endurance for those late nights spent studying and long days at school.

Increase the health and strength of your heart, lungs, and blood vessels. This makes fit individuals 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 level 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.
- Gardening, grass mowing and light outdoor chores
- Loading and unloading gear/equipment/freight continuously, about 40 lbs or less
- Skateboarding on an even surface
- School yard games like tag, swings, monkey bars and slides.

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.
- Heavy outdoor work, shoveling or digging, moving higher loads of 40 lbs or more
- Competitive sports like soccer, flag football, basketball, and wrestling

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.

- 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; this 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 strength, agility, power, and speed. Adding resistance training to your regimen can help you perform better.

- Strength training is a fundamental part of your physical fitness. Perform strength training 2–3 times per week using all 7 major muscle groups to develop the strength you need (See Essential Seven for Strength on page 21).
- Resistance training increases your bone density and is important for long term bone health—this makes individuals tougher and more resistant to injury.
- Strength training improves your body composition to less fat and more muscle
- Women gain strength from resistance training but do not typically add bulk because they have much lower testosterone levels than men. Females will improve their strength but do not have to worry about gaining excessive amounts of muscle bulk through resistance training.
- Strength training balances 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!
- If you are considering taking dietary supplements with your weight training, check Operation Supplement Safety (OPSS) at the Human Performance Resource Center website (http://hprc-online.org/ dietary-supplements/ opss).

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.
- Free weights like dumbbells, barbells, kettlebells, and medicine balls.
- Elastic resistance bands or straps for "suspension training."
- Bodyweight resistance training such as 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 using 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, or physical therapist.

Essential Seven for Strength

Strength training is a fundamental part of your physical fitness. Perform strength training 2–3 times per week using all 7 major muscle groups to develop the strength you need.

Try the exercises listed to build strength.

1. PUSH

>> Push-Ups

>> Bench Press

2. PULL

>> Rowing

>> Carrying

3. VERTICAL PUSH

>> Pike Push Up

>> Overhead Press

4. VERTICAL PULL

>> Pull Ups

5. SQUAT

>> Dumbbell Squat

>> Body Weight Squat

6. LUNGE

>> Bulgarian

>> Standard Deadlift

7. CORE

>> Side Plank

>> V-Up

>> Bridge

>> Supine Twist

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 individuals 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—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 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 individuals 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 at which you can do a set of 8 repetitions, 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. Agility training can also include box jumping and other leaping and hopping exercises used in sports training.
- Explosive strength exercises like:
  - Medicine ball throws
  - Olympic-style weightlifting with a barbell
  - Long jumps and high jumps
  - High intensity conditioning exercise
  - Shuttle runs and obstacle courses

YOUTH STRENGTH TRAINING

Benefits of Youth Strength Training

Strength training can benefit boys and girls of all abilities regardless of participation on a sports team. The American College of Sports Medicine (ACSM) states that youth strength training may increase muscle strength and may also improve motor skills. Strength training with heavy weights (bodybuilding, power lifting or maximum lifts) is not recommended because of the potential for injuries to the long bones, growth plates (areas that produce new bone tissue and determine the final length and shape of bones in adulthood), and back. Proper technique and safety are key— not how much weight can be lifted.

Early studies suggest youth strength training may:

- Decrease some sports injuries by increasing the strength of bones and the tendons and ligaments (the tissues that attach to bone and muscle).
- Increase muscle size in adolescents. This is unlikely in younger children who lack adequate levels of muscle-building hormones.
- Help with weight loss.

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

Although there are no scientific reports outlining the number of sets and reps, ACSM suggests:

- 1-3 sets of 6-15 reps performed 2-3 times per week (do not perform on back-to-back days. Skip at least one day in between sessions).
- Start with one set of several upper and lower body exercises that focus on the major muscle groups.
- Gradually increase the weight or the number of sets and reps to make the program more challenging.
- More experienced individuals should use multiple (3–5) sets to get the most out of their program.
- Use 3–5 sets of 6–12 reps 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 at which you can do a set of 8 reps 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.

Is Youth Strength Training Safe?

- Strength training can be safe and effective for healthy children and adolescents if they can follow directions and if the programs are properly designed and knowledgeably supervised.
- Check with your child's doctor prior to starting a program.
- Strength training injury risks are no greater than those of other youth sports and activities.
- Currently, there is no indication that height is decreased in children who regularly strength train with a qualified instructor. No growth plate fractures were reported in any study that was knowledgeably supervised and designed. Strength training won't "stunt your child's growth;" don't worry!
- However, parents, coaches, teachers, fitness instructors should be aware of the risks associated with poorly designed programs, unqualified trainers, and/or inadequate supervision.
- For additional information see the ACSM Facts and Fallacies Article.

INJURY PREVENTION

Preparation and Injury Prevention

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. Appropriate warm-up and exercise preparation and good injury prevention practices are important.

To implement warm-up and injury prevention practices:

- 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. A focused and tailored warm-up can increase your performance and decrease the risk of injury.
- Consider total daily training requirements in your planning. For example, don't schedule lower body weight training, endurance running and participating in a sporting event on the same day or on two consecutive days.
- Involve your Physical Therapist. A focused training program may help decrease injury risk for individuals with low fitness or with previous injuries.
- Stretch after your workout. 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 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.
- Gradually increase the intensity, duration, frequency, and variety of your training to minimize injury risks. To minimize injury risks, gradually increase intensity, duration, frequency, and variety of training.

RUNNING

Safe Running and Shoe Selection

Physical fitness, especially cardiovascular stamina, is a major factor that optimizes performance. Running greatly increases aerobic stamina. Running can be done in virtually any environment and location and is an excellent way to achieve cardiovascular fitness. 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.
- Many runners struggle with injuries related to running–train smart!

Appropriate Use of Running

- 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.

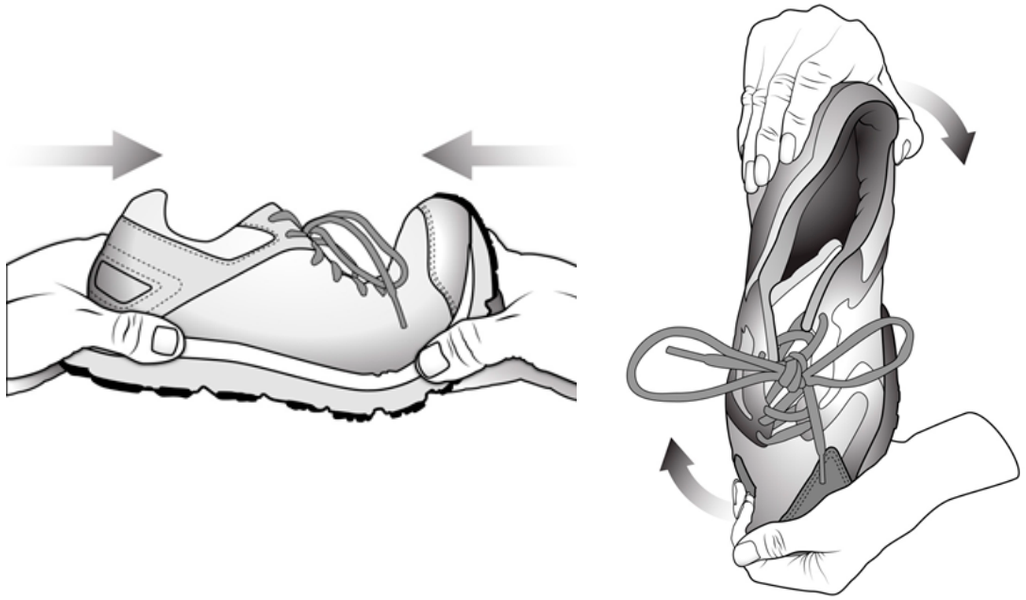
- Minimalist Running Shoes and Forefoot Strikers:
  - Lately, shoes called “minimalist” have been popular.
  - Minimalist running shoes (MRS) are lightweight, low to the ground, flexible shoes with very little cushioning and support.
  - Typical MRS have no elevated heel, no real cushioning material 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:
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). Recent studies 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! Changing your running form may alter your injury pattern but will most likely require a running analysis and retraining. If you are having running issues and pain, make sure you get them 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:
  - The shoes appear worn and lean to one side when placed on a table and examined from behind.
  - 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).



EXTREME CONDITIONING

Extreme Conditioning Programs (ECPs)

(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 individuals 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. If you are not familiar with certain movements, consult a Physical Therapist or other professional. These types of programs may be more unsafe for children or older adults. Those with low fitness levels should not start a training program with Extreme Conditioning.

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 individuals can participate in together. However, it’s important to remember that if they are done poorly without appropriate coaching and supervision, they can push individuals beyond their limits and can lead to injuries.

- Overtraining can cause fatigue, sickness, a decrease in performance, and injury.
- Avoid training the same muscle 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

ECPs can be a fun addition to a fitness program when done safely. For more information on ECPs visit: http://1.usa.gov/1uOBQRW

KIDS

Kids need activity too!

Be a good role model. Your health is critical to the well-being of your family. The more active you are, the more likely your kids will follow suit.

Children and adolescents (ages 6-17) need at least:

- 60 minutes of moderate to vigorous physical activity each day
- 11,000 steps for girls and 13,000 steps for boys each day
- 3 days of muscle strengthening physical activity per week

It's important for children to engage in physical activity. Regular activity:

- Helps manage weight and reduces risk for obesity
- Reduces risk of developing chronic disease in adulthood
- Strengthens bones and muscles
- Can reduce anxiety and stress
- May increase self-esteem
- May help improve concentration, classroom behavior, and grades

Tips for increasing your child's activity:

- Reduce screen time (TV, computer, video games, and phones).
- Take a family walk after dinner.
- Play at the park or go for a family bike ride or hike.
- Explore opportunities to learn a new activity (such as martial arts, dance, or yoga).
- Volunteer for your child's sports team or physical
- activity event.
- Invite your child(ren) to take part in your physical activity.

Examples of Aerobic, Muscle and Bone - Strengthening Activities for Children and Adolescents

Activity	Aerobic (moderate or vigorous)	Muscle-Strengthening	Bone-Strengthening
Running	✓		✓
Skipping	✓		✓
Swimming	✓		
Jumping rope	✓		✓
Swinging or climbing on playground equipment	✓	✓	
Bicycling	✓		
Dancing	✓		
Tag	✓		
Flag football	✓		
Push-ups/Pull-ups		✓	
Sit-ups		✓	
Sports (like volleyball, basketball, tennis)	✓		✓
Martial arts (e.g. karate)	✓	✓	
Weight lifting		✓	✓
Brisk walking	✓		

Resources for more Information on Activity:

Army H.E.A.L.T.H. designed to help you maintain or lose weight and to improve your fitness by providing personalized nutrition and fitness plans.

The American College of Sports Medicine (ACSM) also has great information about the importance of strength training.

Let's Move! Website provides information and resources for parents to improve children's activity and nutrition.

»NUTRITION

IINTRODUCTION

Nutrition for Performance and Health

The Performance Triad is designed to fuel, enhance, and sustain performance and health and well-being. Eating or fueling for performance enables top level training, increases energy and endurance, shortens recovery time between activities, improves focus and concentration, and helps individuals 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 at the gym, at work, 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 individuals maintain an appropriate weight and help reduce the risk of chronic disease. By eating the right balance and variety of foods, individuals 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 timing the fuel (nutrients and fluids) to match the work performed. Eating regular meals along with pre-/post-training 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 make 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 the next day's performance will be negatively impacted. 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, physical activities, food availability, and preferences
- Knowing what barriers are preventing you from eating right and how to overcome them

Nutrients

Six major classes of nutrients 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.
- Plan for 3 meals and 2 snacks a day. Try not to skip meals or go more than 4–5 hours without refueling.
- Escape the rut: eat a variety of foods to get a balance of nutrients.

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 have to stop and rest 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 activity, ≈ 30 min/day	3–5	1.36–2.27
Moderate-intensity training activity, ≈ 60 min/day	5–7	2.27–3.18
Moderate to high-intensity endurance training, 1–3 hrs/day	6–10	2.72–4.55
Moderate to high-intensity training, 4–5 hrs/day	8–12	3.64–5.45

EXAMPLE:

Tim does moderate-intensity exercise 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 kg)

150/2.2 = 68 kg

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

68 x 3 = 204 or 150 X 1.36 = 204
68 x 5 = 340 or 150 X 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): _____ ÷ 2.2 = _____

DAILY CARBOHYDRATE NEEDS: _____ TO _____

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 you need? The Recommended Dietary Allowance (RDA) for protein is 0.36 grams per pound body weight. Very active individuals 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 that when you are in training 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
Physical activity 3-5 x per week	0.5–0.7
Physical activity + strength athlete	0.7–0.8
Physical activity + 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 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 for a long run or a fitness class at the gym, 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 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

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 has a more severe impact on mental function, mood, and fatigue.

One can become easily dehydrated regardless of fitness level, body composition, or age. Dehydration 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.

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 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:

- Eating 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
- Drinking 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. After exceeding the 60 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 and maintain 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.

Dietary Supplements

Many people 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

Many individuals 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 individuals 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 an individual's 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, i-carnitine, creatine and/or glucuronalctone.

Performance degradation from too much/many stimulants:

- Dehydration and upset stomach
- Anxiety
- Shakiness
- Headaches
- 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.

Food Choices

Whether you are eating at home or eating out, 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 in 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 ½ 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 fruits in their own juice.
   - **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:**
   - You can prepare some meals 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.

Meat, Poultry, Fish & Nuts	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.
Bread & Baked Goods	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.
Oils, Dressings & Shortenings	Buy and use fats and oils in limited amounts.
	When buying oils for cooking, baking or in dressings or spreads, choose the ones that have 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
	Lunch TOTALS:	**437**	**49**	**10**	**35**

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
	Snack TOTALS:	**278**	**34**	**15**	**7**

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
	Dinner TOTALS:	**747**	**67**	**32**	**51**

	CALORIES	CARBS (G)	FAT (G)	PROTEIN (G)
Daily TOTALS:	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
	Lunch TOTALS:	**566**	**72**	**11**	**42**

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
	Snack TOTALS:	**350**	**53**	**15**	**7**

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
	Dinner TOTALS:	**747**	**67**	**32**	**51**

	CALORIES	CARBS (G)	FAT (G)	PROTEIN (G)
Daily TOTALS:	2572	361	72	131

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 Yogurt	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
	Breakfast TOTALS:	**384**	**54**	**12**	**16**

MID-MORNING SNACK		CALORIES	CARBS (G)	FAT (G)	PROTEIN (G)
1 Fruit	1 Fresh, Medi-um-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
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
	Lunch TOTALS:	**437**	**49**	**10**	**35**

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
	Snack TOTALS:	**278**	**34**	**15**	**7**

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
	Dinner TOTALS:	**637**	**67**	**24**	**41**

	CALORIES	CARBS (G)	FAT (G)	PROTEIN (G)
Daily TOTALS:	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 a 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

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 Guide to Recommended Daily Servings

Recommended Daily Servings by Food Group**	What Counts as a Serving?*
*8 Cups of Fruit and Vegetables***	***What Counts as 1 Cup of Fruit?**** • 1 medium-sized fresh fruit • 1 cup of fresh or canned fruit • ½ cup dried fruit ***What Counts as 1 Cup of Vegetables?**** • 2 cups of leafy greens • 1 cup of cooked or raw veggies • 1 small baked potato
*3–8 oz. Grains **	***What Counts as 1 oz?**** • 1 cup dry cereal • ½ cup cooked cereal, pasta, rice • 1 slice of bread • ½ bun or ½ English muffin
*5–10 oz. Proteins***	***What Counts as 1 oz?**** • 1 oz. cooked meat, fish, poultry • ¼ cup cooked beans • 1 egg • ¼ cup tofu • 1 tbsp. nut butter • ½ oz. nuts (11-12 whole almonds, 24 pistachios, 7 walnut halves)
*3–4 Cups of Dairy***	***What Counts as 1 Cup?**** • 1 cup (8 oz) of milk, yogurt • 1 ½ oz. hard cheese • 2 slices of processed cheese • 1/3 cup shredded cheese
*Added Oils: Use sparingly (5–8 tsp. /day)*** *3 tsp. = 1 tbsp.*	***What Counts as Added Oils?**** • Vegetable oil, margarine, butter, salad dressing, mayonnaise, coffee creamer, etc. ***1 tsp. = approx. 5 g total fat***

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

Nutrition Facts
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.

Protein 5g ***10%***

Calcium 20%

Yogurt B

Number of ingredients: 2

Nutrition Facts
Serving Size 1 container (170g)
Servings Per Container 1

Cultured Grade A Reduced Fat Milk, Pectin.

CONTAINS ACTIVE YOGURT CULTURES INCLUDING L ACIDOPHILUS

Protein 8g ***16%***

Calcium 30%

Notes

Ingredients: Look for yogurt with fewer 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

Nutrition Facts
Serving Size ½ cup dry (41g)
Servings Per Container 18

Whole Grain Oats

Protein 5g ***10%***

Sodium 0mg ***0%***
Dietary Fiber 5g ***25%***
Sugars 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

Nutrition Facts
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.

Sodium 160mg ***20%***
Dietary Fiber 2g ***25%***
Sugars 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, Modifieed 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%

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!

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%

Wheat Bread A

Number of ingredients: 8

Nutrition Facts
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.

Sodium 45mg **2%**
Dietary Fiber 4g **15%**
Sugar 1g

Iron 8%

Notes

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

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

Wheat Bread B

Number of ingredients: 24

Nutrition Facts
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.

Sodium 135mg **6%**
Dietary Fiber 2g **6%**
Sugar 3g

Iron 4%

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 Inosate, Disodium Guanylate, Autolyzed Yeast Extract and Spices), Modified Food Starch, Vegetable Base (Salt, Hydrolyzed Corn Gluten, Lactose, Sugar, Onion Powder, Disodium Inosate, Disodium Guanytate, 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

Nutrition Facts
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

Sodium 590mg ***25%***

Beef Jerky B
Number of ingredients: 16

Nutrition Facts
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

Sodium 470mg ***20%***

Notes

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

Nutrition: Choose the brand lowest in sodium.

Weight Control

Weight Loss Tips

- Set reasonable, achievable and measurable goals. Write them down and post them where you see them every day.
- 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.
- 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.
- Don't skip meals, and keep healthy snacks like fruits and vegetables handy.
- Drink 2 cups of water right before a meal. This helps you feel full and may help reduce caloric intake.
- 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 hungry).
- Eat slowly. Taking at least 20 minutes to eat gives your "fullness signal" a chance to kick in.
- Reduce the number of times you eat foods prepared away from home. Pack your lunch and cook dinner at home.
- 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.
- Learn how to read and interpret food labels.

Tips for Maintaining Weight Loss

- Keep your eating patterns consistent. Try to eat meals and snacks at roughly the same time each day.
- Eat breakfast every day.
- Don't skip meals. Plan ahead, and keep healthy snacks handy.
- Build exercise into your daily routine. Regular exercise helps prevent weight re-gain.
- Weigh yourself regularly. Once per week is sufficient.
- Keep a food diary. Evaluate your calorie intake at least once every two weeks.
- Stay committed to a healthy diet. Use your food diary to evaluate your daily nutrition choices.
- Minimize screen time. This promotes sitting and inactivity. Commit to moving more and sitting less throughout the day.
- Exercise at least an hour a day, almost every day. Spice it up by trying different activities.
- Watch your calorie intake because as your body becomes smaller, it burns fewer calories. Reassess calorie needs every few months.
- 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.

Tips for Families with Children

Family meals are the perfect place for children to learn about healthy eating. Parents should model healthy eating habits and encourage kids to try new foods. Eating meals together promotes healthier eating and give families time to talk, listen, and build relationships. It also teaches everyone to choose and prepare better foods during family meals and beyond. Children who eat with their families are better nourished, maintain a healthier weight, have better grades, and are less likely to smoke, drink, or use marijuana. Eating together helps improve connections to one another.

How to get started:

- Ease into it. Set a goal of eating together twice a week and build from there.
- Keep it simple. Focus on family favorites and enhance with salads and vegetables. Cook when you have more time - maybe on weekends. Make soups, stews, or casseroles to freeze for the next week.
- Do some tasks ahead: wash and trim vegetables, or make fruit salad. Cook whole-grain noodles for pasta salad. Cook lean ground meat for tacos.
- Buy partly prepared foods. Try grated cheese, cut-up chicken, or mixed salad greens to save time.
- Avoid portion distortion. Keep serving sizes under control, whether you are at home or eating out.
- Get the family involved. Let your family help plan the menu, choose their favorite dinner, set the table, and make the meal.
- Make it enjoyable. Leave serious discussions for another time.
- Remove distractions. No TV or phones! Use this time for listening, sharing, and nurturing.
- Grow a family garden and include the fresh fruits and vegetables as part of your meals.

Build a healthy plate with your child by:

- Eating whole grains (such as 100% whole-wheat pasta or bread, brown rice, and whole-grain cereals).
- Making half the plate fruits and vegetables.
  - Use MyPlate to guide your food choices when shopping.
- Choosing fat-free or reduced-fat dairy products (such as 1% milk, yogurt, and cheese).
- Eating a variety of protein foods (such as lean meats, seafood, nuts, eggs, beans, and peas).
- Making water the first beverage choice; if drinking juice, be sure to choose 100% juice and limit to 4-6 oz portions.
- Using healthy fats such as olive oil or canola oil.

Tips on feeding your kids:

- Start the school-day off right by serving your children a healthy breakfast.
- Make the healthy choice, the easy choice: have fruits, veggies, cheese sticks, pretzels, yogurt, etc. on hand for snacks.
- Serve age-appropriate portion sizes of food and drink.
- Quit the “Clean Plate Club”: encouraging or bribing your kids to clean their plate may lead to overeating.

Resources for more Information on Nutrition:

SuperTracker

Academy of Nutrition and Dietetics

Fruits and Veggies, More Matters

Eat Healthy Your Way

We Can! Kids Eat Right

ChooseMyPlate

»TECHNOLOGY

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 provides Battle Buddies with the tools and information needed to assist each other during a crisis. It also provides tips and tools to help Buddies intervene before the situation reaches crisis proportions. This app is organized into two primary areas: “My Buddies” and “My Resources.”

CBT-I Coach
This app guides 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 well-being. 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 app 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 his or her heart rate, emotions, concentration, and other physiological and psychological responses during stressful situations.

T2 Mood Tracker
T2 Mood Tracker is a mobile app that allows users to monitor and track their 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. This downloadable app puts the fully functioning calculator right on the user’s phone, along with links to resources on the NHLBI site.

Virtual Hope Box (VHB)
The Virtual Hope Box (VHB) is a fun and very personal app. Work to make it your own and boost your positive thinking by uploading images and quotes that inspire you, practicing a relaxation exercise, or solving your favorite puzzle!

Websites

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

Army Medicine: 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, and links to Army and DoD resources on wellness, health, fitness, and resilience (such as the Ready and **Resilient Campaign)**.

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.

ChooseMyPlate: Nutrition information from the USDA and tools for making healthier food choices.

Go4Life® : Go4Life® is an exercise and physical activity campaign from the National Institute on Aging at NIH. The campaign provides activity and healthy eating resources for older adults.

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 AR 600-9.
- **Enhancing Personnel Readiness & Warfighter Performance:** This is 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** 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 topics are 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, alcohol, tobacco and drugs, and getting the best sleep.
- Nutrition includes 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.
- Family & Relationships includes topics such as relationship enhancement, family resilience, deployment phases, family nutrition and physical fitness. Many topics are 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.

- Improves the health and wellness of the entire community. This website contains 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.
- Includes online health tools and mobile apps 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): USAPHC 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

The American Council on Exercise Workout Library (ACE): The **ACE Workout Library** features of variety of exercise routines based on the certain muscle groups, available equipment, and stage of life.

We Can! (Ways to Enhance Children's Activity & Nutrition): We Can! is a national movement designed to give parents, caregivers, and entire communities a way to help children 8 to 13 years stay at a healthy weight.

See page 56 for a list of Smartphone apps.

Visit: **http://bit.ly/OperationLiveWell-tools**

Additional Websites:

- **7 Min Workout**
- **ACSM Bodyweight Strength Program**
- **Army Families are Army Strong**
- **Army Fit**
- **Army Fit Goal Setting**
- **Army Fit Workouts**
- **Army Health**
- **Army Medicine**
- **Assess Sleep Need**
- **Caffeine Info**
- **Calculate Energy**
- **Calorie Burn Calculator**
- **Catch Up on Sleep**
- **CDC Healthy Weight**
- **Changing Eating Video**
- **CSF2**
- **Eat Healthy tips**
- **Eating on Budget**
- **Extrinsic Rewards**
- **Food Nutrition News**
- **Get Enough Sleep**
- **Goal Setting**
- **Good Mood Food**
- **Guided Relaxation- Stairs**
- **Healthy Family Matters**
- **Healthy Sleep Basics**
- **HPRC- Breathing Exercises**
- **HPRC- Family Nutrition**
- **HPRC- Nutrition**
- **HPRC- Vertical Core**
- **Let's Move!**
- **Mind-Body Guided Meditations**
- **Nutrition Basics**
- **Operation Live Well**
- **OPSS**
- **Personalize Nutrition**
- **The President's Challenge**
- **Take Naps**
- **U.S. Army MWR**
- **USAPHC**

Sleep

We align our Sleep curriculum with consensus expert data from the National Sleep Foundation and other professional organizations.

Some links of interest:

National Sleep Foundation: **http://sleepfoundation.org/**

Sleep Tools: **http://sleepfoundation.org/sleep-toolstips**

Sleep Problems and Disorders: **http://sleepfoundation.org/sleep-disorders-problems**

American Psychological Association: **http://www.apa.org/topics/sleep/index.aspx**

Activity

We align our Activity curriculum and targets with Health and Human Services' National Prevention Strategy, Physical Activity Guidelines for Americans, Healthy People 2020 and with major professional organizations such as the American College of Sports Medicine and the National Strength and Conditioning Association.

Some links of interest:

National Prevention Strategy: **http://www.surgeongeneral.gov/initiatives/prevention/strategy/report.html**

Physical Activity Guidelines for Americans: **http://www.health.gov/paguidelines/guidelines/chapter4.aspx**

Healthy People 2020: **http://www.healthypeople.gov/2020/default**

Centers for Disease Control Prevention Research Center: **http://www.cdc.gov/prc/**

CDC DNPAO: **http://www.cdc.gov/nccdphp/dnpao/index.html**

DoD HPRC: **http://hprc-online.org/**

American College of Sports Medicine Position Stands: **http://acsm.org/access-public-information/position-stands**

ACSM Exercise is Medicine: **http://exerciseismedicine.org/**

American Psychological Association of Sports and Exercise: **http://www.apa.org/topics/sport-exercise/index.aspx**

Nutrition

We align our Nutrition curriculum and targets with the Federal guidelines, the CDC, and other professional organizations.

Some links of interest:

USDA Choose My Plate: **http://www.choosemyplate.gov/**

USDA Nutrition: **http://www.choosemyplate.gov**

Dietary Guidelines for Americans: **http://health.gov/dietaryguidelines/2015.asp** and **http://www.cnpp.usda.gov/dietaryguidelines/**

Centers for Disease Control Prevention Research Center: **http://www.cdc.gov/prc/**

DoD HPRC: **http://hprc-online.org/**

CDC DNPAO: **http://www.cdc.gov/nccdphp/dnpao/index.html**

American Psychology Assocation on Obesity, Eating Disorders:

http://www.apa.org/topics/obesity/index.aspx

http://www.apa.org/topics/eating/index.aspx

Academy of Nutrition and Dietetics: **http://www.eatright.org**

U.S.ARMY

Performance Triad

Learn more about the Performance Triad at
HTTP://ARMYMEDICINE.MIL