

POWER PERFORMANCE

THE NUTRITION CONNECTION

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MODULE

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MODULE

2 Building a Performance Diet

MODULE

3 Performance Choices

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Module 7: Performance Your Weigh

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This module of Performance Nutrition explains how body weight can affect performance and health and gives you diet and exercise guidelines and behavioral strategies for successful long-term weight management.

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I. FINDING YOUR PERFORMANCE BODY WEIGHT

Introduction

Weight control for many of us means simply watching the numbers change on the scale, hopefully in the right direction. But weight control involves not only losing or gaining to reach a healthy weight for your body, but staying at that weight.

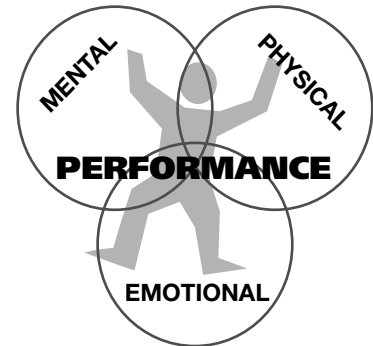
We're not just talking about the numbers on the scale. The composition of that weight — how much is fat, muscle and bone — is what's important in determining whether you have the strength, stamina, and overall good health for optimal military performance. Each person has a range of body weights that is most desirable for their own fitness and health. That is your Performance Body Weight.

Changing body composition is really about changing habits. If you want to look better or be fitter, you have to change some eating and activity patterns. Maintaining a Performance Body Weight involves making a balanced diet and regular exercise a natural part of your lifestyle. This manual can help you learn to do that.

KEY CONCEPT

A balance of sound nutrition and exercise must be developed and maintained by behavior modification to achieve and maintain a Performance Body Weight.

The Elements of Military Performance



Your body composition, activity level, and what, when, and how much you eat impact your mental, physical, and emotional health. And, not only do your mental, physical, and emotional states impact your military performance, they affect your weight control efforts as well.

Are You Ready?

1. Do you want to change your body composition to look better or achieve better health and fitness?
2. Do you need to change your body composition to achieve better health or fitness?
3. Are you motivated to change your eating and exercise habits?
4. Are you willing to make permanent changes in your eating and exercise habits?
5. Are you able to overcome the excuses of no time or can't learn to like new foods?
6. Are there other areas of your life undergoing major change or in need of your mental or physical energies?

If you answered yes to questions 1-5, you are ready to achieve Performance Your Weigh!

If you answered yes to question 6, you may need to consider waiting to start a weight control effort until you are able to commit to making changes in your eating and exercise habits. If you are not ready, you should at least take steps to prevent further weight change. This manual can help.

OBJECTIVES:

- ▲ Appreciate the health and performance consequences of excess body fat or inadequate muscle mass.
- ▲ Define the factors that determine one's body composition.
- ▲ Describe the energy balance equation.
- ▲ Understand the factors that influence the energy balance equation.
- ▲ Set realistic goals for target body weight and rate of body composition change.
- ▲ Use at least two methods to estimate changes in body composition.

Your Mission...Should you decide to accept it:

Achieve and maintain a Performance Body Weight no matter what you encounter in your life. Finding your Performance Body Weight may be challenging, because there are so many factors that can influence your weight.

HEALTHY AND READY

Being in the military means you have to be ready for the challenges of combat at any time. Part of being ready is being physically able and healthy enough to perform your share of the work.

Excess body fat can hinder performance and compromise your readiness. For tasks in which maximal power, endurance or quickness are key, excess fat limits you. Carrying dead weight is inefficient and tiring. Extra body weight also increases the risk of wear-and-tear injuries to your feet, knees, and hips, while extra fat around the middle adds to low back strain.

Conversely, muscle mass is a positive factor in lifting and carrying heavy loads. The more muscle you have, the easier it is to do physical work. Extreme lightweights are at increased risk of injury and take longer to recover from injury. Being too skinny makes you tire faster and has been linked with heart problems, anemia, chronic fatigue, and poor concentration.

You may feel okay. You may even consider yourself physically fit. So why should you worry about your body composition? Excess body fat affects other conditions that can shorten your military career or even your life. Being over-fat is hazardous to your health. Medical research shows that as excess body fat increases, the risks of many diseases increase.

DOWNSIDE OF VERY LOW BODY FAT

- ▲ Loss of insulation and organ protection
- ▲ Lack of fuel reserves to draw on during high-stress periods
- ▲ Increased illness and infections
- ▲ Abnormal menstrual function and bone loss
- ▲ Poor pregnancy outcome
- ▲ Decreased testosterone production

POSSIBLE HEALTH EFFECTS OF BEING OVERWEIGHT (especially if overweight and inactive)

- ▲ High blood pressure
- ▲ High blood cholesterol
- ▲ Heart disease
- ▲ Stroke
- ▲ Diabetes
- ▲ Cancer (uterus, gallbladder, kidney, stomach, colon, and breast)
- ▲ Arthritis
- ▲ Gout

However, you can have too little body fat. A certain amount of body fat is necessary for normal body functioning. Fat is an essential part of the nervous system, bone marrow, and internal organs. If you don't have enough body fat, you may feel weak or tired, have a low resistance to infection and illness, and get sick more frequently.

For men, about 3 to 6 percent of body weight as fat is the absolute minimum. For women, about 10 to 13 percent body fat is necessary – higher than men because of additional fat needed to support child bearing functions (menstruation, pregnancy, and breastfeeding). Body fat levels below these do not allow adequate margins of safety to cover the often unavoidable weight losses that occur during high tempo scenarios.

Optimal body fatness varies with the nature and demands of the job or sport. Realistic and appropriate levels of body fat for military personnel are between 10 and 20 percent for men and between 15 and 30 percent for women.

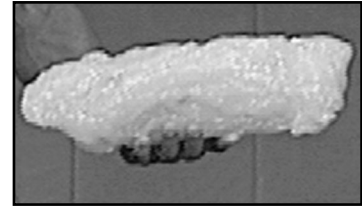
What Are You Made Of?

SCALE WEIGHT...NUMBERS CAN BE DECEIVING

Comparing your body weight to a height-weight chart is the easiest and most practical way to gauge yourself, but don't place too much emphasis on what the scale says. The scale can't tell the difference between muscle, bone, water, and fat weight. Your percentage of body fat is more important than the numbers on the scale.



5 LB of Muscle



5 LB of Fat

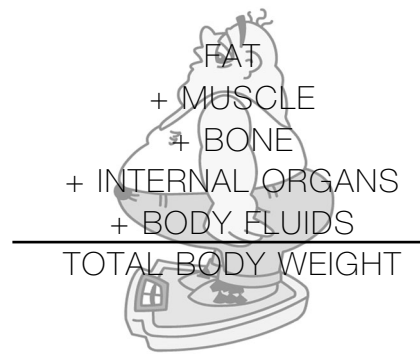
Two people of the same height and weight can have very different body sizes and body compositions. One might be over-fat while the other might be very muscular. One reason is that muscle is much more compact than body fat. Five pounds of muscle and five pounds of body fat are very different in size.

When tracking progress, weigh yourself no more than once per week. Try to weigh yourself on the same day of the week around the same time of day, preferably first thing in the morning on an empty stomach. Weighing yourself more often is misleading. Water accounts for $\frac{1}{2}$ - $\frac{3}{4}$ of your body's weight. Small changes in water balance can produce misleading 'gains' or 'losses' in the number on the scale.

The rapid weight loss during the first few days of any diet is due mostly to body water loss. After that, the rate of weight loss slows down as body fat stores become the main source of weight loss. Very low calorie diets that lead to muscle breakdown and protein losses cause even greater water losses.

BODY MASS INDEX


Checking your body mass index (BMI) is a way to judge how healthy your weight is. For most people, the higher the BMI, the higher the total body fat content and the greater the risks of developing certain health problems. Because BMI is calculated from a height-to-weight formula that ignores whether the weight is from fat or muscle, it does not work for very muscular persons (athletes or body builders, for example). It also doesn't work for pregnant or nursing women.



Depending on your overall fitness picture, a BMI of :

- <18.5 suggests you are underweight and at risk of poor nutrition
- 18.5 to 25 means you are in the healthy range for most adults
- 25 to 27 may mean you are overweight, especially if you have a large waist; could mean you are in a healthy range if you regularly perform strength training exercises
- 27 to 30 indicates you are overweight
- >30 indicates you are obese


If you are at the upper end of the healthy range or score more than 25, consider losing enough weight to lower your BMI at least one or two numbers. If your BMI is less than 18.5, try adding a few pounds of muscle. (See Gaining a Performance Edge on page 7-47.)

Use the chart on the following page to figure out your BMI: 

To use the BMI Chart, find your height (inches) along the left side of the chart. Move across to the weight closest to your current weight. Then, move down to the bottom of the column to find your BMI.

Your height _____ inches

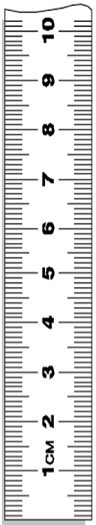
Your nude body weight _____ pounds

Body Mass Index Chart																		
Height (inches)	Body Weight (pounds)																	
58	86	91	96	100	105	110	115	119	124	129	134	138	143	148	153	158	162	167
59	89	94	99	104	109	114	119	124	128	133	138	143	148	153	158	163	168	173
60	92	97	102	107	112	118	123	128	133	138	143	148	153	158	163	168	173	178
61	95	100	106	111	116	122	127	132	137	143	148	153	158	163	168	173	179	185
62	99	104	109	115	120	126	131	136	142	147	153	158	164	170	175	181	186	191
63	102	107	113	118	124	130	135	141	146	152	158	163	169	175	181	187	192	197
64	105	110	116	122	128	134	140	145	151	157	163	169	174	181	187	193	199	204
65	108	114	120	126	132	138	144	150	156	162	168	174	180	186	192	198	204	210
66	112	118	124	130	136	142	148	155	161	167	173	179	186	192	199	205	211	216
67	115	121	127	134	140	146	153	159	166	172	178	185	191	198	204	211	217	223
68	119	125	131	138	144	151	158	164	171	177	184	190	197	204	211	217	223	230
69	122	128	135	142	149	155	162	169	176	182	189	196	203	209	216	223	230	236
70	126	132	139	146	153	160	167	174	181	188	195	202	207	216	223	230	237	243
71	129	136	143	150	157	165	172	179	186	193	200	208	215	223	230	237	244	250
72	133	140	147	154	162	169	177	184	191	199	206	213	221	228	236	244	251	258
73	137	144	151	159	166	174	182	189	197	204	212	219	227	235	243	250	257	265
74	140	148	155	163	171	179	186	194	202	210	218	225	233	241	249	257	265	272
75	144	152	160	168	176	184	192	200	208	216	224	232	240	248	256	264	272	280
76	148	156	164	172	180	189	197	205	213	221	230	238	246	254	263	271	279	287
BMI 	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35

Your BMI score  _____

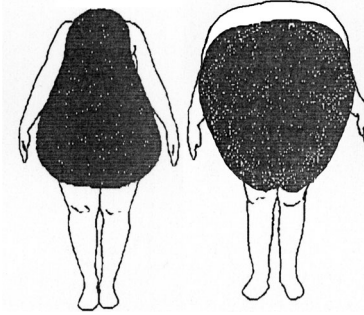
Goal weight in healthy range _____ pounds

Other ways to gauge your body fat and track your progress:



Waist to Hip Ratio It's not only how much fat you have but where the fat is that's important. Where you store your body fat is mostly determined by your body type — that gift donated by your ancestors. Men usually build up fat around their bellies, giving them more of an “apple” shape. Women, on the other hand, typically collect fat in their hips and buttocks, giving their figures a “pear” shape. This is not a hard and fast rule though. Some men are pear-shaped and some women become apple-shaped, especially after menopause.

Excess body fat in the stomach area — the “pot belly” or “spare tire” — is related to an increased risk for high triglycerides, high blood pressure, stroke, heart disease, diabetes, and longer time to conceive. Although, the body fat of a pear is less risky to health than that of an apple, it is more difficult to lose.



A pear shape stores body fat below the waist mostly in and around the hips, buttocks, and thighs. Apple shape body types store body fat around the abdomen.

A simple way to measure whether you are an apple or a pear is the waist-to-hip ratio.

You'll need a non-stretch, fabric tape measure to do this test. If you don't have a measuring tape, use a long piece of string, mark the points on the string where it overlaps and, using a yardstick, measure the distance between the marks on the string.

1. Measure your waist at its smallest point. (No sucking in your gut!) _____ inches.
2. Measure your hips at the largest part of your buttocks. ÷ _____ inches.
3. Divide your waist measurement by your hip measurement. = _____ waist-to-hip ratio.

A waist-to-hip ratio above .80 for women or .95 for men means it's time to make some changes. Taking 2 inches off your waist can reduce your health risk and improve your military bearing. Although dieting can help, aerobic exercise in particular, helps reduce stomach fat. Besides losing weight, quitting smoking and cutting back on alcohol also may help reduce abdominal fat.



The Pinch Test Grasp the loose flesh on various parts of your body, such as the back of your upper arm and your abdomen, between your thumb and forefinger. If you can pinch more than an inch, you're probably carrying too much body fat.



The Mirror Test Look in the mirror ... stark naked. That's right. Front and sides. Give yourself a good visual inspection. Can you see your muscles in the chest, abdomen, thighs, or arms? Are there rolls of flesh around your waist? Be honest. Sometimes this is the best reality check.



Clothing Size and The Notches in Your Belt If you're going up or down in your clothes sizes, something is happening to your weight and, most likely, your body fat level. If you are exercising to lose fat weight, the scale weight may not change, but your pants can be looser. Since exercise builds muscle and muscle weighs more than fat, you may weigh the same but be smaller.



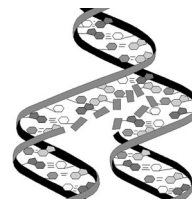
If you can **have your body fat measured**, even better. Just remember that any of the fat measurement methods, except for X-Ray and, perhaps, underwater weighing, are only rough estimates of your true percentage of body fat. Use them only as a guide. More important than a number on any scale or chart is how healthy and fit you are.

The Weigh You Are

FAMILY LEGACY

Your weight is determined by a number of factors, one of which is your genes. What does your family look like? Does your body resemble that of a parent, brother, or sister? What is your basic body shape? Where do you store your fat?

What you inherit from your family is, of course, out of your control. But most things that determine your body composition are within your control. You can control the types and amounts of food you eat and how much you exercise.



PUMP UP YOUR METABOLISM

Your metabolism, the rate at which your body burns energy, makes a difference. Your body composition helps to determine how well you burn calories. Muscle burns more calories than fat even when you are asleep. Part of a high metabolism is having more muscle. Because men have more muscle than women, their metabolic rates are usually about 10% higher than those of women who are the same age, height and weight. Making sure you have enough muscle is important to life-long weight control. This is one reason why exercise is so important. Besides burning calories, exercise builds muscle and helps the body hold on to it during weight loss. The more muscle you have, the more you can eat and not gain weight.



METABOLIC SLOW DOWN

Believe it or not, body fat does not have to increase as you get older. It is true that as we age we produce less of certain hormones that control metabolism and muscle growth. But this loss causes only a small amount of any weight change.

Being inactive—burning fewer calories plus losing muscle mass as a result of doing less exercise—is the number one reason people get fatter as they age. If appetite doesn't decline as fast as the level of physical activity—which is what usually happens—weight gain results. Regular endurance and strength training exercise can offset the decrease in metabolism usually seen with aging. **Use it or lose it!**



METABOLIC JUMP START

Every time you eat, your metabolism increases slightly because your body requires energy to digest, absorb and utilize food. If you're skipping meals or not eating enough calories, you may not be making the most of your metabolism. But be careful. Eating too much and too often will easily overpower this small metabolic boost and result in weight gain.

***Diet Fantasy:** There are negative-calorie foods that take more energy to be digested than they contain.*

***Reality:** Although you do burn calories digesting and absorbing food, the contribution to total energy output is minimal and is never more than the calories in the food itself.*

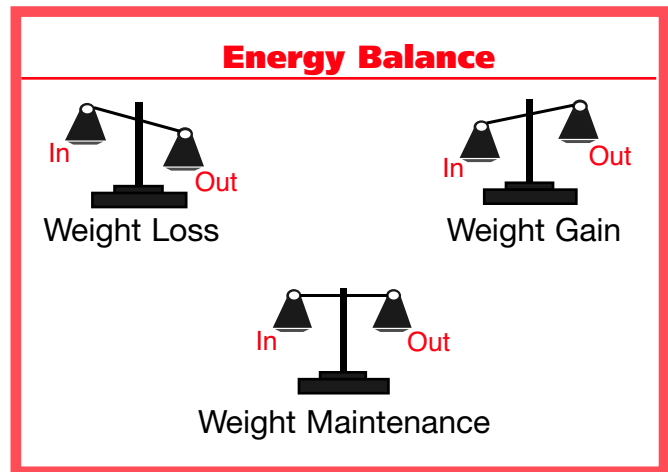
Energy Balance

The bottom line in maintaining, gaining, or losing weight or body fat is energy balance. Energy, whether in food or what the body burns, is measured in calories.

- ▲ If you take in more calories than your body burns, your body stores the extra calories as fat, and you gain weight.
- ▲ If you take in fewer calories than you use, your body burns stored calories and you lose weight.
- ▲ When you consume the same amount of calories as your body uses, your weight stays the same.

One pound of fat has about 3500 calories. To lose one pound of body fat a week, you have to create an energy debt of 500 calories a day.

- ▲ Increase exercise: frequency or intensity, or
- ▲ Decrease energy intake, or better yet
- ▲ Combine exercise with calorie reduction.



*You can lose 1 pound a week if you:
Burn 250 more calories a day through exercise
(ex. walking 2.5 miles)
AND
Consume 250 fewer calories.*

Although you can lose weight by dieting alone, it is counterproductive. Without exercise, you'll lose muscle along with body fat. Exercise boosts the rate at which your body uses energy. And the muscles you build doing exercise use more energy than body fat.

Exercise burns calories. Including regular exercise in your weight loss plan allows you to eat more and still lose weight. By making less drastic changes in your diet, you are more likely to stick with it.

If an injury or job assignment restricts your activity level, you need to cut back on your caloric intake to avoid gaining weight.

How to Tip Energy Balance Toward Body Fat Loss

▼ Energy In: What Can You Do? (See Section II)

- Eat smaller portions of foods.
- Eat more fruits and vegetables.
- Reduce high-fat foods (margarine, mayonnaise, salad dressings, fried foods).
- Reduce high-sugar foods (sodas, candy, desserts).
- Eat regularly — don't skip meals.
- Avoid a severe calorie restriction.

▲ Energy Out: What Can You Do? (See Section III)

- Engage in aerobic exercise 4-6 times a week (walking, jogging, cycling, etc).
- Engage in strength training exercise 2-3 times a week.
- Increase lifestyle physical activity (ex. taking the stairs, parking far from the store).

How Much And How Fast

GET REAL

What is your performance body weight goal? Make sure it is attainable. Unrealistic goals set you up for failure.

Aim for a body composition that's possible with your body type. Don't compare yourself to some unreal magazine model. Don't set a weight goal that conforms to unrealistic and unhealthy social ideals for thinness. If achieving a certain weight goal means eating too little and exercising more than you can feasibly fit in your day, you need to set a more realistic weight goal. Instead, try achieving a healthy weight at which you can be vigorous and as fit as you need to be.

Determine your long-term goal first. An example would be, "to have a BMI less than 25 by the weigh-in." From that goal, you can begin working backwards to set your short-term goals. For instance, the weigh-in is 4 months away, and you know you need to lose about 20 pounds. Your short-term goal may be "to lose 5 pounds this month." Twenty pounds may seem like a lot, but you know you can lose five pounds in a month.

Work on changing eating and exercise habits one by one, first choosing the ones that influence your energy balance the most. Set weekly or monthly goals that allow you to check off successes.

A weight shift of 1/2 to 2 pounds a week is healthy and sustainable. The maximum rate of weight loss without medical supervision should be two pounds per week. Consistently losing greater than two pounds per week means your calorie level is too strict.

You don't have to have one rigid calorie goal. Try to stay within a reasonable calorie range. Most women can lose weight within a range of 1400 to 1800 calories, depending on current weight and activity levels. Many men can lose weight at average calorie levels of 2000 or more. If you are not losing a half to a pound a week, you may have to adjust your calorie goal. But also look at how much exercise you get. This may be where the adjustment needs to take place.

Fallacies Of The Quick Fix

Severe diets cause large losses of body water. The body dumps water when salt and carbohydrate intakes diminish. Dehydration can result, taking away your mental edge and hurting your physical performance. The water weight quickly returns when you return to normal eating.

Cutting too many calories makes it difficult to get enough carbohydrates to refuel carbohydrate stores (glycogen) in liver and muscle. If liver and muscle glycogen stores are reduced, mental and physical performance suffers.

Weight losses greater than two pounds a week lead to muscle breakdown and protein loss. This can result in losses of strength and ability to fight off illness.

Don't wear waterproof or rubberized clothing when exercising. You can overheat and seriously dehydrate. Any weight lost is only sweat fluid losses which are quickly regained when you drink.

When you go on an extremely low-calorie diet, your body senses famine and slows its metabolic rate to "survive." Then, when you go off the diet, it's even easier to gain weight than before.

Some athletes restrict calories to "make weight" or believe they must maintain unreasonably low body weights to excel in their sport. Studies show that these athletes have slower reaction times and a loss of strength because of dehydration and muscle loss. Light and lean athletes only go faster and farther when they adequately fuel their bodies.

Fasting hurts performance too. It keeps you from storing muscle and liver glycogen, needed to fuel exercise and feed your brain. Prolonged fasts can cause loss of muscle mass, dehydration, dizziness, irregularities in heart function, and dangerously low blood pressure. The practice of sweating off pounds to 'make weight' isn't healthy either.

Any attempt to quickly lose body fat by drastically cutting calories ultimately will harm your military performance and your health. Remember fitness and health—not appearance—should be your goal

Watching And Waiting

Most of us need to see some measurement of our progress to keep us motivated. But, again, be realistic. Body composition changes occur over time, so don't get caught up in daily weight fluctuations. The weight on the scale includes the food in your stomach and fluids in your body, including the urine in your bladder. Although large changes in body weight can occur within hours, it takes weeks for large changes in body fat or muscle to occur.

To determine if you're making progress, ask yourself these questions:

	Yes	No
• Do your clothes fit differently?	<input type="checkbox"/>	<input type="checkbox"/>
• Are you able to maintain the changes in your habits every day?	<input type="checkbox"/>	<input type="checkbox"/>
• Can you exercise longer before getting tired?	<input type="checkbox"/>	<input type="checkbox"/>
• Can you do your job better?	<input type="checkbox"/>	<input type="checkbox"/>
• Do you feel stronger?	<input type="checkbox"/>	<input type="checkbox"/>
• Are you less tired?	<input type="checkbox"/>	<input type="checkbox"/>

Before You Go Forward, Take A Look Back

To control body weight, a variety of lifestyle factors must be managed. Knowing what is involved to truly manage your weight for a lifetime will help you become mentally prepared. The following questions will help evaluate your own readiness for change.

Carefully read these questions. They will help you determine if your goals are realistic and what areas of your life will need the most change for successful weight management.

WEIGHT HISTORY

- What was your weight like in grade school? High school?
- What was your lowest adult weight? How were you able to maintain that weight? What was your life like then? Did you exercise? Did you eat differently?
- What was your highest adult weight? What changed in your life that led to this weight?
- What has been the most stable weight for you in the last 5 years?
- Does anyone in your immediate family have a weight problem?
- Have you tried to change your weight in the past? Did you meet your goal? If so, how long did you stay at your goal?
- What could you improve on from your last weight change attempt?

MEDICAL HISTORY

- Are you currently being treated for any medical condition to which your weight or eating habits are contributing factors (Ex. high blood pressure, diabetes, high blood cholesterol, fatigue, anemia)?
- Do you have any family history of diabetes, heart disease or cancer?
- Do you have a history of muscle, joint, or bone injuries? Is your physical activity currently limited because of a muscle, joint, or bone problem?

FOOD HISTORY

Put a check by things that have led to your weight change.

- | | |
|---|--|
| <input type="checkbox"/> Eat too much (large portions) | <input type="checkbox"/> Eat sweets and desserts often |
| <input type="checkbox"/> Eat very little | <input type="checkbox"/> Eat fast foods often |
| <input type="checkbox"/> Skip meals | <input type="checkbox"/> Eat while watching TV |
| <input type="checkbox"/> Drink too much alcohol | <input type="checkbox"/> Quit smoking |
| <input type="checkbox"/> Drink too much of other high-calorie beverages, such as sodas, sweetened tea, and fruit drinks | <input type="checkbox"/> Don't exercise |
| | <input type="checkbox"/> Exercise all the time |

Do you eat if you are:

- | | | |
|----------------------------------|------------------------------------|--|
| <input type="checkbox"/> Bored | <input type="checkbox"/> Depressed | <input type="checkbox"/> Tired |
| <input type="checkbox"/> Nervous | <input type="checkbox"/> Happy | <input type="checkbox"/> Tense |
| <input type="checkbox"/> Angry | <input type="checkbox"/> Worried | <input type="checkbox"/> Procrastinating |

Eating patterns:

- | | |
|---|--|
| <ul style="list-style-type: none">• How often do you eat? How often do you snack?• Do you ever forget to eat?• Do you eat quickly?• Are there foods you tend to overeat? | <ul style="list-style-type: none">• Do you like to cook?• Do you know your way around a grocery store?• How often do you eat out or eat take out?• Do you associate most social activities with eating? |
|---|--|

EXERCISE PATTERNS:

- How often do you perform aerobic or endurance exercise? How long do you exercise?
- How often do you perform strength training exercises? Do you exercise all the major muscle groups?
- How often do you do stretching exercises?

MOTIVATION AND COMMITMENT

- | | |
|---|---|
| <ul style="list-style-type: none">• Why do you want to change your weight? <input type="checkbox"/> Appearance <input type="checkbox"/> Fitness <input type="checkbox"/> Health | <ul style="list-style-type: none">• Do you often make big changes but are able to maintain them for only a short time?• Will you stick with changes in your eating and exercise habits if it becomes difficult or uncomfortable?• Are you willing to change your lifestyle? |
| <input type="checkbox"/> To feel better <input type="checkbox"/> Pressure from family/friends | |
| <input type="checkbox"/> Military career | |

The METT-T Realities of Performance Weight Control

MISSION: To find your best Performance Body Weight. To perhaps lose body fat and gain muscle safely, healthfully, effectively and permanently.

ENEMY: Lack of time, inactivity, poor food choices, and inability to make decisions around food either because of a lack of knowledge, motivation or desire.

TERRAIN AND WEATHER: Pick the terrain to help your efforts at healthy living. Be prepared for situations that challenge your commitment to maintain a healthy lifestyle. Learn to create a supportive environment as well as deal with non-supportive people and situations, such as frequent deployments and relocations.

TIME: Establish time to fit in regular exercise. Take time to buy and prepare healthy foods. Eat regular meals.

TROOPS: Partner and support each other.

II. THE FOOD CONNECTION TO PERFORMANCE YOUR WEIGH

KEY CONCEPT

To change body composition while maintaining physical performance, food and beverage choices and portion sizes must be adjusted to achieve an appropriate energy intake while providing essential nutrients.

OBJECTIVES

After completing this section, you will be able to:

- ▲ Estimate your energy needs for weight maintenance or desired weight change.
- ▲ List the three fuel nutrients that provide energy to the body.
- ▲ Appreciate the need for nutrient-dense foods in your weight loss eating plan.
- ▲ Choose appropriate numbers of servings from the five major food groups of the Food Guide Pyramid.
- ▲ Select appropriate portions of foods.
- ▲ Plan a day's menu to meet your calorie goal.
- ▲ Build a personal performance diet, using the Food Guide Pyramid, to achieve and maintain your performance weight.

Calorie Smarts

Energy balance is partially determined by your energy intake. Although calories are important, weight management is more than counting calories. However, it is helpful to have an idea of how many calories we should be consuming.

The first step in calorie awareness is estimating how many calories you need in a day to maintain your weight. Calorie needs are due to many things—some you can change and some you are stuck with.

Unless you do strenuous physical work or prolonged, vigorous athletic activity, most of the energy you use is just to keep your body functioning, even if you stay in bed all day. This is your basal or basic metabolic rate. Physical activity above resting can greatly increase calorie needs.

Once you know about how many calories you need to keep your weight where it is, determine about how many calories you should take in to allow for weight gain or loss.

To gain weight, you need to take in more energy than you burn. Most of that weight gain should be muscle. An additional 400 calories a day, combined with strength training, can add about a pound of muscle weight per week.

Use the quick calculation method on the next page to estimate your calorie needs.



To lose one pound of body fat per week you have to consume 500 calories a day less than you use. You can do this by eating 250 calories less and burning off an additional 250 calories by exercising more. Your calorie goal will depend on how much exercise you can add to your day.

Don't go below your basic calorie needs or 1200 calories, whichever is higher. If you go much below that, your metabolism slows down and you will burn calories more slowly. Eating fewer calories boosts your chances of running short of necessary nutrients.

Determiners of Energy Needs

Age: Energy needs decline as we get older, mostly due to decreases in physical activity.

Body Size: It takes more energy to move a bigger body.

Body Composition: Ounce for ounce, muscle burns more energy than fat. So the more muscle you have, the more calories you need to maintain your weight.

Body Type: Some bodies are energy wasters and others are energy hoarders. Whether your body is a waster or a hoarder is partly determined by genetics, in addition to your body composition, fitness level, and energy balance.

Physical Activity: The more active you are, the more calories you need.

ESTIMATE HOW MANY CALORIES YOU BURN IN A DAY

1. Calculate your basic energy needs.

Multiply your weight by 10 if you're female or by 11 if you're male. If overweight, use your healthy or goal weight. This is because extra fat contributes little to calorie burning at rest.



$$\frac{\text{Weight}}{\text{(Weight)}} \times \frac{\text{10 or 11}}{\text{(10 or 11)}} = \frac{\text{Calories for basic needs}}{\text{(Calories for basic needs)}}$$

2. Multiply your basic calorie needs by a factor to account for the additional calories you use for your daily activities.

To select the multiplier to use, find the description that matches your usual activity level from the following list. Individuals of small body size or with little muscle mass should generally use the lower figures when a range is given. People who fidget a lot may need to use the higher figures.

Level of General Activity	Activity Multiplier
Exceptionally active - Heavy manual labor; Army and Marine recruit training; Competitive athlete.	2.1-2.4
Very Active - Typical workday includes several hours of physical labor, such as light industry and construction-type jobs. Athletic levels of fitness activity.	1.8-1.9
Moderately Active - Sedentary job plus substantial weekend recreation or 1 hour of moderate physical activity on most days or moderate to vigorous exercise three to five times a week. On your feet most of the work day, light lifting only, and no structured exercise.	1.6-1.7
Slightly Active - Sedentary for most of the day and do light activity, such as walking, for no more than 2 hours daily.	1.4-1.5
Sedentary - Describes most Americans. You sit, drive, lie down, or stand in one place for most of the day and don't do any type of exercise.	1.3
Very Sedentary - Movement restricted, such as sick at home but not confined to bed.	1.2

$$\frac{\text{Calories for basic needs}}{\text{(Calories for basic needs)}} \times \frac{\text{Activity Multiplier}}{\text{(Activity Multiplier)}} = \frac{\text{Total calorie needs to maintain weight}}{\text{(Total calorie needs to maintain weight)}}$$

By adding exercise, you can increase your calorie needs.
(See Section III to find out how many calories you can burn in exercise.)

What is your calorie intake goal? calories
(Don't go below your basic calorie needs or 1200 calories per day, whichever is higher.)

If you don't want to go through these calculations, a quick guideline is that most women will lose weight on 1400-1600 calories a day. And most men will lose on 1600-2000 calories a day. But not everyone has to go this low. It depends on how big you are, how much you're exercising, and how fast you want to lose.

Mental activity requires very little energy, even though it may make you tired. You may be very busy riding from place to place, doing errands, or making phone calls, but these activities involve few muscles and, therefore, burn few calories.

There is no need or reason to obsess about calories. Keep in mind that calorie calculations are only estimations. The only accurate ways to determine how many calories you need are expensive laboratory measures. In addition, calorie values for foods are approximate. The true caloric content can vary widely from food to food or manufacturer to manufacturer. For example, an apple may provide 50 calories or 100 calories depending on variety, season, exact size, and how close to the core you eat. Use calorie figures as starting points to help you make food choice decisions. As long as you're gradually losing weight you're making adequate changes in your diet and activity level.

Where Do Calories Come From?

The caloric content of a particular food depends on the amounts of carbohydrates, proteins, and fats in the food. These are the three nutrients your body can use for energy. Alcohol, not a nutrient, also provides considerable calories. Unused calories from any source are stored as body fat.

1 gram fat = 9 calories	▲▲▲▲▲▲▲▲▲
1 gram carbohydrate = 4 calories	▲▲▲▲
1 gram protein = 4 calories	▲▲▲▲
1 gram alcohol = 7 calories	▲▲▲▲▲▲▲

Carbohydrates Give You

- ▲ Quick start
- ▲ Endurance
- ▲ Alertness
- ▲ Short bursts of energy
- ▲ Quick recovery
- ▲ Energy that lets you do the work that builds muscle
- ▲ Size and strength

CARBOHYDRATES

Carbohydrates are your body's fuel of choice. Ingested carbohydrates are converted into blood sugar and used for energy or are converted to glycogen and stored in your liver and muscles. Liver glycogen feeds your brain between meals. Muscle glycogen is needed to fuel movement, from short bursts of activity to forced marches.

Half to two-thirds of your calories should come from carbohydrates to give you the energy you need day in and day out. If your diet is low in carbohydrate, you'll start to feel sluggish, if not immediately, certainly down the road. If your diet is too high in carbohydrate, you may be squeezing out protein and even fat, which are vital for health and performance. Balance is the key.

It's Not So Simple Carbohydrates in our diets come in two major categories: simple and complex. The difference is based on their structure.

Simple Carbohydrates are sugars. There are two major types of sugars:

- ▲ **NATURALLY-OCCURRING** – Fruit contains fructose. Milk contains lactose. Besides providing calories, these foods provide vitamins and minerals.
- ▲ **ADDED** – Most of the sugars we consume are added or refined sugars, such as table sugar or high fructose corn syrup in sodas and fruit-flavored drinks. Added sugars only add calories—no vitamins, no minerals, no fiber. That's why foods high in sugar are "empty calorie" foods. High sugar foods, such as soda, consumed by themselves, may cause your blood sugar to rise sharply then drop off. Since low blood sugar triggers hunger, this can lead to overeating later.

Complex Carbohydrates are starches. They are found in dried beans, vegetables, fruits, and grains like wheat and rice. Foods high in complex carbohydrates provide vitamins, minerals, and fiber along with their calories. By themselves, starchy foods are not high calorie. It's the added fats and sugars in foods that escalate the calories.

Fiber (a type of complex carbohydrate) is the structural part of all plants that we are unable to digest or absorb. Fiber fills us up with fewer calories. High fiber foods leave the stomach slower and help us feel full longer. New research suggests that fiber also helps cut calories by blocking the digestion of some of the fat and protein consumed with it. Upping fiber intake could possibly “save” 50-150 Calories a day. Generous dietary fiber intake is related to the prevention of several health problems: constipation and hemorrhoids, colon cancer, heart disease, and diabetes. Shoot for 25-30 grams of fiber a day.

- Eat more fruits and vegetables (5-9 servings a day).
- Select whole grain breads. The word “whole” should be first on the ingredients listing. Choose breads with a minimum of two grams of fiber per slice. Read the label. (See label reading section page 7-25.)
- Eat legumes—dried beans and peas—at least once per week. Yes, baked beans are legumes.
- Include a high fiber cereal for breakfast. Aim for a minimum of three grams of fiber per serving.

PROTEINS

Proteins also provide energy, especially if you don’t consume enough carbohydrate and fat. But protein is an inefficient fuel source. Proteins’ main functions are to:

- ▲ Make and repair muscle and all other body tissues.
- ▲ Form enzymes and hormones that regulate various chemical reactions.
- ▲ Form antibodies which protect us against invasion from bacteria and viruses.

If proteins are broken down to be used for energy, they can’t be used to maintain body tissues.

Your protein needs partially depend on how much muscle you have. Building muscle requires higher protein levels. Sports nutrition research has shown that athletes need slightly more protein than sedentary individuals. An increased protein intake appears to be more important during the early stages of training rather than later in the training program. Protein needs are also slightly higher during weight loss to prevent loss of lean tissue.

What Do You Need?

Grams of Protein per Pound of Desired Body Weight

Sedentary adult	0.4
Very active adult	0.55
Adult endurance athlete	0.7
Adult building muscle mass (Weight/strength training)	0.8
Adult losing weight	Add 0.05
Upper limit	1.0

Where Do You Get It?

Protein in food

1 8-ounce glass of milk	= 8 grams
1 ounce lean meat, fish, or poultry	= 7 grams
1 ounce seafood	= 5 grams
1 slice of bread	= 2-3 grams
1/2 cup vegetables	= 1-2 grams
1/2 cup navy beans	= 7 grams

Fish, poultry, meats, eggs, milk, and cheese contain large quantities of high-quality protein. Dried beans and peas, seeds, and nuts provide considerable amounts of protein too. Small amounts are found in grains and vegetables. Animal sources of protein can be high in fat, so choose low fat varieties. See pages 7-22 and 7-23 for how to pick lowfat protein foods.

FATS

Since fats contain more than twice the calories as equal weights of carbohydrates or proteins, they pack a lot of calories into a small amount of food. What looks like a little dab of fat can easily be 100 calories. This makes it easy to eat a lot of fat calories before feeling full.

Using a measuring spoon - 1 level table-spoon of pure fat contains 120 Calories!

Fats can be more fattening than carbohydrates or proteins. The body uses less energy to convert excess calories from dietary fat to body fat than it uses to convert carbohydrates or proteins to fat.

In general, the same lowfat/low-fat diet that is recommended for health and physical performance can help you maintain a performance body weight. Your average fat intake should hover around 20-30% of your total calories. This translates to about 25-35 grams of fat for every 1000 calories you consume.

Vitamins and Minerals

To stay alive and well, we also need vitamins and minerals. They do not provide energy by themselves, but without them, our bodies could not get energy from the foods we eat.

Vitamins, minerals, and other trace elements are needed to regulate all body systems, build or repair tissues, prevent diseases, and do a whole lot more.

The approximately 40 essential vitamins and minerals are found in widely varying amounts in different foods. Supplements are usually not needed if the diet provides more than 1400 calories a day and is well balanced with a variety of foods.

Don't strive for a fat-free diet. Fat is an essential nutrient—we need a little bit of it in our diets to stay healthy. Plus, fat is important to the enjoyment of our meals.

- ▲ Fat can help delay hunger. Fat doesn't leave your stomach as quickly as carbohydrate or protein, so a little fat can keep you satisfied longer after a meal. If there's no fat at all in your meal, you might be hungry an hour later.
- ▲ Fat makes food taste good. It provides texture and keeps foods moist. The strategy is to use just enough to provide flavor.

Cutting fat intake too low can lead to frustration and boredom with food and a backlash of binging.

Total Daily Calories	Fat Gram Limit	
	Lower	Upper
	20% fat	30% fat
1200	25	40
1600	35	55
2000	45	65
2400	55	80
2800	60	95

Foods that are almost pure fat include cooking oil, lard, butter, margarine, shortening, and salad dressings.

Foods that contain significant amounts of fat include meat, full-fat dairy products, chocolate, cakes, pies, cookies, nuts, fried foods, such as french fries, and a few fruits and vegetables, such as olives and avocado.

Water

There is more water in our bodies than anything else. Although water is an essential nutrient, needed by every cell of the body, its importance is often overlooked.

A good rule of thumb is to drink at least 4 cups (1 quart) of water for every 1000 calories consumed.

- ▲ High-protein or high-sodium diets increase water needs.
- ▲ Drink more if increasing fiber intake to prevent constipation.
- ▲ When it's hot or you are exercising a lot, increase your fluid intake to replace sweat losses.

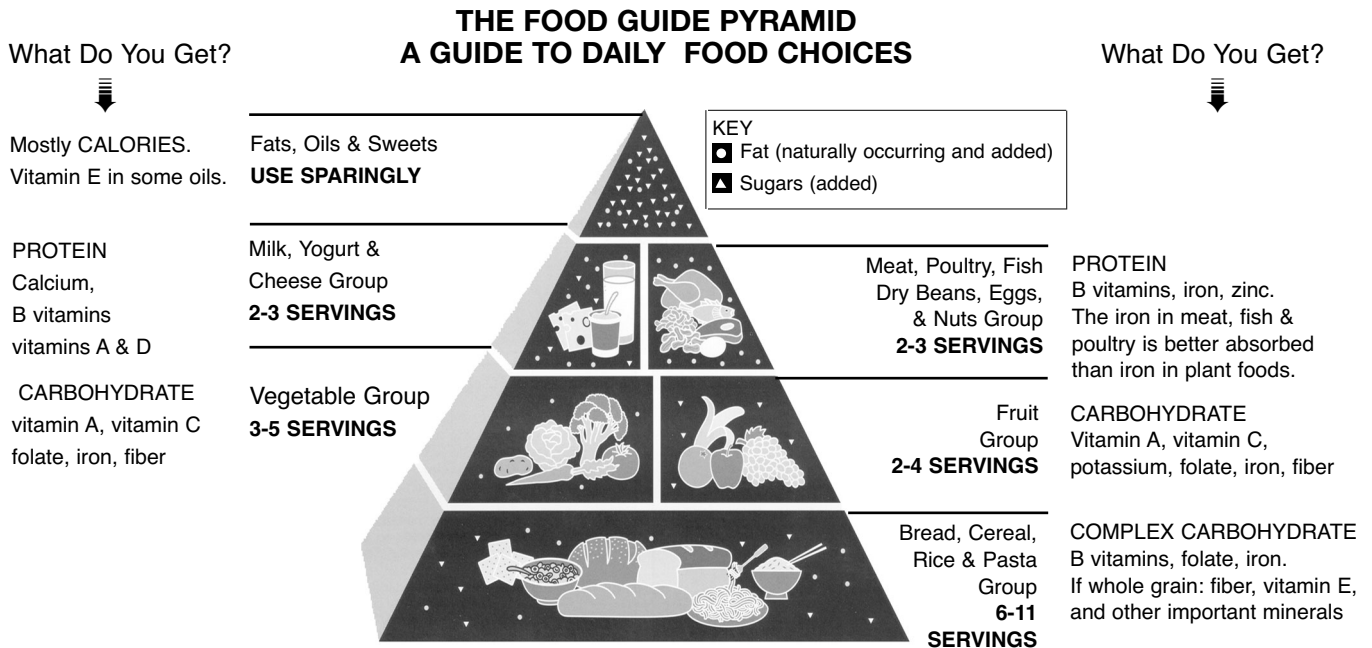
Water helps fill you up with zero calories. Drinking lots of water does not magically melt away fat, but all systems in your body, including fat breakdown, work better when your water level is high.

You don't have to drink just plain water. Almost all beverages, except for ones with alcohol or a lot of caffeine, help you meet your water needs. But, beware! Many are high in calories. See page 7-24 for help in picking low calorie beverages.

Food Balance

The Food Guide Pyramid can help you put together a diet with the right balance of nutrients that is within your calorie range. When you are cutting calories, it is especially important to get the most nutrition per calorie. Base your food choice decisions on nutrient content as well as calories.

Each of the five major food groups of the Pyramid contains some, but not all, of the nutrients you need. Foods in one group can't replace those in another, and, although one food group is not more important than another, some food groups deserve more emphasis in the diet than they often get. The larger a Pyramid segment, the more you should eat from that food group.



How Many? The Pyramid shows a range of servings for each major food group that provides about 1600 to 2800 calories. The number of servings that are right for you depends on how many calories you need, which in turn depends on your age, sex, size, and how active you are.

SUGGESTED SERVINGS AT VARIOUS CALORIE LEVELS

Total Calories								
	1200	1400	1600	1800	2000	2200	2400	2800
Grains	4	5	6	7	9	9	10	11
Vegetables	3	3	3	3	3	4	4	5
Fruits	2	3	2	3	3	3	3	4
Milk Group*	2	2	2	2	2	2-3	2	2-3
Meat & Alternatives	5 oz.	5 oz.	5 oz.	6 oz.	5 oz.	6 oz.	6 oz.	7 oz.
Comments	Nonfat milk and yogurt. Allows some part skim or fat-reduced cheese.				Allows use of 2% fat milk daily or 3-4 servings of full-fat cheese per week.			
	Meats should have no more than 3 grams fat per ounce.			Meats should have no more than 5 grams fat per ounce.				
	Requires low-calorie salad dressing and very little margarine.							
Do As You Like Calories**	100	150	175	225	275	325	400	500
Total Fat Grams	33	39	53	60	67	73	80	93

*Everyone should strive for 2 servings from the milk group. Service members under 25 years and women who are pregnant or breastfeeding need at least 3 servings of dairy foods daily to get their calcium needs.

**Do As You Like Calories can be used for servings from the tip of the Pyramid or to work in higher-fat or higher-sugar foods from one of the major food groups, as long as the fat gram limit is not exceeded. For example, premium ice cream has about 200 calories and 15 grams fat per 1/2 cup serving.

How Much?

To control your calories, you need to know what counts as one serving. The amount you eat may be more than one serving. If you eat a larger portion, count it as more than one serving. If you eat a smaller portion, count it as a part of a serving.

Bread, Cereals, Rice, and Pasta

(lowfat choices about 80 calories)

- 1 slice of bread
- 1 small roll, biscuit, or muffin
- 5-6 small crackers (saltine size)
- 3-4 large crackers (graham cracker size)
- 1/2 cup of cooked rice, pasta, or cereal
- 1 ounce of dry cereal (1/2 to 1 cup depending on type)
- 1 4-inch pancake
- 2 cups hot-air popped popcorn

Vegetables

(15-40 calories; Starchy vegetables, 100 calories)

- 1/2 cup cooked vegetables
- 1/2 cup cooked dry beans (legumes) (if not counted as a meat)
- 1/2 cup tomato or spaghetti sauce
- 1 cup raw, leafy vegetables
- 3/4 cup vegetable juice
- 1 small baked potato
- 1/2 cup cole slaw (contains added fat)

Get Real!

Typical Portion	Number Pyramid Servings
1 deli bagel	4-5
2 cups spaghetti	4
1 large sub roll	3-4
1 hamburger bun	2
Typical bowl of cereal	2

Fruit

(60-100 calories)

- 1/2 cup raw, canned, or cooked fruit
- 1 medium whole fruit, such as apple, banana, orange, nectarine
- 1/2 grapefruit
- 1/4 cup most dried fruit
- 2 Tbsp. raisins

Dairy*

(90 calories or more)

- 1 cup (8 oz.) milk or yogurt
- 1-1/2 oz. natural cheese (ex. Cheddar, blue, feta, mozzarella)
- 2 oz. processed cheese
- 1/2 cup ricotta cheese
- 2 cups cottage cheese (to equal calcium in 8 oz. milk)
- 1 cup frozen yogurt**
- 1-1/2 cups ice cream**

*Full-fat dairy products are high in fat and calories. Select lowfat or nonfat versions.

**Most contain substantial amounts of added sugars.

Meat, Poultry, Fish, Eggs, Dry Beans, and Nuts

(55-75 calories per ounce for lean-medium fat meat)

1 serving is 2-3 ounces cooked, lean meat without bone.

- 3 oz. = about the size of a deck of cards
 - 1/2 of 6-1/2-oz. can tuna in water
 - 1 medium chicken breast half
 - 2 chicken legs
 - 3/4 cup cooked chopped meat
 - an 8" X 2-1/2" fish fillet, 1/4" thick

Count as 1 ounce of meat:

- 1 egg
- 1/2 cooked dry beans (if not counted as a vegetable)
- 2 Tbsp. peanut butter (16 grams fat)
- 1/3 cup nuts (20-25 grams fat)
- 1/4 cup seeds (e.g., sunflower) (5-20 grams fat)
- 1 ounce cheese (if not counted as dairy)

Fat, Oils, Sweets & Alcohol

There are no specific serving sizes for the fats, oils, and sweets group because the message is USE SPARINGLY. However, typical portion sizes and their calorie counts are shown below. (Compare to choices in the table on the right.)

Regular Products		Lower-Calorie Alternates	
	Calories		Calories
Fats:		Fats:	
1 teaspoon (small pat) margarine or butter	30–35	1 teaspoon (small pat) light margarine	15–20
1 tablespoon mayonnaise	100	1 tablespoon fat-free or light mayonnaise	10 or 50
1 tablespoon salad dressing	60–80	1 tablespoon low / reduced calorie salad dressing	20–40
1 tablespoon cream cheese	50	1 tablespoon light cream cheese	30
1 tablespoon sour cream	30	1 tablespoon light sour cream	20
1 slice bacon (6 grams fat)	35	1 slice turkey bacon (3 grams fat)	30–35
1 tablespoon cooking or salad oil	120	5 sec spray of nonstick cooking spray (PAM)	5
Sugars:		Sugars:	
1 teaspoon sugar, jam or jelly	15	1 teaspoon equivalent of sugar substitute	0–4
1 teaspoon honey or syrup	20	1 tablespoon light pancake syrup	10
20 fl oz. soft drink	250	20 fl oz. diet soda	0–5
Alcohol:		Alcohol:	
12 fl oz. beer (1 regular can)	150	12 fl oz. light beer	70–100
5 fl. oz. wine, dry	115		
1 1/2 fl. oz. Liquor (without mixer)	95–110		

HOW MUCH IS THAT?

Even lean foods can sabotage your good intentions if your portions are oversized. Developing an eye for size is your best defense. Picture these visual cues when you size up your portions.

Golf ball =	1 ounce meatball or 2 Tbsp. peanut butter
Deck of cards =	3 ounces of cooked lean meat (~1 svg)
3 dominos =	1-1/2 oz. cheese
Thumb =	1 ounce of cheese
Baseball =	1 cup
1/2 baseball =	1/2 cup
Tip of thumb =	1 teaspoon

An even better way to teach yourself how to eyeball your servings is to actually measure or weigh some of your foods. Realize that serving sizes are level measures – not rounded or heaping – using measuring cups and spoons – not your coffee cup or serving utensils.

COMBINATION DISHES

Many foods have ingredients from several food groups – for example, soups, stews, casseroles, and pizza. For mixed dishes estimate the food group servings of the main ingredients, including any added or hidden fat. For example a bean burrito has a tortilla from the grain group, beans from the meat or vegetable group, and cheese from the milk group. Add 1/4 cup chopped tomato and 1/2 cup shredded lettuce for a vegetable. Consider the extra fat if the burrito is made with whole-milk cheese and refried beans.

MEAL ENHANCERS

Some foods are so low in calories you don't have to count them if you don't go overboard.

- Salsa (Count as a vegetable if use 1/2 cup or more)
- Sugar-free Jello
- Sugar substitutes
- Bouillon or broth

Drinks

- Seltzer/carbonated water
- Coffee, brewed, black
- Club soda
- Diet soft drinks, sugar-free
- Drink mixes, sugar-free
- Tea, brewed, unsweetened

Condiments

- Bacon bits (Keep to less than 1 Tbsp)
- BBQ sauce
- Catsup, tomato
- Chutney
- Horseradish

- Lemon juice
- Lime juice
- Mustard, prepared
- Pickle relish

Sauces & Seasonings

- Pickles
- Herbs
- Soy sauce
- Spices
- Tabasco sauce
- Taco sauce
- Teriyaki sauce
- Vinegars (Balsamic, cider, red wine, rice wine)
- Wine used in cooking
- Worcestershire sauce
- Sauces & seasonings

✂ Cutting The Grease ✂

Go easy on fats added to foods in cooking or at the table—butter, margarine, gravy, salad dressings and high-fat sauces.

- ▲ Alfredo, cheese, cream, Hollandaise, remoulade, and roux are high-fat sauces.
- ▲ Request gravies, dressings, and sauces on the side and add to foods sparingly.
- ▲ Use a nonstick cooking spray instead of oil to sauté foods.
- ▲ Grill, pan-broil, roast, bake, steam, microwave, stew or poach foods instead of frying them.
- ▲ Measure the fats and oils you do use so you use just enough.
- ▲ Select lowfat, low-calorie versions: Reduced calorie or nonfat mayonnaise, salad dressings, margarine, sour cream.
- ▲ Save french fries and other fried foods for special occasions; have a small serving; share with a friend.
- ▲ Read the Nutrition Facts panels on food labels to help you find out where the fat is hidden.
- ▲ Cook with high-flavor ingredients, like garlic, hot peppers, or onions to add flavor without fat.
- ▲ Use herbs, spices, citrus juices, lowfat salad dressings, and salsa to flavor meats, poultry, vegetables, and grains.

TOP IT OFF

- ▲ Forgo the butter or margarine on pancakes or French toast and use only the syrup. Do you really need both?
- ▲ Use jams, preserves, fruit purees, or apple butter (misnamed, since there's no butter in apple butter) on breads or bagels instead of margarine or cream cheese.
- ▲ Ask for barbecue sauce for your grilled or broiled chicken sandwich instead of the special sauce or mayonnaise.
- ▲ Moisten a baked potato with a drizzle of milk so you don't need a lot of margarine or sour cream. Or, top with lowfat cottage cheese, nonfat yogurt or sour cream, salsa, or mustard.
- ▲ Use mustard, which is fat-free, instead of mayonnaise on sliced meat sandwiches.
- ▲ Have pastas with tomato or vegetable-based sauces instead of cheese or cream sauces.

LOWFAT BUT NOT LOW-CALORIE

Don't assume that a food labeled "lowfat" is also low in calories. Many reduced-fat and fat-free products provide almost as many calories as the original product. Most fat replacers used to keep the flavor, texture, or other properties, add back calories. Don't fall for the trap of eating more because a food has less fat.

1 Fig Cookie	
Fat Free	Regular
70 calories	55 calories
2 Tablespoons Peanut Butter	
Reduced-Fat	Regular
190 calories	190 calories
5 Saltine Crackers	
Fat Free	Regular
50 calories	60 calories

There are many lowfat, fat-free, and sugar-free foods in the commissary that are truly calorie savers. Fat-free mayonnaise and sour cream or lowfat salad dressings are examples.

Use the Nutrition Facts panel on the food label to help determine the fat and calories in the foods you eat and to compare different products.

There can be a big difference between similar products from different manufacturers. Try various brands until you find the ones that satisfy your taste requirements.

Remember, it's the total fat and caloric intake over a day or a week that's important. A food high in fat can be part of your diet as long as it's balanced with other lower-fat, lower-calorie choices.

SAME BUT DIFFERENT

All fats have the same amount of calories, but some are better for your health than others.

Saturated fats and trans fats:

- ▲ Raise blood cholesterol levels
- ▲ Found in meats and whole milk dairy foods
- ▲ Also in processed foods that contain hydrogenated oils or palm or coconut oils

Unsaturated fats:

- ▲ Reduce blood cholesterol
- ▲ Mostly from plant sources. Healthiest choices include:

Olive oil	Mayonnaise	Soybeans
Walnuts	Canola oil	Almonds
Peanut butter	Peanuts	Hummus

- ▲ Also found in fatty fish, such as salmon or swordfish

The more **solid** a fat is at room temperature, the more **saturated** it is.

The more **liquid** a fat is, the more **unsaturated** the fat is.

Myth: Margarine is less fattening than butter.

Fact: Regular margarine and butter contain the same amount of calories per serving—all from fat. "Light" margarines have less fat and calories.

HIDDEN CALORIES

Even if you're controlling your portions and avoiding visible fats and sugars, hidden calories can sabotage your efforts at calorie control. All foods within a food group are not equal. Much of the fat and sugar in our diet is hidden.

Small circles and triangles are used throughout the Pyramid to remind us that foods in the major food groups—such as French fries from the vegetable group or cheese or ice cream from the milk group—can contain fat and added sugars. When choosing foods, consider the fat and added sugars in your choices from all the food groups, not just fats, oils, and sweets from the Pyramid tip.

Food Choices Throughout The Pyramid

Whether you are eating in a military dining facility, at the kitchen table, or dining in a restaurant, you have choices. No food is bad, but some foods fit into a performance diet better than others.

Choosing the best performance choices most of the time will keep you on track to your performance body weight.

Make trade-offs to keep your meals and day in balance.

Take a tour of the Pyramid to find your best performance choices. Be an adventurous explorer. Be willing to try new foods, new seasonings, new recipes. Look for ideas from different countries and cultures.

BREAD, CEREAL, RICE & PASTA

In the grain group, opt for breads made with less fat and sugars, such as whole wheat breads and rolls, bagels, bread sticks, English muffins, Italian bread, pita bread, or corn or flour tortillas.

- ▲ Choose air-popped or lowfat microwave popcorn, matzos, pretzels, rice cakes, and baked tortilla chips.
- ▲ Looking for something sweet? Try angel food cake, animal crackers, graham crackers, vanilla wafers, or ginger snaps.
- ▲ Start your day with a low-sugar, high-fiber breakfast cereal. Some to pick from: bran flakes, corn flakes, muesli, oatmeal, Raisin Bran[®], shredded wheat, Chex[®] cereals, Wheaties[®].
- ▲ Look beyond white rice and spaghetti. Try brown rice, bulgur, barley, couscous, and cracked wheat as a serving from the grain group.

CALORIE ALERT

Croissants	Doughnuts
Sweet rolls	Snack cakes
Biscuits	Hush puppies
Snack crackers	Granola

VEGETABLES & FRUITS

Satisfy your hunger with fewer calories and more nutrition by eating plenty of vegetables and fruits. You won't have as much room for large portions of high-calorie foods like meats, cheeses, and desserts.

- ▲ Flavor vegetables with herbs, seasonings, lowfat salad dressings, or a splash of lemon instead of margarine.
- ▲ Save unwanted calories by avoiding fruits that are canned or frozen in heavy syrups or sweetened fruit juices.
- ▲ Count only 100% fruit juice as fruit. Punches, ades, and most fruit "drinks" contain only a little juice and lots of added sugars, and, therefore, belong in the Pyramid tip.

CALORIE ALERT

Cole slaw	Potato salad
Cheese sauces	Cream sauces
Corn chips	Potato chips
French fries	

TIPS FOR INCREASING ...

Fruits	Vegetables
At Breakfast	
<ul style="list-style-type: none"> ▲ Drink a glass of 100% juice, especially orange, grapefruit. ▲ Add fruit (bananas, strawberries, and blueberries) to cereal. ▲ Top your breakfast waffles or pancakes with fresh or frozen berries, peaches, applesauce, or bananas instead of syrup. You'll save on sugars and calories—and get more nutrients and fiber, too. ▲ Make a fruit and yogurt shake. 	<ul style="list-style-type: none"> ▲ Add chopped peppers, onions, and mushrooms to an omelet and top with salsa.
For Lunch	
<ul style="list-style-type: none"> ▲ Eat a piece of fresh fruit. 	<ul style="list-style-type: none"> ▲ Have a salad or vegetable soup. ▲ Add romaine, sprouts and tomato to your sandwich. Carry cut up veggies in your brown bag lunch.
For a Snack	
<ul style="list-style-type: none"> ▲ Nibble on grapes. ▲ Take an apple to work. ▲ Drink a can or juice box of 100% juice. 	<ul style="list-style-type: none"> ▲ Munch on cut up veggies; celery, carrots, cauliflower, green peppers, cucumbers, and broccoli are good choices. ▲ Drink a can of V-8 juice®.
At Dinner	
<ul style="list-style-type: none"> ▲ Use fruits as a garnish. ▲ Choose a fruit appetizer, such as a fruit salad. ▲ Have fruit for dessert. Try warmed blueberries from the microwave. 	<ul style="list-style-type: none"> ▲ Add two vegetables instead of one to your meal. ▲ Have a tossed veggie salad. ▲ Keep frozen vegetables in the freezer to have available for short notice. They steam or microwave in minutes and are just as nutritious as fresh. ▲ Pour a can of seasoned beans (chili, Texas, or Creole) over cooked rice for a quick beans and rice meal.

MILK, YOGURT, & CHEESE

Whole-milk dairy products are very high in fat. Most have lower-fat counterparts that can save you lots of calories. Dairy products with no more than 1% fat are your best choices. Choose...

Skim milk	Nonfat buttermilk
Evaporated skim milk	Nonfat yogurt
Nonfat dry milk	Lowfat. cheese (<i>read label – look for less than 6 grams fat per ounce.</i>)

If you drink whole milk, gradually switch to skim, starting with 2% fat milk for a few weeks. When you are used to that, move to 1% lowfat milk. When you are ready to switch to a fat-free milk, look for nonfat milk that is protein fortified or has nonfat dry milk solids added. These have more flavor and body than regular skim milk.

Lost the habit of drinking milk?

To get the calcium advantage of dairy: Try yogurt, frozen yogurt, and fat-reduced cheeses. Sneak nonfat, dry milk into meat loaf or lowfat “cream” soup.

Don't drink milk?

High-calcium foods are too important to leave out. Try lime-treated tortillas, tofu or soy milk. Select calcium-fortified orange juice.

Milk bother you?

Try yogurt with active cultures, aged cheese, Lactaid® milk products, or use lactase enzyme tablets or drops. Ask your physician about calcium supplements.

MEAT, POULTRY, FISH, DRY BEANS, EGGS, & NUTS GROUP

Think of meat as the side dish, with the vegetables and grains as the main course. If your portions are typically 6, 8, or even 10 ounces, you may not be immediately satisfied with 3 ounce servings. Cut back gradually to get used to downsized portions. Also remember, you can save up servings and have one bigger portion of meat at one meal of the day.

- ▲ Eat more vegetarian protein meals, using dried beans, peas, and lentils in place of meat. Flavor with lean ham or lowfat smoked turkey sausage instead of bacon or salt pork.
- ▲ Trim away all the visible fat from meats and remove skin from poultry.
- ▲ Cutting off the edge fat from meat may not be enough. The thin streaks of white within the meat – marbling – is fat, much of which stays in the meat when it is cooked. “Select” or “good” grades of beef, veal and lamb have the least marbled fat. Next lowest is “choice” cuts. Prime grades of beef are the fattiest.
- ▲ Certain cuts of meat are leaner than others.
 - Cuts of beef with round or loin in the name are the leanest.
 - Loin or leg cuts of pork or lamb are the leanest.
 - For pork, roasts and chops of tenderloin, center loin, and ham are lean.

CALORIE ALERT

Prime rib	Fried chicken
Club steak	Rib steak/Roast
Spare ribs	Short ribs
Fast food burgers	Chitterlings
Pork rinds	Nuts
Nut butters	Seeds
<u>Unless Lowfat Version:</u>	
Sausage	Hot dogs
Cold cuts	Luncheon meats
(Ex. salami, bologna, deviled ham)	

LEAN BEEF CUTS		
Steaks	Roasts	Miscellaneous
Flank	Chuck Arm pot roast	Corned beef round
Round, all cuts	Chuck roast (round bone)	Dried or chipped beef
Sirloin, all cuts	Heel of round	Extra lean ground beef (90% lean)*
Tenderloin, all cuts	Rump roast	Stew meat (lean, well-trimmed)
	Sirloin tip	Tripe

**Percent lean refers to the weight of the meat, not the percent of calories from nonfat sources.*

- ▲ For ground beef, choose 90% lean, 10% fat. Ground chicken or turkey **meat** is usually no more than 7% fat. This is found in the fresh meat case. Most frozen ground turkey includes skin and is 15% fat or more.
- ▲ Fake it! A veggie burger has about half the calories and one quarter the fat of a hamburger made with extra lean ground beef. In addition, veggie versions are usually high in fiber and provide no cholesterol. Look for soy or bean based veggie burgers and dress them up with sliced onions, tomatoes, greens and spicy mustard!
- ▲ For chicken, both light and dark meat are lean choices if the skin has been removed. Almost all fish and shell fish—unless fried or packed in oil—are low in fat and calories.
- ▲ Choose lowfat cooking methods—broil, poach, steam, grill, braise, roast on a rack—instead of frying. Marinate in lemon juice, broth, nonfat yogurt, or tomato juice instead of oil.

Dual Hatted: Dry beans and peas (legumes) fit two food groups! Legumes can count either as a meat alternate or as a starchy vegetable. Because they are high in protein and high in many of the vitamins and minerals provided by meats, they serve as meat alternates. But like starchy vegetables, dry beans and peas are high in carbohydrates and fiber and low in fat. These versatile vegetables are good in salads, soups, side dishes, even dips for snacks. You can cook them yourself or buy them already cooked and canned. Try kidney beans, black beans, pinto beans, chick-peas, split peas, lentils, and so forth.

FATS, OILS, SWEETS, & ALCOHOL

These are strategic targets to eliminate when trying to cut calories.

- ▲ Replace butter and stick margarine with soft, tub-style margarine. These are easier to spread thinly and are also lower in saturated fat. Better yet, go for “light” margarines.
- ▲ Use butter flavor granules to season vegetables, rice, and lowfat “cream” sauces.
- ▲ Measure out your salad dressing. Add to your salad and toss lightly but thoroughly to evenly coat the greens. You may be surprised how far one tablespoon of dressing can go.

CALORIE ALERT

The ladles in salad bar salad dressings are usually 2 ounces. This is 4 tablespoons! This also is what most fast food restaurants provide with their salads. Don't use it all.

Remember, although the calories don't add up as fast as ones from fat, you still need to go easy on sweets, jams, jellies, and syrups.

Choose Your Liquids Wisely

What we drink can sneak in a lot of extra calories—a cappuccino in the morning, a soda in the afternoon, a couple of beers watching the game on TV. Easy to go unnoticed, but your body is counting those calories.

SOFT DRINKS

A 12-ounce cola, for example, supplies about 150 calories from almost 10 teaspoons of sugar.

- ▲ Switch to diet soft drinks or flavored seltzers, mineral water, or club soda with lime. This can save you hundreds of calories a day. Your taste buds can adjust if you give them a chance.
- ▲ To help yourself make the switch from the syrupy sweet stuff, start by mixing diet and regular soft drinks and serving over ice. Gradually increase the proportion of diet drink.

CALORIE ALERT

Beware of flavored waters. Depending on how they are flavored, they can have a few or a lot of calories.

COFFEE & TEA

Although plain, black coffee and tea have negligible calories, what's mixed with them may not be so harmless. Be especially careful of fruit flavored iced teas, lattes, cappuccinos, Coolattas® and other gourmet drinks.

- ▲ Order your java drinks with skim milk and no whipped cream.
- ▲ Consider these sweet indulgences as dessert and budget for the calories accordingly.

	Made with	Calories
12-ounce latte	Whole milk	180 - 220
	Skim milk	105 - 140
12-ounce cappuccino	Whole milk	125 - 150
	Skim milk	70
9-1/2-ounce Frappuccino®		190
9-ounce Mocha Blast®		180

LIGHTEN UP!

Depending on how many cups of coffee you drink, what you put in your coffee can add a lot of calories.

	Amount	Calories
Creamer, nondairy, liquid	1 Tbsp	20
Creamer, liquid, flavored	1 Tbsp	40
Creamer, nondairy, powder	1 tsp	11
Nonfat dry milk powder	1 tsp	5
Cream, half and half	1 Tbsp	20
Cream, light (coffee cream)	1 Tbsp	29
Milk, evaporated, whole	1 Tbsp	21
Milk, whole	1 Tbsp	10
Milk, skim	1 Tbsp	5
Sugar	1 tsp	15
Flavored syrup	2 Tbsp	80

SPORTS DRINKS

A sport drink may hit the spot after a vigorous work out, but don't ignore the calories—125 to 175 calories in a 20-ounce bottle. Still, these are often a lower-calorie choice than soda pop.

Be especially cautious of protein powders and muscle gainers. At 200 to 300 calories a serving, you could gain a lot more than muscle!

ALCOHOL

If you are trying to lose weight, limit your intake of alcohol. Alcohol contains almost twice as many calories per gram as carbohydrates and protein.

The calories from alcoholic drinks can add up quickly. Drinking two beers a day would provide an extra 2100 calories a week. Watch out for wine or liquor coolers; they can pack in over 200 calories in a 12-ounce bottle.

- ▲ Try light beer (100 calories) or nonalcoholic beer (60 calories).
- ▲ Make wine spritzers by adding club soda to half a glass of wine.

Alcohol also stimulates the brain's appetite center and increases the flow of gastric juices, making you feel hungrier than you really are. And alcohol takes away willpower, making it even easier to succumb to the munchies.

Drinking too much alcohol is a health and safety hazard. Even if you can afford the calories, you should consume no more than one drink a day if you're a woman and no more than two drinks a day if you're a man. One drink is 12 ounces of regular beer, 5 ounces of wine, or 1-1/2 ounces of distilled liquor.

Food Labels

Use labels on food products to compare the nutritional content of similar foods and make trade-offs to balance your energy and nutrient intake over the day and week.

The Nutrition Facts Panel on a food label tells you:

- 1. The Serving Size.** Serving sizes on product labels may not match Pyramid servings or how much you actually eat. Read carefully. The serving size on the label of soda pop, for example, is 8 fl oz., although the bottle holds 20 ounces. A 2-oz. bag of chips contains two 1-ounce servings, while a 1 1/2 oz. bag is one serving.
- 2. Servings Per Container.** Another way to help you adjust the nutrient values to reflect your actual intake.
- 3. Calories.** Compare to your intake goal to determine whether the caloric consequences are worth it.

Nutrient content per serving as percent daily value for at least:

- 4. Total Fat, Saturated Fat, Cholesterol, Sodium.** Listed because many people consume too much. Total daily intake should be limited to no more than 100 percent of the Daily Value or your personal restriction.
- 5. Total Carbohydrates, Dietary Fiber, Sugars, Protein, Vitamin A, Vitamin C, Calcium, and Iron.** Your goal is to consume a variety of foods that add up to at least 100 percent per day. Note that "sugars" on the label includes both added and naturally-occurring sugars.
- 6. Percent Daily Values** give you a general idea of how much one serving contributes to a 2000 Calorie diet. Use them to see if the food provides a little or a lot of particular nutrients.

Nutrition Facts	
2 Servings Per Container 4	
1 Serving Size 1/2 cup (114g)	
Amount Per Serving	
3 Calories 260	Calories from Fat 120
% Daily Value*	
4 Total Fat 13 g	20%
Saturated Fat 5 g 25%	
Cholesterol 30 g 10%	
Sodium 660 mg 28%	
5 Total Carbohydrates 31 g	10%
Dietary Fiber 0 g 0%	
Sugars 5 g	
Protein 5 g	
Vitamin A 4%	
Vitamin C 2%	
Calcium 15%	
Iron 4%	
* Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs:	
	Calories 2,000 2,500
Total Fat	Less than 65g 80g
Sat Fat	Less than 20g 25g
Cholesterol	Less than 300mg 3000mg
Sodium	Less than 2,400mg 2,400mg
Total Carbohydrate	300g 375g
Dietary Fiber	25g 30g
Calories per gram:	
Fat 9 • Carbohydrate 4 • Protein 4	

Strategic Shopping

- ▲ Make a list and stick to it.
- ▲ Shop on a full stomach to avoid impulsive buying of foods not on your list.
- ▲ Shop without the kids if you can help it.
- ▲ Buy foods as close as possible to the way Mother Nature makes them.
- ▲ Read labels and compare products.
- ▲ Concentrate on calorie and fat content.
- ▲ Go through the no candy check-out aisle.
- ▲ Buy some foods already portion-controlled: baking potatoes, pork chops instead of a roast, fudgsicles or popsicles, cereal in serving size boxes. If you must have snack foods, buy them in single-serve packages.

Food Is Better Than Pills, But...

The lower your energy intake the harder it is to get all the vitamins and minerals you need from your diet. Eating a wide variety of foods from among and within all the food groups on the Pyramid will help you get the vitamins and minerals you need. However, if you eat less than 1600 calories per day, you would probably benefit from taking a daily vitamin and mineral supplement.

Choose a supplement that contains no more than 100% of the daily value (DV) for any nutrient. Avoid supplements of single vitamins or minerals unless recommended by your healthcare provider. Too much of some nutrients are toxic or can cause nutrient imbalances.

A multivitamin cannot correct a reckless lifestyle of poor diet, inactivity and smoking.

Eating Out — Fancy, Family-Style, Or Fast

Eating out is increasingly common. Even at home, we are often eating take out. Restaurant meals do not have to be diet disasters. Apply the same principals of the Pyramid and food choice guidelines you follow at home.

- ▲ Plan what you will order before you get there. Then stick to your guns when ordering.
- ▲ Don't give in to "just this once won't hurt" thinking, unless it truly is a rare happening.
- ▲ If you need a treat, choose a non-food reward instead of dinner.
- ▲ Ask that foods you do not want, such as fries or chips, be left off your plate.
- ▲ Ask for condiments, such as butter, mayonnaise, salad dressings, and gravies and sauces be served on the side so you can use just a little, if any.
- ▲ Order fish, skinless poultry, veal, or lean cuts of beef, such as filet, top sirloin, flank, London broil, or shish kabob.
- ▲ Order items broiled without butter, grilled, blackened, baked, steamed, or poached.
- ▲ Ask that sandwich breads and buns not be buttered.
- ▲ If you don't see what you want, ask. For example, lowfat milk or fresh fruit may be available, but may not be on the menu.

Portion Control

- ▲ Buy children's portions; for example, a kiddie cone.
- ▲ Avoid the value meal or jumbo anything. More for your money usually goes to "waist."
- ▲ Make a meal out of appetizers and side dishes.
- ▲ Ask for a half-order on pasta dishes, dinner salads, or entrees.
- ▲ Order a doggie bag before you start eating or have the server put half of the meal in a doggie bag before bringing your serving to the table.
- ▲ Share your entree, fries, or dessert with someone else.

CALORIE ALERT

Garlic bread
Cheese breadsticks
Cream or cheese soups
Croissant or biscuit sandwiches
Stuffed or twice baked potatoes
Cheese potatoes
Remoulade sauce
Anything fried or cooked:
Au Gratin Escaloped
En croute Creamed
Alfredo

- ▲ Drink water, tea, a diet drink, club soda or coffee as a beverage.
- ▲ Start off the meal with gazpacho, vegetable, minestrone, consomme or other broth-based soup or a salad with lowfat dressing. This will make it easier to save half of the higher-calorie main course for the doggie bag.
- ▲ Move the bread basket, popcorn, or chips from in front of you or ask to have it removed from the table.
- ▲ Ask for lemon or cocktail sauce instead of melted butter for seafood.
- ▲ Request salsa, pico de gallo, mustard, honey-mustard dressing, lemon, flavored vinegars, or barbecue sauce to get low-calorie flavor.
- ▲ For dessert, ask for fresh fruit, fruit ice, sorbet, lowfat frozen yogurt, angel food cake, or cappuccino. If these options are not available and you must indulge, order a single serving for the table and savor a few forkfuls.

- ▲ Substitute. Instead of French fries, ask for a baked potato, corn on the cob (no butter), black eyed peas and corn salsa, steamed vegetables or a side salad. Ask for soft corn or flour tortillas to dunk in the salsa instead of the fried tortilla chips.

- ▲ Watch your portion size. Because restaurants are supersizing everything, it's easy to overdo.
- ▲ Beware of "lowfat" offerings. They still may tip the scales with larger than standard portions.
- ▲ Eat slowly to give your body time to feel full.

SALAD BARS

Salads are generally regarded as low in fat and calories and high in nutrition, but this is not always true. Many traditional salad bar offerings are prepared or served with high-fat dressings, or include few nutrient-rich ingredients to make them worth the calories. Good choices can ensure you assemble a salad that won't weigh you down.

- ▲ Load up on lettuce greens (the darker green, the better), cucumbers, radishes, carrots, green pepper, onions, beets, mushrooms, bean sprouts, cauliflower, tomatoes, beans, peas, broccoli.
- ▲ Go easy on the dressings. Avoid thick, creamy salad dressings. If you don't like the fat-free dressing, try mixing it half and half with the regular. Try French with plain vinegar, or low-cal Italian with Ranch or Bleu cheese.
- ▲ Be stingy with croutons, cheese toppings, chopped eggs, seeds, nuts, olives, avocado, bacon bits, and chow mein noodles.
- ▲ Go easy on prepared salads – pasta, potato, cole slaw, chicken or tuna salad, and marinated vegetables. Salads made with vinaigrette, such as three-bean or corn salad, instead of a creamy dressing usually have less fat and calories. Put the prepared salad over fresh vegetables and lettuce and use it as the dressing.
- ▲ Making it a meal? For protein, add small amounts of diced ham, poultry, beans (such as kidney and garbanzo), crabmeat (real or imitation), and cheese. Make it more filling by getting a roll, pocket bread, or crackers.

COURTING QUICK EATS

Whether it's from the drive through or the food court, most quick service food is high in grease and calories and low in fiber and important nutrients. But, it doesn't have to be off limits. With care, you can fit fast food into your eating plan. By making trade-offs, you can balance your fast food meal with the rest of your day.

Most single hamburgers are 300-350 calories with 10-15 grams of fat and are easy to fit into a weight control program. Just count them in your food group servings. But a double whopper with cheese has 1010 calories and 67 grams of fat and certainly blows a big chunk of your calorie quota.

General Tactics

- ▲ Go for the small, regular, or junior size. Beware of "big," "deluxe," "super," or "grand."
- ▲ Avoid fried food. Just because it's chicken or fish doesn't mean it's low calorie. Almost all breaded and fried chicken or fish sandwiches are higher in fat and calories than most single hamburgers.
- ▲ Remove the skin from rotisserie chicken.
- ▲ If you're craving fries, order a small size and share them.
- ▲ Order without the mayonnaise, sauces and cheese. You'll save hundreds of calories. Ask for honey-mustard, sweet and sour, or barbecue sauce, or ketchup and mustard to moisten and liven up the flavor.
- ▲ Count drink calories. Most large beverages range from 32 to 64 oz. or 300-600 calories. Who really needs 64 ounces of soda anyway? Drink lowfat or skim milk, a diet soft drink, unsweetened iced tea, or water.
- ▲ Consider a small shake as an occasional dessert or treat.
- ▲ Need a sweet ending?
 - Get a fruit salad or bring your own fresh fruit for dessert.
 - Have a small lowfat frozen yogurt or ice milk as a serving from the milk group.
 - Stop by the Shoppette for a frozen fruit juice bar or popsicle.

See Module 3, "Performance Choices," for more tactical suggestions.

Subs and Sandwiches

- ▲ Thicken your sandwich with vegetables, such as peppers, tomatoes, sprouts, cucumbers, shredded carrot, or onion.
- ▲ Decline the olive oil blend.
- ▲ Steer clear of hot dogs. Even the juniors have at least 343 calories.
- ▲ Choose no dressing and almost all Robin Hood choices are moderate calorie (300-400) because of the use of Healthy Choice® meats. Leave off the cheese and save about 80 calories.

Pizza

- ▲ Get rid of meat toppings and extra cheese. Order the vegetable toppings. Gotta have meat? Get the Canadian bacon or ham instead of sausage or pepperoni.
- ▲ Order slices for built-in portion control.
- ▲ Have one or two slices and fill in with a garden salad with low fat dressing and a diet drink.

Asian

- ▲ Avoid deep-fried foods – like wontons, most meats in sweet and sour dishes, and tempura – or dishes cooked in coconut milk. Stir-fried foods are a better option; steamed foods are your best.
- ▲ Ask that dishes be stir-fried in minimal oil.
- ▲ Select dishes that contain a lot of vegetables or add a portion of steamed vegetables to your entree.
- ▲ Eat just one cup of the entree along with one cup of steamed rice. Share with a friend or take the rest home.

SURVIVAL STRATEGIES FOR SPECIAL OCCASIONS

When you are going to a gathering where you know food will be the focus...

- ▲ Don't starve yourself that day. Eat a small snack before leaving to prevent being ravenous. Try an apple, carrot sticks, slice of bread or a glass of skim milk.
- ▲ Plan your eating strategy before you show up. Plan ahead. Save up some calories. A couple hundred calories saved each day from Monday through Friday can help you afford an occasional party night. However, don't plan on going wild and then making up for it afterwards. Very few people actually pull this off successfully.
- ▲ Enjoy the conversations, rather than focusing on the food offerings.
- ▲ Distance yourself from the food as much as possible.
- ▲ Make your calories count. Indulge in only the foods you truly love. At a buffet, look over the whole table before deciding which three to five foods to pick. Serve yourself small portions and eat slowly.
- ▲ Split a dinner with your dining companion. If you're the one hosting the event, give away any leftovers.

If for some reason you deviate from your plan and overdo it, don't get bent out of shape. One big meal or one big day won't set you way back. Make up for it during the next few days and plan how you can do better the next time.

Some events truly are special and warrant a few indulgences, but if special events happen often, you can't make every one an excuse to overeat.

NOT TO BE MISSED

Skipping meals may seem like a good way to control calories, but studies show that people who don't eat breakfast or lunch tend to overeat later in the day. If you go five hours or more without eating, it becomes harder to resist tempting foods and even harder to stop at reasonable portions.

Eating frequent, small meals can raise your metabolism, keep blood sugar and energy levels high, and keep hunger in line. And some research suggests that five or six small meals a day may minimize the storage of body fat. This doesn't mean eating lots of food — just spread your calories over the day, eating small amounts more often. Try eating something every four hours or so.

Not a breakfast eater?

Gradually build up your breakfast. A piece of fruit or toast or glass of juice can ease you into the habit. Once you start eating breakfast, you may find that you eat less at night and are actually hungry for breakfast.

ADDITIONAL STRATEGIES TO TAME HUNGER

- Include a source of protein (beans, fish, meat, dairy) in each meal to delay the return of hunger.
- Take advantage of the filling properties of high-fiber foods (whole grains, vegetables, fruits, beans).

SUMMING UP THE STRATEGIES

- Eat regular meals.
- Eat more fruits and vegetables – a minimum of five servings a day – and whole grains.
- Cut down on fried foods, full-fat dairy products, and high fat meats.
- Have more meatless meals.
- Keep portion sizes small to moderate.
- Choose low-calorie beverages and limit alcohol.
- Choose a variety of foods from each of the five food groups and allow for an occasional treat.

How might the Pyramid look on your plate?

Divide your plate into four sections (if you're trying to lose weight, make it a small plate). Fill three sections with vegetables, fruits and grains and the fourth with a lower fat choice from the meat group. Then add a glass of lowfat milk. You can have the fruit for dessert or save it for snack.

Diet Myth:

Nighttime calories are more fattening.

Fact:

Throughout the day, your body adds up energy in and energy out. If there is an energy surplus, no matter whether the extra calories came from breakfast or a bedtime snack, the extra calories will be stored as fat. It still comes down to total calories. However, for many people, overeating occurs at night, when fatigue, the accumulated stresses of the day, and the effects of missed meals wear down their resolve.

III. THE EXERCISE ADVANTAGE*

KEY CONCEPT

Physical activity and exercise (aerobic, strength and flexibility) are key components of successful weight management.

OBJECTIVES:

- ▲ Recognize the benefits of exercise as it relates to weight control.
- ▲ Understand the effects of aerobic, strength, and flexibility exercise on body composition and appearance.
- ▲ Design an effective exercise program using the FITT formulas.

How Does Your Activity Level Rate?

1. Do you participate in sustained, aerobic activity for at least 20 minutes at least three times a week?
2. Do you engage in any strength training exercises?
3. Do you stretch your muscles daily?
4. Do you walk just to walk?
5. Do you usually find “a reason” NOT to exercise?
6. Do you spend hours a day glued to the TV or computer?
7. Do you jump in the car to drive short distances when you could walk instead?
8. Has it been over a month since you played a game or sport for fun?
9. Do you think exercise is punishment?
10. Do you have any injuries that limit your physical activity?

If you answered mostly no to questions 1-4 or mostly yes to questions 5-9, you're probably not getting enough exercise or physical activity and are missing crucial connections to your Performance Body Weight. Exercise and activity can be an enjoyable part of your lifestyle. If you answered yes to question 10, check with your health care provider and a physical trainer—there is always something you can do, even with a physical limitation.

No Longer a Secret

If there's a magic potion for weight control, it's exercise. One of the few proven predictors of successful weight maintenance is regular exercise and physical activity. Exercise is particularly effective in reducing abdominal fat stores, those most related to increased risk of chronic disease. In addition, regular physical activity itself significantly reduces the risks of a long list of medical conditions, ranging from heart disease and high blood pressure to cancer and osteoporosis.

The formula isn't a secret, but it's getting harder to be physically active in our increasingly mechanized and sedentary society. Most of us have to make a deliberate effort to include exercise and activity in our lives. It may not always be easy, but the benefits are well worth it.

Role of Exercise in Weight Control

- ▲ Exercise burns calories.
 - ▲ Exercise preserves or builds muscle—the more muscle you have, the more calories you burn even at rest.
 - ▲ Regular exercise increases your body's capacity to burn fat.
 - ▲ Exercise regulates your appetite.
 - ▲ Exercise diffuses stress and enhances mood, helping to keep stress eating under control.
 - ▲ Exercise reduces symptoms of PMS in women.
 - ▲ Exercise makes you look better, feel better, perform better, and sleep better.
- Exercise is essential for most people to prevent weight gain or regain.*

* People over 40 or with a previous muscle, bone, or joint injury or other medical condition should consult with a medical doctor before beginning any new exercise program.

Ingredients Of Success

The major goals of exercise for body fat loss and body shaping are to burn calories and develop muscle. You should include both aerobic and strength training exercises in your weight management program – aerobic exercise for calorie burning and strength training exercises for muscle building. The added bonus is improved fitness. And a fitter body burns fat better—a win-win situation!

CALORIE BURNING EXERCISES

Active aerobic exercises are the best calorie burners; you burn more calories in a shorter time with aerobic activities. Aerobic exercise is any moderate to vigorous activity that uses large muscle groups in a rhythmic manner and that can be performed nonstop for at least 20 minutes. This type of exercise also strengthens the heart and oxygen delivery systems of the body. Hence, the term “cardiovascular” is often used to describe aerobic activities.

Many vigorous sport and recreational activities are not truly aerobic in nature because they are not continuous (See chart below). But, if they are performed with minimal rest periods, they can provide almost the same calorie burning and fitness benefits as aerobic exercise.

Although regular, aerobic exercise is best for losing body fat, any extra movement helps burn calories (and may keep you from eating). Look for ways you can add physical activity to your lifestyle: bike or walk to work, park the car farther from your destination, take the stairs rather than the elevator.

Aerobic	
Brisk walking*	Aerobic dance
Jogging	Step aerobics
Running	Rowing
Cycling	Swimming
Stair stepping	Kayaking
Rope skipping	Ice skating
In-Line skating	Cross-country skiing
Elliptical training	Slide boarding
Cardio kickboxing**	Spinning**

*Good activity to start with if you haven't been active lately.

**Not for the beginner.

Not Quite Aerobic	
Dancing	Hiking
Downhill skiing	Racquetball
Basketball	Soccer
Calisthenics	Tennis
Circuit training	Volleyball

Lifestyle	
Walking	Horseback Riding
Car washing	Badminton
Climbing stairs	Table tennis
Shoveling snow	Water skiing
Gardening	Cleaning the house or the barracks
Lawn care	Archery
Frisbee	



Calories Burned During 30 Minutes of Activity*

See page 2 in modules 1 and 6 for examples of military tasks.

	140 lb person	180 lb person
Aerobics, step, 8-inch step, basic steps	295	380
Badminton, general	130	170
Bicycling, 10 mph on level ground	175	230
Bicycling, stationary, moderate effort	225	290
Cycling, spinning Can burn as much as:	445	575
Calisthenics, vigorous and fast paced	165	210
Canoeing/rowing, moderate, ~5 mph	225	285
Cardio kickboxing	240	310
Elliptical trainer, moderate effort	230	300
Golf, carry clubs, twosome	155	200
Power cart	80	105
Handball, moderate	275	360
Horseback riding, trot	210	265
Ice skating, 9 mph	175	225
Rollerblading	235	302
Rowing, machine, vigorous	270	350
Running, 5 mph (12 min/mile)	255	325
6.7 mph (9 min/mile)	350	450
8.6 mph (7 min/mile)	450	580
Sitting and writing, card playing, etc	54	69
Skiing, cross country, 3.5-4 mph, loose to hard snow	280	350
Skiing, stationary, moderate effort	275	355
Slide boarding, 60 slides/min, athletic stance	345	445
Stair stepper machine, not supporting weight on handrails	260	350
Snow shoeing, level, loose snow, 2 -1/2 mph	300	390
Swimming, freestyle laps, moderate effort	255	325
Table tennis	130	165
Tennis, social doubles	145	190
social singles	210	270
Volleyball, non-competition	125	160
Walking, 3.5 mph, level	140	185
3.5 mph, 8% grade	245	315
4 mph, level	175	230
4.5 mph, level	200	260
Walk-jog, level	195	250
Water skiing	200	260
Weight lifting, hard, no super sets	185	240
Yoga, Hatha	125	160

*Because there are many factors that influence how many calories you burn during exercise, it's impossible to predict the exact number. These figures are approximations of the average, total cost of exercise, which includes resting or basic energy expenditures.

If you briskly walk 30 minutes a day and don't take in any more calories, for example, you could lose, or avoid gaining, about 20 pounds in a year.

MUSCLE CONDITIONING EXERCISES

These exercises are also important, since they maintain or build muscle. The more muscle you have, the more calories you burn. In addition, strength training exercises protect muscles and joints against injuries and make it easier to do any physical task.

Muscle conditioning exercises include calisthenics and strength training exercises, such as weight lifting or resistance training. Some aerobic exercises and sport activities also contribute to muscle fitness. However, for all-around muscle conditioning and body shaping, strength training exercises are the best choices.

If you're a woman, don't worry that you'll end up muscle bound if you lift weights. Women don't have enough of the hormone testosterone to build big, bulky muscles. Even men won't get large muscles unless they specifically work very hard at it. But adding a little muscle in the right places can do a lot to balance out a wide waist or hips.

FLEXIBILITY EXERCISES

Stretching exercises can improve your posture and how you carry yourself, helping you look taller and sleeker. Stretching reduces muscle soreness which may result from other aspects of your exercise program and protects muscles and joints against possible injuries. Stretching promotes physical and mental relaxation. Although most fitness programs present athletic stretches, don't disregard the flexibility benefits of yoga, pilates and tai chi.

Prescription For Success

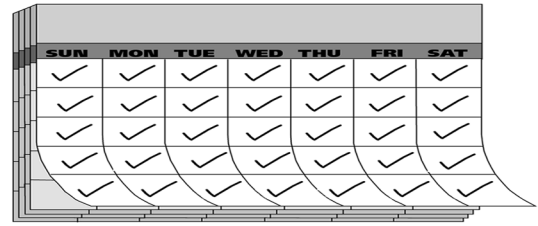
Some exercise is better than none. And more exercise is better than some—up to a point. Experts have created **FITT formulas** to help you put together an effective yet safe exercise program. The last T in FITT is for Type. There are actually different FIT formulas for the different types of exercise. The exercise formulas that work for you depend on your level of fitness, the types of activities you like to do, and how much time you can devote to exercise.

When losing body fat is your primary goal of exercise, the FIT formulas are:

		Aerobic	Strength Training	Stretching
F	Frequency How often you should exercise	4-6 times per week	2-3 times per week with at least one day of rest in between exercises for the same muscle group	3-7 days a week. Stretch when muscles are warm, such as after a warmup, a workout or a hot shower.
I	Intensity How hard you exercise or your level of effort. How much weight can you lift?	Moderate to vigorous but not exhausting. Usually measured by your heart rate or rating of perceived exertion – how hard you feel you are working (see next page).	Weight that can be lifted with good form at least 8 times but no more than 12 times.	Gradually stretch until you feel a gentle pull, not pain.
		Start at a moderately low level of intensity or capacity and gradually progress. Do not increase intensity and duration at the same time.		
T	Time How long you should exercise or perform an activity.	Build up to a total of 30-60 minutes (not counting warm up and cool down). Start with 15-20 minutes. Can be met with multiple 10-15 minute sessions, if necessary.	1-2 sets (series of repetitions) of 8 to 10 exercises of the major muscle groups – arms, shoulders, chest, back, stomach, hips, and legs.	Hold each stretch 10-60 seconds, while breathing normally. Stretch all major muscle groups. Strive for equal flexibility on both sides of your body.
		On days you can't complete an entire workout, do whatever portion you can, even if it's only 10 or 15 minutes.		

FREQUENCY

The more often you exercise, the greater the total weekly energy expenditure. Try to accumulate 30 to 60 minutes of moderate physical activity, which includes lifestyle activities, almost every day.



INTENSITY

The higher the intensity level, the more calories you burn in a given period of time. You want to work hard enough to get your heart rate up and work up a sweat, but not so hard you get hurt or end up stopping before you've burned enough calories. Your goal should be at least 250-300 Calories per exercise session.

Competitive athletes must train hard and accept a relatively high risk of injury for the chance to win. You don't need to, and shouldn't, exercise that hard (or often). You can achieve a good level of fitness and a performance body weight with much less pain and risk of injury.

Pace Yourself

TARGET HEART RATE. One way to ensure you are exercising at an effective and safe intensity is to monitor your heart rate and stay in your target heart rate range. Your target heart rate range is 60 to 85% of your estimated maximum heart rate – the fastest your heart can beat. Exercise at greater than 85% maximum heart rate may do more damage to your body than help it. Your maximum heart rate is roughly 220 minus your age.

Note: Some high blood pressure medicines lower the maximum heart rate and, thus, the target range. Check with your doctor.

Target Heart Rate Range (60 - 85%)

Age	Beats per min.	beats per 10 sec.
20 years	120-170	20-28
25 years	117-166	20-28
30 years	114-162	19-27
35 years	111-157	19-26
40 years	108-153	18-26
45 years	105-149	18-25
50 years	102-145	17-24
55 years	99-140	17-23

To see if you are exercising within your target heart rate range:

1. Before stopping exercise, locate a pulse point. To measure the pulse on the neck, place the tips of your first two fingers just to the side of the Adam's apple, in the soft hollow area. Another convenient pulse spot is the inside of your wrist just below the base of your thumb.
2. Press gently until the pulse is located. Stop exercising and immediately count the beats for 10 seconds. Multiply this number by six to get beats per minute. Quickly resume exercise or start your cool down routine.
3. If your pulse falls within your target range, you're doing fine. If it's below your target range, exercise a little harder next time. If you're above your target range, exercise a little easier.

Aim for the lower end of your target range during the first few months of your exercise program. As you get in better shape, gradually build up to the higher region of your range. Exercise at 80% to 85% of maximum heart rate is typically recommended only for those with good to superior levels of fitness.

SELF RATING. How you *feel* during exercise is just as important as your heart rate. Exercise at an intensity you can keep up for at least 30 minutes. With the right level of intensity—regardless of your heart rate—you should be breathing heavier but not gasping for air. You should be able to talk in short, but not long, sentences. If you don't feel normal within 10 minutes after stopping exercise, you are pushing yourself too hard. As your fitness level improves, you'll be able to exercise at a higher intensity and burn more calories with what seems like the same level of effort.

Exercise researchers have developed **Rating of Perceived Exertion (RPE)** scales to prescribe and monitor intensity of exercise. Perceived exertion refers to how hard you feel you are working based on a variety of physical sensations—muscle aches and pains, how hard you are breathing, how tired you feel, etc. Pick the number that most closely corresponds to your overall sensation of exertion, using the adjectives, such as “light” and “somewhat hard” that accompany the numbers to help you.

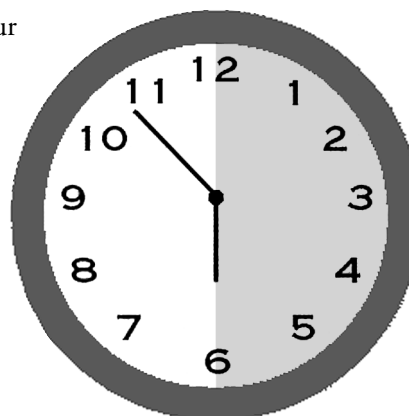
Rate Your Level of Exertion	
	6 Nothing at all
	7 Extremely Light
	8
	9 Very Light
	10
Aerobic Exercise	11 Light
	12
	13 Somewhat Hard
	14
Weight Lifting	15 Hard/Heavy
	16
	17 Very Hard
	18
	19 Extremely Hard
	20

If you are new to exercise, returning after a period of inactivity or starting a new kind of exercise, you may wish to monitor exercise intensity with both heart rate and RPE. Over time, you'll find the RPE that matches your target heart rate and eventually you'll be able to monitor exercise intensity primarily with RPE, occasionally taking heart rate to be sure you're on target.

TIME

Another way to burn more calories is to increase the time spent on your activity. Generally, a longer exercise duration can offset a lower, more comfortable exercise intensity. For the most part, you burn the same amount of calories walking 4 miles in one hour as you do running 4 miles in 30 minutes. As you get fitter, you can exercise comfortably and safely for longer and longer periods.

For many people, slower but longer exercise is an easier exercise prescription to stick with. However, if you can't fit in the extra time, strive to increase your fitness level so you can tolerate higher-intensity, shorter-duration exercise.



TYPE

Try to vary the types of activities and exercises you do from day to day to add some variety and prevent boredom. This will also work your muscles and joints in different ways, which reduces your chances for overuse injury. Pick activities you most enjoy and are more likely to stick with.

Phases Of Exercise

A safe and effective workout—whether aerobic or strength training—consists of three phases. Each workout should begin with a warm-up and end with a cool-down. This reduces strain on the heart and helps to prevent injuries.

Warm-Up: This prepares your body for the stress of exercise. You can warm up by walking, jogging in place or slowly doing the motions of the exercise for 5 to 10 minutes before you begin. Then, gently stretch the muscles that will be used during the exercise.

Stimulus or Training Period: This is the time period (minimum 20 minutes) when you perform aerobic exercise within your training heart rate range or do activities to improve muscular strength and endurance.

Cool Down: This is the warm up in reverse. Slow down your motions and reduce your intensity for about 10 minutes before you completely stop. You are cooled down when your heart rate is about 100 beats per minute or less and your skin is dry and cool to the touch. After your cool-down, stretch the muscles you just worked to avoid soreness and tightness.

Avoid An Overdose

Begin slowly and progress gradually. Otherwise you will likely get discouraged because of sore muscles or injured from working out too vigorously or from stepping up the pace or weight too quickly. If you haven't been exercising, start with low- to moderate-level activities for 15 to 20 minutes at a time. Walking is an ideal activity to start with. Don't increase more than one component – frequency, intensity, or duration – during the same week. Give your body time to adjust to each, new level. Include stretching before and after your exercise to help avoid injury.

Cross Train. Alternate aerobic and strength training. If you exercise twice a day, do different activities—unless it's walking.

Rest Up. Particularly for those who exercise strenuously, the body needs at least one day of rest each week. A rest day in between weight training exercises for any given muscle group is needed to allow the muscles to repair themselves and to make new protein to grow. If you're still sore, rest another day.

Learn Proper Form and Technique. This is especially important for weight training and stretching. If possible, consult with a qualified athletic trainer or your installation fitness coordinator. Seek out someone certified by a reputable organization, such as the American College of Sports Medicine, the American Council on Exercise, or the National Strength and Conditioning Association. Not only can you learn safe and proper ways to exercise, but you can learn how to get the most out of your workouts in the time you have. Reliable and instructive books, video cassettes, and tapes can be purchased at almost any book or exercise equipment store or loaned from many libraries. The Army War College has produced a fitness program on CD ROM entitled *The Total Trainer*. See page 7-49.

Don't push an injury. Listen to your body. If you feel pain, stop. Pushing through the pain can lead to big problems later which can take you out of commission for a long time.

Myths That Just Won't Go Away

MYTH: FAT BURNING EXERCISE

It has been widely promoted that to lose body fat through exercise, slower and longer is better. This notion is based on the fact that a higher percentage of fat compared to carbohydrate is burned for fuel during lower intensity exercise. But this is only half of the story. Higher intensity exercise burns more total calories and just as many, if not slightly more, fat calories. The total number of calories burned is more important to body fat loss than the fuel you're burning.

All physical activity helps burn fat. A calorie deficit – whether created by diet, exercise, or a combination of both – will result in body fat loss. If you want to burn calories to lose body fat, your objective should be to burn the greatest number of calories possible within the time frame you have to exercise.

For burning the most total calories, **distance** is key. For walking, jogging, running, swimming or cycling, it doesn't matter how fast you cover the distance. Adjust your exercise intensity to a level that will let you go the distance. If you exceed your fitness capacity by going too fast, you'll tire and stop before you go far enough and you won't look forward to doing it again. But if you're already fit, you can take advantage of higher-intensity exercise to cover the distance and burn the calories in a shorter period of time.

If you're already fairly fit, but can't keep up the desired pace for the entire distance (or would like to add variety to your exercise program), try a modification of the **interval training** done by endurance athletes. Essentially, all you do during some of your exercise sessions is speed up and slow down, rather than working at a constant pace. In the interval sessions, the speed-up phase should feel hard and challenging, not exhausting, while the slow-down phase should feel fairly light to somewhat hard. If you're a walker, you might alternate walking at your regular pace for 2 minutes with a light jog for 1 minute. Once you feel breathless and uncomfortable, slow back down to the pace you were comfortable at. When you feel fully recovered, you can speed up again. You can try alternating up hills then back to flat land while walking, biking, or running. Alternate interval training days with days of rest, more moderately-paced exercise, or a different type of exercise to avoid injury and maintain your interest. Keep this up and you soon will be comfortable at a faster pace throughout your entire workout.

One piece of evidence: In a study conducted at the University of Wisconsin-La Crosse, individuals walking for a half hour at 3.8 mph burned 240 calories. Forty-one percent of the total calories burned (96 calories) came from fat. When the same individuals exercised at a higher intensity (running at 6.5 mph) for a half hour, they burned more total calories (450 calories) and slightly more calories from fat (108 calories) although fat provided only 24% of the fuel burned.

IV. MAKING IT A HABIT

Now that you know what to do to get to a performance body weight, you need to learn how to make these eating and exercise patterns part of your day-to-day life. Weight control requires a lifelong commitment, an understanding of your eating and exercise habits, and a willingness to change them. To change habits, you need to learn some additional skills. Learning the skills needed to change habits is called behavior modification.

KEY CONCEPT:

Behavioral management techniques are essential tools for achieving and maintaining a Performance Body Weight.

OBJECTIVES:

- ▲ Understand why behavior changes must become lifestyle changes for successful weight control.
- ▲ Know how to effectively use food and exercise logs to identify problem behaviors and monitor progress.
- ▲ Recognize what triggers you to eat.
- ▲ Implement at least four effective behavioral change strategies.
- ▲ List two examples of social support.
- ▲ Practice weight control “survival skills.”

Think About it

Many of our habits have been around awhile, some even from childhood. Try this: Clasp your hands together. It feels comfortable doesn't it? Notice which thumb is on top? Now clasp your hands together again, but this time do it so your other thumb is now on top. Feels uncomfortable, doesn't it? You have been clasping your hands together in one preferred way since you were born. It's comfortable. It's a habit—automatic and performed without much thought.

How does this apply to weight management? The way you eat, your food choices, your daily activities, are in many ways governed by habit. They are comfortable, often automatic, ways of living. Unfortunately for many, those habits are fattening. If you're going to permanently control your body weight, you're going to have to develop some new habits and get rid of some habits that may have been around for a long time.

Habit - “an act repeated so often by an individual that it has become automatic”

Webster's New World Dictionary, 3rd Edition.

It takes some time and thought to change a habit. The more you think about it and the more you practice it, the more likely a new behavior will become a new habit. Combat skills are practiced over and over so they will be performed flawlessly during a mission. If you repeat the steps and use the tools and tips presented in this manual often enough, they will become second nature to you.

You Can Change Those Habits

- ▲ Know what you are doing now.
- ▲ Know how you should do it differently.
- ▲ Do it differently often enough to make it comfortable, automatic—a new habit.

Mission Planning

When planning your weight management program, don't be tempted to change too much too soon. Complex skills such as weight management, are best learned step-by-step. Begin by breaking your big goals into smaller steps, such as what you hope to accomplish this month, this week, or even just today. Target two or three behaviors at a time for change. Practice them until they comfortably fit into your lifestyle and then work on some more.

- ▲ Plan what you will do rather than what you won't do.
- ▲ Plan when you are going to do your aerobic, strength training, and stretching exercises. Plan for specific days and times—with a backup if possible.
- ▲ Plan your meals and snacks ahead of time. Don't leave your eating habits to chance.
- ▲ Don't plan on being perfect—nobody is. What matters is what you do most of the time. Do what you think you should do 80% of the time; do what you want to do the other 20% of the time.
- ▲ Personalize your plan.

Record Keeping

The only way to control your habits is to be aware of them. The best way to do this is to observe yourself and keep records. Research shows that people who keep records—also called journals, diaries, or logs—are more successful at weight control than those who don't.

Records help you recognize the goals you are achieving, even when you don't see changes on the scale or tape measure. Each day or week, you can look back and either reward your efforts or decide how you can do better. You can use charts like those in the examples below or your own record keeping system.

FOR EXAMPLE

Food Record					
Time	Food/Beverage and Amount	Where Consumed	Doing What	Mood/ Hunger/ Fullness	Did You Exercise?

Aerobic Exercise Log					
Date	Type of Exercise	Distance	Duration	Heart Rate	Intensity Rating

Strength Training Log				
Date	Exercise/ Lift	Sets	Reps	Weight

EXERCISE LOG

Each time you exercise, record it in an exercise log. An exercise log gives you an instant sense of accomplishment. Items to record might include time and distance, weight lifted and number of repetitions, how hard the workout felt, or heart rate.

FOOD RECORDS

Record every morsel of food or drink that passes your lips. Besides what and how much (be honest), also write down the time, where you are, and what you are doing. You can also record your mood and describe your hunger each time you eat. Keep a daily record for at least a couple weeks. Review your food record to see how your diet compares with your Pyramid serving goals. If you have access to a calorie guide, it's also helpful to add up how many calories you are eating. Be sure to include hidden calorie sources (such as mayo on sandwiches) in your calculations.

Don't fall into the trap of keeping track of only "good days" or underestimating the amount of food you eat. You need to see on paper the not-so-good days – the "Chinese take-out because you were just too tired to make dinner" days.

Observing your eating habits:

- ▲ Increases awareness of what, how much, and when you eat.
- ▲ Helps you think twice before indulging in a high-calorie snack when you're not really hungry.
- ▲ Helps you see how easily unnecessary calories add up.
- ▲ Lets you discover problem patterns, such as eating most of your foods between dinner and bedtime or snacking frequently.
- ▲ Helps you identify the emotions, situations, and stresses that contribute to unhealthy eating patterns.
- ▲ Reveals splurges that are happening more often than you think.

Triggers To Eat

There are a variety of triggers that can make you want to eat when you are not truly hungry. Use your food records to identify your eating triggers so you can learn how to stop the chain reactions.

- ▲ **SOCIAL** Do other people affect your eating habits? Do you eat or drink just because everybody else is? Are you often urged to eat by someone else?
- ▲ **EMOTIONAL** Do you eat or eat more because you are bored, angry, stressed, nervous, worried, feeling sorry for yourself, lonely or even happy and excited? {For others, these same emotions may block hunger signals, causing them to eat less in times of emotional upheaval.} Do you eat to put off some unpleasant task?
- ▲ **SITUATIONAL** Do you overeat on social occasions, when celebrating special events, or when eating out? Do you automatically go for a snack when a TV commercial comes on? Do you get an uncontrolled urge to eat when you see or smell food?
- ▲ **PHYSICAL** Do you overeat when you are tired, have a headache, had too much caffeine, or are ravenous?

Behavioral Strategies

DON'T GO TO EXTREMES

To be successful at weight control, you need to learn to eat when physically hungry, not in response to food cues or triggers. And you need to stop eating before you've had more than you should.

Try rating your feelings of hunger and fullness, using the scale on the right, before and after you eat. Your goal is to avoid the ends of the scale. Eat only until pleasantly satisfied, not stuffed. Eating regular, planned meals and snacks and not skipping meals will help keep you in the middle.

Learn to tell the difference between hunger and thirst. You may feel hungry when you are really only thirsty.

Rate Your Hunger

10		painfully stuffed; ready to explode
9		so full you're starting to hurt
8		very full
7		starting to feel uncomfortable
6		pleasantly satisfied
5		not hungry, but not full
4		first signs of hunger
3		strong signals to eat
2		very hungry, grouchy, tired
1		ravenous, lightheaded, trembling

SLOW DOWN

It takes about 20 minutes for the "I'm full" signal to get to your brain. If you eat fast, you are more likely to overeat because you don't give yourself time to realize you have had enough. Make meals last at least 15 minutes. Wait at least 5 minutes before going back for seconds; you may decide you're not really hungry.



- ▲ Eat slowly; chew food thoroughly or drink water between bites.
- ▲ Swallow before putting the next bite of food in your mouth. Lay down your utensil between bites.
- ▲ Cut food up into small pieces.
- ▲ Relax and enjoy the meal.
- ▲ Do not do anything else while eating, such as watching TV.

HANDLE STRESS

There will always be stressful periods in life. You probably encounter emotional triggers to eat every day. Learn how to deal with them without food. Select alternative outlets for your emotions and avoid food environments when you are in an emotional state. Satisfy the real need, whether boredom, frustration, anxiety, fatigue, desire to procrastinate, etc.

- ▲ If you are tired, take a nap or take a walk.
- ▲ If you are angry, take positive steps to resolve conflict.
- ▲ If you are bored, find an activity besides eating.
- ▲ If you are depressed, do something positive for yourself. Get professional help if needed.
- ▲ Develop skills in time management, communication, conflict resolution, and stress management.

Emotional Outlets

Exercise is great for defusing anger, relieving depression, and reducing tension. Relaxation techniques, meditation, or yoga also can help you handle the pounding of daily stress. Other outlets and distractions to help you avoid eating when you're not really hungry include:

Listening to music	Engaging in a hobby	Laughing. Listen to anything funny
Dancing	Taking a shower or bath	Imagining a favorite place or get away
Reading	Phoning a friend	Playing a board game or computer game
Hiking	Writing a letter	Playing a musical instrument
Shopping	Writing in a diary	
Going to a library	Going to the movies or a play	
Working in the garden	Doing volunteer work	

DON'T BE AMBUSHED BY FOOD CUES

- ▲ Cook and serve just enough food for the meal. Store any planned leftovers before the meal is served.
- ▲ Do not put serving bowls on the table. Serve food in allotted portions from the stove or counter.
- ▲ Put food on a small plate so you have to serve yourself small portions and what you have looks like more.
- ▲ Do not keep high-calorie foods around. If this isn't possible, keep them covered and concealed.
- ▲ Practice leaving food on your plate, so you get used to seeing food and not eating it.
- ▲ Get up from the table as soon as you have finished what you planned to eat.

ESTABLISH A PERIMETER AND DEFEND IT

- ▲ Restrict where you will eat to one or two locations. Do not eat in front of the TV, in bed, on the couch, in the car, at the movies, or other places that can become triggers to eating when you are not hungry.
- ▲ Only eat sitting down.
- ▲ Do nothing else while eating (such as watching TV or reading the newspaper) that would distract you from what and how much you're eating.
- ▲ As often as you can, only eat at preplanned meal and snack times.

SET YOURSELF UP

Make it almost impossible not to do the right thing. Planning is key. Much of a lack of willpower is lack of planning.

- ▲ Keep healthy snacks readily available. Store them up front in the refrigerator or cupboards. Buy washed and precut vegetables and fresh fruit salad. Keep an apple or orange in your desk.
- ▲ Keep your exercise gear ready by the door or in your car.
- ▲ Empty your pockets or wallet. Carrying money you don't need for necessities means spending it in vending machines, at the bakery or coffee shop, etc.
- ▲ Have a back-up exercise plan for bad weather days.

CONQUER CRAVINGS

Wait It Out. Most cravings go away in 10-15 minutes. If a strong food craving hits, set a timer, distract yourself and wait it out. If you let the urge pass, the next time it comes along it will be weaker. When waiting out the urge, do something that can't be done while eating, for example, clean the bathroom, wash the car, brush your teeth, knit, or exercise. See the emotional outlets on the previous page for more ideas of things to do.

Take Charge. You are stronger than food. You don't have to eat it.

Be Creative. If the urge doesn't go away, try to satisfy it with a less damaging food. When your craving is for a certain type of food – such as crunchy, salty, or sweet – satisfy it with a creative alternative. Looking for crunch? Try rice cakes, carrot sticks, or a pickle. Craving salt? Pretzels are perfect. Craving something sweet? If fruit just won't do, try a fat-free pudding snack, frozen juice bar, marshmallows, or graham crackers. Whatever you choose, limit it to a single serving.

Fit It In. All foods can fit. If your craving turns into an obsession, is it because you've banished a favorite food from your diet? This never works for long. Don't avoid a food so long that you gorge on it when you finally have some. Eat a small portion, on occasion, and savor every mouthful.

Reward Yourself

Frequent rewards can keep you motivated. Reward yourself for achieving short-term goals, losing or not gaining weight, or dealing with a difficult situation without eating. Find non-food ways to reward yourself for all of life's accomplishments.

Reward Ideas Recognize that improving appearance and fitness are rewards in themselves.

new CD	cologne or aftershave	picture frame
new video	night at the movies	massage
hard-cover book	new tool	manicure or pedicure
favorite magazine	car accessories	facial
new clothes a size smaller	sports gear	new hairdo
new belt	camera accessories	bouquet of flowers

DEAL WITH THE FOOD PUSHERS

Learn how to decline offers for food. Saying no will reinforce your commitment to yourself to stay on your plan.

- ▲ Politely, but firmly, refuse. It may take a few times before they get the message, but they will.
- ▲ Tell them you don't feel uncomfortable that you're not eating while they are.
- ▲ Tell them you already ate.
- ▲ Tell them you aren't hungry.
- ▲ Admit you really don't want the calories.
- ▲ Say "Thank you, but that's not one of my weaknesses."
- ▲ Assure them you know they love you and they don't have to feed you to prove it.
- ▲ Try to predict the situations in which you may be pressured to eat and practice saying no.

More Tactics

Be specific with your goals. It's hard to accomplish a goal if you can't define it. For example, "I'll walk for 20 minutes at lunchtime 5 days this week." Instead of vowing to eat fewer high-fat foods, make your strategy "I'll eat a piece of fruit instead of a candy bar for my afternoon snack at least 4 days this week."

Cut back gradually. If you are used to having 3 doughnuts at a sitting, cut out one at a time. If you are used to watching 4 hours of TV at night, cut back 1 hour at a time.

Build up gradually. If you're not used to having 3 or 4 servings of vegetables a day, each week, add one serving a day. If you're just starting to exercise, begin with 15-20 minutes a session and add 5 minutes to your sessions each week.

Talk to Yourself, but watch what you say. Positive self-talk sets you up for success. Believe that nothing will stop you. Don't include absolutes –must, always, never – in your tactics. Get rid of the word "should," too. If you don't tell yourself you will, you won't. Know that your weight has nothing to do with whether you are a good person.

Visualize body composition and fitness goals. The long-term rewards of reaching your goals can outweigh a few minutes of indulgence. Picture yourself at your goal, feeling confident, proud, and with more energy.

Develop a support system. A network could include anyone from family and friends to church groups, formal groups, or professionals, including doctors, dietitians, psychologists, and fitness experts. Also look for opportunities to support others. Discuss your program and goals with your family and friends. Their encouragement and understanding are important sources of support that can help you keep going.

Keep your hands busy with something other than putting food in your mouth. If you nibble while watching TV, take up a hobby: woodworking, whittling, model building, knitting, needlepoint, or paint your nails.

Develop new or rediscover enjoyable pastimes, hobbies, and skills to add interest to your life and take the place of eating.

Go a different way, so you don't walk by the vending machine or drive by the bakery or burger joint. In the dining facility, detour the fast-food line or dessert tray.

Look for opportunities to be physically active. The more you do, the more you feel like doing.

Take a brisk walk instead of a doughnut break.

Get adequate rest. Adequate rest improves attitude, posture, and appearance. Lack of rest and sleep can weaken resistance and will power.

Keep something in your mouth other than food, like a toothpick, a pen, a straw or sugarless gum. You can't chew gum and eat at the same time.

Brush your teeth or suck on a sugar-free breath mint after a meal or snack to signal your brain you are not going to eat anymore. This gets rid of the taste of food, which could trigger you to eat more, and ruins the taste of anything you eat or drink for a short time afterwards.

Make a contract or bet. Give a friend or spouse \$20. If you do not achieve a specified goal within a certain time frame (be realistic), they get to keep the money. If you achieve the goal, they give the money back.

KEEP THE EXERCISE HABIT

Schedule your exercise. Make an appointment with yourself and keep it. Don't make excuses, make the time.

Make exercise a part of your routine, like brushing your teeth or getting dressed. Try to schedule your exercise for the same time each day.

Find a workout partner. Enlist the support of an exercise buddy – one with ability and goals close to yours. A partner can motivate you to exercise when you otherwise might slack off. Make an appointment with your partner so you can't skip out.

Track Your Progress. Keep track of your daily achievements. Record how many laps you swim or how many pushups you do each day.

Choose activities that can fit into your present lifestyle. Look for sports, activities, exercise partners, and programs that you will enjoy.

Compete against yourself. Jog a little faster than you did last week or benchpress a few more pounds. Strive to be just a little better each time.

Remember, you won't just feel better after a work out, you'll feel better about yourself.

Sticking With It

GIVE IT A CHANCE

Don't give up too soon. When a strategy or plan doesn't work for you, don't give up. Try something different. Look for small changes that can add up to a lot. Expect that some adjustments may be difficult at first. Be patient. It takes time and repeated practice to form new habits.

Try all of the strategies. Don't just pick and choose the parts of a program that are easy. You may find that not all the techniques or tools presented in this manual work for you. But give them all a good effort, then sort out the ones that work from those that don't. Continue to use the strategies that work until they become habit.

Retrain Your Taste Buds. If you give your taste buds a chance to adjust, they will. Don't let the word "can't" sabotage your options. If you don't immediately like certain types of foods, keep trying and find at least a few you can eat. To make the taste transition easier, gradually switch, for example, from regular to fat free versions of foods or from regular soft drinks to diet. As you gradually cut down on fatty and sugary foods, you'll begin to desire them less and less.

RIDE OUT THE PLATEAUS

Don't get discouraged. Plateaus are inevitable and the reasons are many. In most cases, you just need to stick to your plan and in two to four weeks, the weight will start to come off again.

Remember, it takes fewer calories to maintain a lighter body. As you lose weight, you need to cut back a little on your calorie intake or exercise a little more to maintain the same rate of weight loss.

Get off the Plateau

- ▲ Wait it out.
- ▲ Take your focus off weight change. Look at other measures of progress.
- ▲ Increase the time you exercise.
- ▲ Add an extra exercise session into your week.
- ▲ Increase the intensity of your workouts—if your fitness level permits—to the higher end of your range.
- ▲ Add or increase strength training exercises.
- ▲ Change the kind of exercise you do. If you have been walking, try cycling or swimming.
- ▲ Carefully keep food records, weighing or measuring foods and beverages, to make sure you're not taking in more calories than you think.
- ▲ Increase your calories to a maintenance level for a few weeks, then decrease calories again, but not to as low a level as before.

ONE STEP AT A TIME

Focus on the progress you have made, whether you have made it through one meal, one day, or one week. Don't dwell on how far you have to go.

Avoid the quick fix and fad diet traps:

- ▲ Skipping meals
 - ▲ Laxatives or diuretics
 - ▲ Purging (vomiting)
 - ▲ Excessive exercise
 - ▲ Rigid menus
 - ▲ Specific food combinations
 - ▲ Bizarre quantities of specific foods
- Steer clear of these claims:
- fast
 - miracle or revolutionary
 - secret formula
 - cure
 - easy weight loss
 - new discovery
 - enzymatic process
 - balances hormones

These methods and diets can harm your performance and health or in some cases threaten your life. Quick fixes don't help you learn how to keep the weight off for good.

WHEN IT'S TWO STEPS FORWARD – ONE STEP BACK

Nobody's perfect. Temporary backslides are bound to happen. Don't let guilt set in and don't abandon your goals. Figure out how to prevent the situation the next time and get back on track as soon as you can. The longer you delay, the harder it is to pick up where you left off.

DOWNSHIFT WHEN THE GOING GETS TOO ROCKY

During times of major stress—physical or mental—it's usually best to try to keep your weight stable rather than try to lose. This means don't try to lose weight, for example, during the holidays or when quitting smoking. If you keep your weight the same during these times, you're successful.

From Here to Eternity: Staying Where You Want to Be

Weight control is a lifetime process. Although you probably can be a little less strict maintaining your weight loss, you need to be careful not to return to your old habits that put the extra fat on in the first place. Be alert. It's easy to revert back to your old ways when situations change or major life events occur.

Recognize new high-risk situations and immediately implement strategies to avoid them or deal with them. Continue to keep your exercise logs and food records, at least from time to time.

Events That Can Bring on High-risk Situations

- ▲ Getting married
- ▲ New baby
- ▲ Getting divorced
- ▲ Family separation
- ▲ Holidays
- ▲ Deployment
- ▲ Sea duty
- ▲ Training exercises
- ▲ Illness or injury
- ▲ Death in the family
- ▲ Quitting smoking

ANTICIPATE AN ENERGY IMBALANCE

There are certain predictable times, such as during the holiday season or when injured—when it's especially easy to gain weight. Learn to anticipate events that interfere with your exercise schedule or make it easy to eat too much. Plan how to keep yourself in overall energy balance. Review the strategies in this manual to plan your defense. Be flexible and creative.

On the Injured List— If an injury prevents your usual exercise routine, try a different form of exercise—for example, if you typically run, try cycling or swimming. If exercise is impossible, cut your calorie intake until your activity level returns to normal.

FOLLOW THE LEADER

Commit to losing weight. Then, do one or more of the following:

- ▲ Keep up a high level of physical activity (equal to ~4 miles a day).
- ▲ Weigh yourself at least once a week.
- ▲ Count calories or control fat intake.
- ▲ Eat smaller portions.
- ▲ Limit certain types of foods.
- ▲ Plan meals in advance.
- ▲ Write down everything you eat.

WINNERS AT THE LOSING GAME

There is a national registry of individuals who have successfully lost at least 30 pounds and kept it off for an average of 5-1/2 years. Many had been overweight since childhood and had a family history of obesity. Information from this registry, and other research programs, reveals some common factors that make these people successful when others have failed. By doing what they do (see box at left), you too can succeed.

Nip any weight rebound in the bud. Set a three pound weight gain limit. As soon as you are over this limit, be more strict with your eating and exercise plan.

Get rid of the clothes that no longer fit. Don't allow yourself to go back to your old sizes.

Don't try to use only exercise for weight control. Without keeping a handle on your calorie intake, it's easy to exceed the calorie advantage of exercise.

V. GAINING A PERFORMANCE EDGE**

Weight gain can be just as hard and takes as much dedicated effort as weight loss does for others. To gain weight you need to tip the energy balance equation by eating more calories than you use. However, weight gain is not simply weight loss in reverse.

EXERCISE REQUIRED

Most people need to gain muscle, not fat. To build muscle, you need **strength training**. Unless you exercise, whatever you gain will be mostly fat. Lifting weights or using resistance machines lets you gain weight as muscle. If you want to gain muscle mass in certain parts of the body, you must exercise those areas. As you get stronger, you need to progressively increase the weight being lifted to continue to gain strength and muscle mass.

There are hundreds of different strength training exercises and training techniques available. Seek out the help of a strength coach or trainer or consult a book specific to resistance training. *The Total Trainer* fitness program on CD-ROM from the Army War College also can help you design an effective and safe muscle gain program.

FILL UP THE TANK

Calories Adding muscle takes lots of energy—to build the muscle and do the required weight training exercise. To gain the recommended one pound of muscle weight per week, you need an extra 400 to 500 calories per day. Keep in mind that some of the extra calories can come from body fat stores. Most men can gain muscle weight by consuming approximately 22 to 24 calories per pound of body weight per day. Women will need about 20 to 22 calories per pound of body weight per day.

Carbohydrate The bulk of calories consumed should come from carbohydrates, such as breads, pasta, cereals, and starchy vegetables. You need adequate carbohydrate to fuel your workouts and give your body the energy to build new muscle tissue.

Protein You do need more protein when gaining muscle, but not as much as most people think. One pound of muscle contains about 100 grams of protein. Therefore, to gain one pound of muscle per week, you need about 14 grams of protein per day more than your basic needs. You can get this amount of protein in one cup of milk plus one serving from the meat group. Protein supplements are overkill.

GENERAL TIPS

- Eat at least 4 times a day. Always have a snack handy.
- Increase portion sizes or servings. The table on the right shows you the number of servings you can eat from each of the major food groups if your daily goal is 3400 to 4000 calories. (See pages 16-17 for a discussion of the Food Guide Pyramid.)
- Don't fill up on water. Make sure what you drink has calories.
- Weight-gain shakes and bars are not needed, but they can be a handy way to up your calorie or protein intake.
- Limit bulky salads and bran cereal.
- Add heart-healthy fats if necessary.
- Keep food and exercise logs to help you see why you may be having a hard time gaining weight.
- Don't go overboard on exercise or you'll end up burning more calories than you consume.
- As with weight loss, the key to weight gain is slow and steady – about one pound a week. Bulk up too fast and you put on more fat than muscle.

Food Group Servings	
	Total Calories 3400 - 4000
Grains	16–18
Vegetables	5–8
Fruits	5–6
Milk Group	3–4
Meat Group	7–10
Do As You Like Calories	500 – 600
Total Fat Grams	110 –135

Good, High Calorie Foods to Put on Your Menu:

- Fruit juice
- Fruit smoothie drinks
- Starchy vegetables, such as winter squash, corn, peas, sweet potatoes
- Dried beans and peas, such as in chili or split pea soup
- Granola, Grape-Nuts, or muesli
- Fruited yogurt
- Raisins and other dried fruits
- Nuts and peanut butter
- Sports bars
- Instant breakfast powder
- Ovaltine

**People with a chronic illness, or those who have begun to lose weight without explanation, should consult a physician before embarking on a program to gain weight. If you have high blood pressure, a heart condition, a hernia, or low back problems, seek medical advice before starting a strength training program.

IS THAT ALL THERE IS?

No one manual can address everyone's needs or cover all body composition issues in detail. There are many valuable resources available that can help you. If at all possible, work with registered dietitians, fitness professionals, and behavioral specialists to design a program specific for you. Lifetime weight management cannot be a "one size fits all" approach. If professional resources are not available, seek out additional information on the Internet, at the library or bookstore, or by contacting professional organizations. Following are some resources to help you on your information quest.

THE INTERNET

Surfing the Internet can provide you with loads of information—some good and some bad—about nutrition, exercise, and weight control. Use the list of web addresses below to visit some of the more credible information sources.

Beware. Starting at a good site doesn't guarantee you won't stray into questionable territory. Be sure the information is not an advertisement disguised as health education. One clue that the information is credible is that the website subscribes to HON code principles. These are a set of principles, created by Health on the Net Foundation, to be used as guidelines to help unify the quality of medical and health information available on the World Wide Web.

Be careful of on-line support groups and chat rooms, even those sponsored by credible organizations. Although they can be good for moral support and helpful hints, the information passed along is not scrutinized and is often inaccurate.

Suggested Web Sites

American Council on Exercise: www.acefitness.org

American Dietetic Association: www.eatright.org

American Diabetes Association: www.diabetes.org

Calorie Control Council: caloriecontrol.org

Center for Science in the Public Interest (publishes Nutrition Action Newsletter): www.cspinet.org

Cyber Diet: www.CyberDiet.com

Food and Nutrition Information Center: www.nal.usda.gov/fnic

Healthfinder from the U.S. Department of Health and Human Services: www.healthfinder.gov

International Food Information Council Foundation: ificinfo.health.org

The LEARN Education Center: www.LearnEducation.com

Mayo Clinic Health Oasis: www.mayohealth.org

Medscape online medical journal: www.medscape.com

National Council Against Health Fraud: (NCAHF): www.ncahf.org

Navy Environmental Health Center: www-nehc.med.navy.mil See Health Promotion Section.

Rails-to-Trails Conservancy for locations and information on abandoned railroad tracks that have been converted to hiking trails: www.railtrails.org

Shape Up Program, sponsored by former U.S. Surgeon General C. Everett Koop: www.shapeup.org

☞ Tufts University Nutrition Navigator: navigator.tufts.edu A good place to start.

U.S Army Center for Health Promotion and Preventive Medicine: chppm-www.apgea.army.mil/dhpw

United States Department of Agriculture: www.usda.gov

The Physician and Sports Medicine Online: www.physsportsmed.com

Weight-control Information Network of the National Institute of Diabetes and Digestive and Kidney Diseases: www.niddk.nih.gov/health/nutrit/win.htm

NUTRITION NEWSLETTERS

Environmental Nutrition
2112 Broadway, Suite 200
New York, NY 10023
1-800-829-5384

Mayo Clinic Health Letter
Subscription Services
P.O. Box 53889
Boulder, CO 80322-3889
1-800-333-9037

Nutrition Action Newsletter
Center for Science in the Public Interest
1875 Connecticut Ave. NW
Suite 300
Washington, DC 20009
202-332-9110

Tufts University Diet and Nutrition Letter
P.O. Box 57857
Boulder, CO 80322-3889
1-800-234-2188

University of California at Berkeley Wellness Letter
Health Letter Associates
P.O. Box 420148
Palm Coast, FL 32142
1-800-829-9080

INSTRUCTIONAL PROGRAM ON CD ROM

The Total Trainer available by contacting
The Army Physical Fitness Research Institute
U.S. Army War College
Carlisle Barracks, PA 17013-5243
(717) 245-4511; *Internet:* carlisle-www.army.mil

BOOKS FOR FURTHER READING

The Aerobics Program for Total Well-Being: Exercise, Diet, Emotional Balance. Dr. Kenneth Cooper, Bantam Doubleday Dell Publishers, 1985.

ACSM Fitness Book. American College of Sports Medicine, Leisure Press, 1992.

The Balancing Act: Nutrition and Weight Guide. Georgia G. Kostas, 1994. See below.*

The American Dietetic Association's Complete Food & Nutrition Guide. Roberta Larson Duyff, Chronimed Publishing, 1996.

Bowes and Church's Food Values of Portions Commonly Used. 16th ed. Jean Pennington, Lippincott, 1992.

Dieting For Dummies. Jane Kirby and the American Dietetic Association, IDG Books Worldwide, 1998.

The LEARN Program for Weight Control. 7th Edition. Kelly D. Brownell, American Health Publishing Co., 1997. See below.*

Living With Exercise. Steven N. Blair, American Health Publishing. See below.*

Maximize Your Body Potential: 16 Weeks to a Lifetime of Effective Weight Management. Joyce D. Nash, Ph.D, Bull Publishing Co., 1986.

Nancy Clark's Sports Nutrition Guidebook, 2nd ed. Eating to Fuel Your Active Lifestyle. Nancy Clark, Human Kinetics, 1997.

The New Fit or Fat. Covert Bailey, Houghton Mifflin, 1991.

Power Eating. Susan Kleiner, Human Kinetics, 1998.

Strong Women Stay Slim. Miriam Nelson and Sarah Wernick, Bantam Books, 1998.

Thin For Life: 10 Keys to Success from People Who Have Lost Weight and Kept it Off. Anne Fletcher, Chapters Books, 1994.

Eating on the Run. Evelyn Tribole, Human Kinetics, 1992.

*Available from the LEARN Education Center (800) 736-7323

