

## Nutrition and Exercise

### Introduction

Welcome to the Nutrition and Exercise session of the *Living in Balance* program. This session will provide information about proper nutrition and physical exercise and their importance for your sobriety.

### What is in this session?

This session has two major parts: (1) Nutrition and (2) Physical Exercise.

- ✓ After participating in part 1, you will be able to
  - Understand how substance use affects your eating habits
  - Identify the essential nutrients your body needs
  - Understand the types and proportions of foods that make up a balanced diet
  - Recognize which foods are not healthy and how you can cut back on them
  
- ✓ After participating in part 2, you will be able to
  - Understand the value of exercise in promoting physical and mental well-being
  - Identify the different types of exercise
  - Understand what kinds of aerobic exercise you need to stay healthy



**SESSION 17 HAS  
TWO MAJOR PARTS:**

1. Nutrition
2. Physical Exercise



### LEARNER OBJECTIVES FOR PART 1:

You will

- Understand how substance use affects your eating habits
- Identify the essential nutrients your body needs
- Understand the types and proportions of foods that make up a balanced diet
- Recognize which foods are not healthy and how you can cut back on them

**One of the more obvious signs of addiction is a severe loss of weight.**

### *What will be asked of you?*

You will be asked to look at your eating habits and examine ways to improve them. Also, you will need to begin thinking about (and start doing something about) an exercise plan that can help restore the mental and physical balance you lost while you were using alcohol and other drugs. In sobriety, you have the chance to turn your life around in many ways. One important way is by taking care of yourself physically, something most actively addicted people don't do.



## Part 1: Nutrition

Research has shown that the old saying “you are what you eat” is true. For individuals who have been abusing alcohol and other drugs, a proper diet that includes vitamins, minerals, carbohydrates, proteins, and fats is vital not only to their general health, but also to the success of their recovery.

When a person is taking drugs, his or her entire life is based on those substances. Relationships, work, and daily life are ignored. In particular, people stop taking care of their bodies through proper eating and exercise.

By being aware of what foods you should eat and how you can keep yourself physically fit, you can reverse many of the negative effects that occurred during active addiction.

### Drugs and Nutrition

With many drugs, one of the more obvious signs of addiction is a severe loss of weight. This can occur for a number of different reasons. For example, stimulants (such as amphetamines and cocaine) suppress appetite so that a person doesn't feel the need to eat. At the same time, these drugs speed up the body's metabolism so that the person burns calories quicker. The result is a loss of weight. Other drugs, such as PCP and inhalants, have also been associated with weight loss.

Chronic alcohol use may also suppress appetite and cause a person to lose weight, even though alcohol itself contains calories.

The individual may not eat regularly because of his or her alcohol use, and therefore not get enough calories and lose weight. The calories that are obtained from alcohol are without nutritional value, and alcoholics may also suffer from a number of nutritional disorders.

Other drugs, such as marijuana, may increase appetite, leading to weight gain. Too much weight can be as unhealthy as too little. Also, users may consume large amounts of salty and sugary snack foods that have poor nutritional value.

Although people who use alcohol and other drugs in binges can seriously upset their nutritional balances, those who have used chemicals over long periods of time, and at high doses, are at highest risk for having serious nutritional problems.



**EXERCISE 1**

*Please answer the following questions:*

1. When you stopped using alcohol and other drugs, did you notice an increase in your appetite?

Yes     No    *(If yes, please explain.)*

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2. During periods of alcohol and other drug use, did you tend to eat junk food, such as cookies and chips?

Yes     No    *(If yes, please explain.)*

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**Your body requires many different nutrients, such as vitamins and minerals, in order to stay healthy.**

## **Essential Nutrients**

Your body requires many different nutrients, such as vitamins and minerals, in order to stay healthy. Your body also needs a certain amount of fat, protein, fiber, and carbohydrates. However, too much of some of these things can be unhealthy.

**Vitamins.** By regulating the body's metabolism, vitamins ensure that the brain, nerves, muscle, skin, and bones all remain healthy. While vitamins do not really supply energy, some help energy to be released from food.

If you eat a balanced diet, you will not need to take vitamin supplements. However, people who consumed a lot of alcohol and other drugs over a long period of time will benefit from a simple multivitamin and mineral supplement for a few months.

**Minerals.** Some of the better-known minerals include salt, calcium, and iron. Although salt is needed to maintain a balance of fluid in the body, excess salt can cause high blood pressure. Calcium is necessary for healthy bones and teeth.

The only mineral that is commonly required as a supplement is iron, which helps to carry oxygen in the blood. Iron is often recommended for women and especially pregnant women, because iron is lost during menstrual periods.

**Water.** Water is important because it determines the volume of blood in circulation and is necessary to keep the bowels functioning normally.

**Fats.** Fats, such as butter, margarine, shortening, oil, lard, meat, and dairy products, provide energy and insulate the body's organs. Too much fat, though, can clog arteries and cause heart attacks.

**Fiber.** Fiber, found in fruit, raw vegetables, grains, and cereals, is plant material that can't be digested. Even though it passes through the body relatively unchanged, it is essential. Too little fiber may lead to constipation and other problems.

**Carbohydrates.** There are two carbohydrate food groups, sugars and starches, which are the main energy sources for the body.

Carbohydrates should make up at least half of a person's diet. Unrefined or unprocessed carbohydrates (cereals and fruit) are usually richer in fiber and nutrients than refined carbohydrates (sugar and white flour).

**Proteins.** When you use certain drugs, your body loses neurotransmitters. These chemicals, which are made from amino acids, are what the nervous system uses to communicate directions to the body. Proteins, found in red meat, fish, chicken, cheese, milk, eggs, dry beans, and peas, are necessary to replace these vital amino acids. Proteins also help the body build muscle.



## EXERCISE 2

*Please check the answer that seems most true:*

1. Which of the following is an essential mineral?
  - Salt
  - Calcium
  - Iron
  - All of the above
2. Carbohydrates should make up how much of your diet?
  - About a quarter
  - As little as possible
  - At least 50 percent
  - None of the above
3. A lack of fiber can cause
  - Hair loss
  - Constipation
  - Anxiety
  - All of the above



**DEFINITION OF PROTEIN-CALORIE MALNUTRITION:**

A form of deficiency that is often the result of famine, extreme poverty, anorexia, or drug addiction.

**Nutritional Disorders**

Nutritional disorders are caused by the lack or excess of one or more of the essential nutrients listed on the previous two pages.

**Nutrient deficiency.** A diet that is low in carbohydrates is almost always low in protein. *Protein-calorie malnutrition* is a form of deficiency that is often the result of famine, extreme poverty, anorexia, or drug addiction. A lack of a specific vitamin or mineral can also cause problems. For instance, a lack of vitamin A can cause night blindness and skin dryness, although too much vitamin A can also cause some health problems.

**Nutrient excess.** Two of the most common problems associated with an excess of certain nutrients are *obesity* and *dental caries* (or cavities). Eating too much refined carbohydrates and fat causes obesity, which is another way of saying being overweight. Dental caries or tooth decay develops mainly in people who eat large amounts of refined sugar products.



**EXERCISE 3**

*Please answer the following question:*

What do you eat in a typical day?

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## Healthy Diet Guidelines

In order to know if you're eating a healthy diet, you should learn the basic food groups, and what nutrients each food group provides. You will want to choose those foods that provide proteins, carbohydrates, vitamins, and minerals without being too high in calories, fat, or sugar.

**The whole grains group.** Foods made from whole grains (wheat, rice, and oats) form the foundation of a nutritious diet. They provide vitamins, minerals, carbohydrates (starch and dietary fiber), and other substances that are important for good health. Grain products are low in fat. Whole grain foods include whole wheat bread (not white bread), oatmeal, and rice (but not white rice).

**Plant oils.** Plant oils include olive, canola, soybean, corn, sunflower, peanut, and other vegetable oils. Plant oils range from 7 percent saturated (canola oil) to approximately 15 percent saturated (soybean oil). Plant oils are part of a healthy and balanced diet. They provide help in preventing heart disease, diabetes, and possibly prostate problems. Importantly, plant oils do not contain cholesterol.

**The fruit group.** The outer skins or peels of fruits are a very good source of fiber. Citrus fruit, melons, berries, and tomatoes contain vitamin C. Nearly all fruits are low in fat, and none contain cholesterol. Fruits reduce the risk of cardiovascular disease.

**The vegetable group.** The outer skins or peels of vegetables are a very good source of fiber. Dark-green and yellow vegetables are high in vitamin A. Most dark-green vegetables (if not overcooked) also contain vitamin C. Dark-green vegetables also provide other vitamins and minerals. Certain greens, such as collards, kale, mustard, turnip, and dandelion, contain calcium. Nearly all vegetables are low in fat, and none contain cholesterol. Vegetables reduce the risk of cardiovascular disease.





**Nuts and legumes.** *Legumes* are plants that have pods with rows of seeds inside. The category “nuts and legumes” includes peas, beans, lentils, peanuts, walnuts, and almonds. Nuts and legumes help by reducing the risk of cardiac problems, strokes, and diabetes.



**Fish, poultry, and eggs group.** Foods in this group provide protein, which is a good part of a healthy diet. Poultry and fish contain less saturated fat and more unsaturated fat than red meat does. Studies have shown that people who replace red meat with chicken and fish have a lower risk of heart disease and colon cancer. Eggs are high in cholesterol, but consumption of up to one a day does not appear to have adverse effects on heart disease risk (except among diabetics). They do slightly raise cholesterol levels but provide other nutritional benefits.



**Dairy or calcium supplement group.** Foods in this group, which include milk, yogurt, hard cheese, cheese spread, and cottage cheese, are rich in calcium, protein, and vitamins. Companies often enrich or fortify milk by adding other vitamins as well.



**Red meat and butter group.** Red meat includes beef, pork, and lamb. Both red meat and butter contain saturated fat, which raises cholesterol levels in the blood and raises the risk of heart disease. To reduce the risk of these problems, eat lean (low-fat) red meat sparingly.



**White rice, white bread, potatoes, pasta, and sweets group.** Research has shown that a diet high in refined carbohydrates (these are things like white bread and white rice) can really upset the levels of sugar in your body and cause medical problems. Also, a diet high in starch (such as potatoes and pasta) is associated with diabetes and heart disease. Overall, white rice, white bread, potatoes, pasta, and foods with sugar do not provide much nutritional value and should be used sparingly.





**EXERCISE 4**

*Please answer the following questions:*

1. Do you regularly eat from each of the food groups described on the two previous pages?

Yes     No    *(If yes, please give examples.)*

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2. If you don't eat foods from one or more of these groups, why not? How could you change your eating habits to include some foods from these groups?

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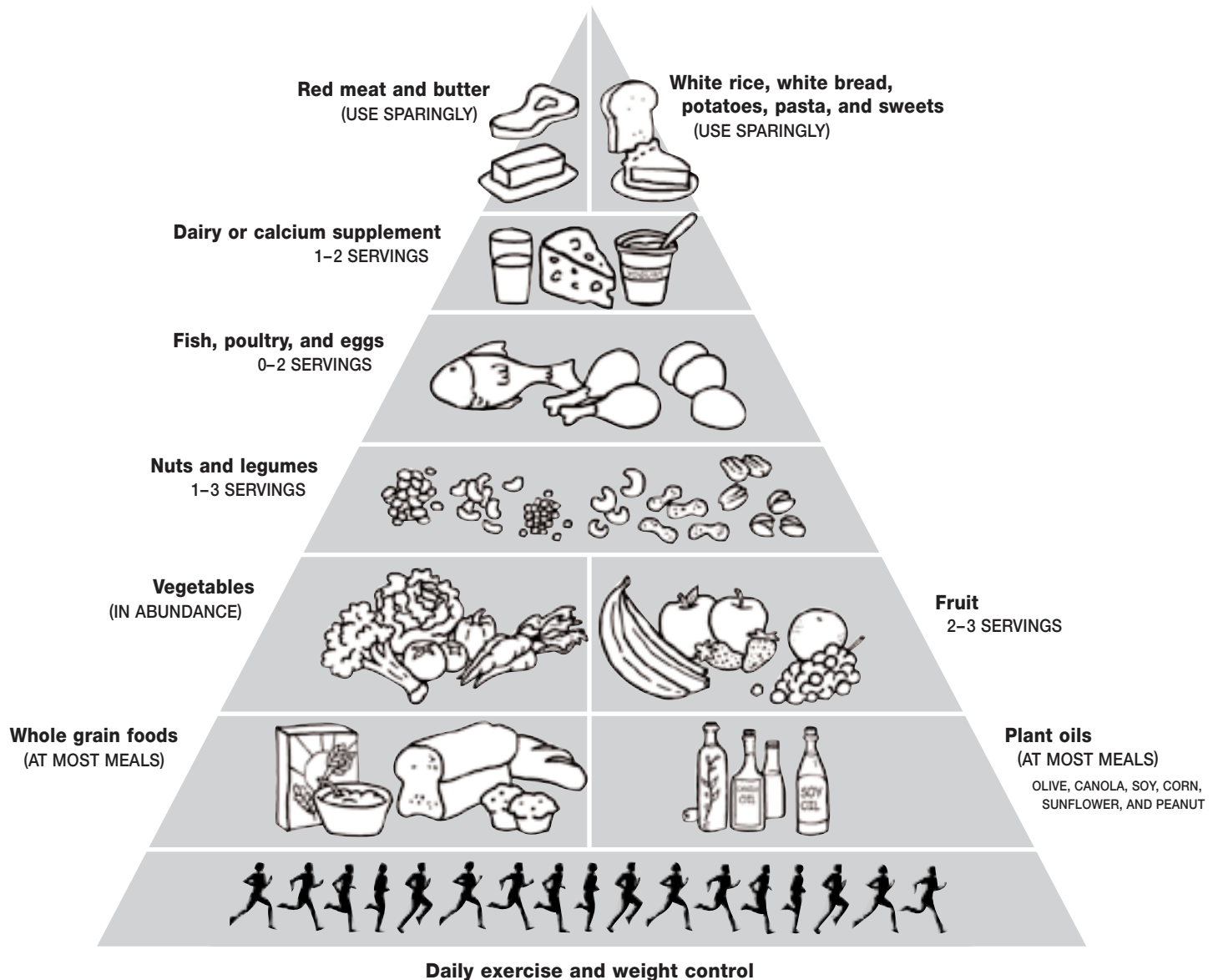
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## Food Guide Pyramid



Most people should consume whole grains and vegetable oils with most meals, eat several servings of vegetables and fruit each day, and consider one or more servings of nuts and legumes. At the same time, people are encouraged to eat red meat and butter as well as white rice, white bread, potatoes, pasta, and sweets sparingly. Foods such as dairy or calcium supplements, as well as fish, poultry, and eggs, can be eaten in moderation.

As the food pyramid on the previous page shows, a healthy diet rests on a foundation of a daily exercise program. Also, a healthy diet consists of different food groups, not all eaten in the same amounts. The larger the area given to a particular group in the pyramid (such as the bottom food areas), the more you should eat from that group. This food guide pyramid is adapted from the work of Walter Willett and Meir Stampfer in their article “Rebuilding the Food Pyramid,” published in the January 2003 issue of *Scientific American*.

**Exercise.** Losing weight and not gaining weight depend on one important factor: If you exercise to burn up more calories than you eat, you can lose or not gain weight. If you eat more calories than you burn up through exercise, you gain weight.

**Whole grains.** Some whole grain foods should be eaten during most meals. Importantly, this *does not* include white rice, white bread, or pasta.

**Plant oils.** Plant oils include olive, canola, soybean, corn, sunflower, peanut, and other vegetable oils. These should be consumed at most meals.

**Vegetables.** The vegetable group includes dark-green, leafy vegetables, deep-yellow vegetables, dried beans and peas, and other vegetables. A healthy diet should include several servings of vegetables each day. Potatoes are mostly starch and do not have the benefits of other vegetables.

**Fruits.** The fruit group includes citrus fruit, melons, berries, fresh fruit, dried fruit, canned fruit, and fruit juice. A healthy diet should include two to three servings per day.

**Nuts and legumes.** *Legumes* are plants that have pods with rows of seeds inside. The category “nuts and legumes” includes peas, beans, lentils, peanuts, walnuts, and almonds. A healthy diet includes one to three servings of nuts and legumes each day.

***Fish, poultry, and eggs.*** This group includes fish (preferably not fried), poultry (chicken and turkey), and eggs. Only a moderate amount of these foods should be eaten regularly. A healthy diet can include none to two servings each day.

***Dairy or calcium supplements.*** This group includes milk, yogurt, hard cheese, cheese spread, cottage cheese, and milk products. Most adults get the necessary amount of calcium by consuming the equivalent of one glass of milk each day. Some people, such as women who are postmenopausal, may need more calcium than usual, but it can be easily obtained by taking a calcium supplement. A healthy diet includes only one to two servings each day from the dairy group.

***Red meat and butter.*** A healthy diet includes small amounts of food from the red meat and butter category. Americans tend to eat a lot of red meat and butter each day, which is not recommended.

***White rice and bread, potatoes, pasta, and sweets.*** Overall, white rice, white bread, potatoes, pasta, and foods with sugar do not provide much nutritional value and should be used sparingly.

### **What Are Calories?**

Because the body needs energy, it must get it from foods containing carbohydrates, fat, and protein. The body gets calories from these foods, which are the basic source of its energy.

Many foods provide a balance of nutrition and calories, but fat, sugar, and alcohol provide calories without nutritional value.

When you take in the same amount of calories as you use, your weight stays the same. If your calorie intake is larger than the amount of energy used, you will gain weight. On the other hand, if you use more energy than you get in calories, you will lose weight.

**Many foods provide a balance of nutrition and calories, but fat, sugar, and alcohol provide calories without nutritional value.**

### Formula for Ideal Weight

Staying healthy means making a serious effort to keep within your ideal weight. The formula for determining ideal body weight is different for men and women. To determine your ideal weight, you should use the following formulas.

#### Men

Take 106 pounds for being five feet or less, and add six pounds for each inch above five feet. Subtract 10 percent of the total for the low end of the range, and add 10 percent for the high end of the range.

*Example:* A man who stands five feet, ten inches tall:

$$106 + 60 = 166 \text{ (plus or minus 17 pounds)}$$

*Ideal Weight Range* = 149 to 183 pounds

#### Women

Take 100 pounds for being five feet or less, and add five pounds for each inch above five feet. Subtract 10 percent of the total for the low end of the range, and add 10 percent for the high end of the range.

*Example:* A woman who stands five feet, five inches tall:

$$100 + 25 = 125 \text{ (plus or minus 13 pounds)}$$

*Ideal Weight Range* = 112 to 138 pounds



**Eating a diet high in fat—especially saturated fat—may cause you to have higher levels of cholesterol in your blood and may increase your chance of getting heart disease.**

**Fat**

Some fat is necessary for a healthy diet. It helps form cell membranes and carries certain vitamins through the body. Fat also enhances the flavor and texture of many foods.

***Eating too much fat.*** Calories can come from protein, carbohydrates, or fat, but fat has twice as many calories as the same amount of carbohydrates or protein. Thus, it is fairly easy to gain weight by eating too much fat.

***Eating the wrong kind of fat.*** Most *unsaturated fats* come from plants and are liquid at room temperature. Examples include corn oil, soybean oil, and safflower oil. (There are exceptions to this, however. Palm and coconut oils come from plants, but are saturated oils.) Most *saturated fats* come from animals and are solid at room temperature. For instance, the fat in meats as well as the fat in butter and cheese is saturated fat.

Eating a diet high in fat—especially saturated fat—may cause you to have higher levels of cholesterol in your blood and may increase your chance of getting heart disease.

***Fat and oil.*** In general, the difference between fat and oil is simply whether it is liquid or solid. If it is liquid, it is called oil; if it is in solid form, it is generally called fat.



**EXERCISE 5**

*Please answer the following questions:*

1. In the last twenty-four hours, what kinds of fatty foods have you eaten?

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2. What is your favorite high-fat food? Is there another food you like that you could substitute for it?

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3. If you cook, do you cook with butter, lard, or a lot of oil? What could you do to cut back on the amount you use?

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**Cholesterol**

Cholesterol is a fatty substance found only in foods that come from animals, not foods that come from plants.

Cholesterol helps cause hardening of the arteries (atherosclerosis), in which the cholesterol sticks and deposits on the inside of artery walls. These deposits clog the arteries and interfere with the flow of blood.

When the blood that is going to the heart is stopped, the result is a heart attack. When the blood going to the brain is stopped, the result is a stroke.

The body itself does produce a small amount of cholesterol. Diets high in saturated fat tend to increase cholesterol production. Also, some foods themselves are high in cholesterol.



**DEFINITION OF CHOLESTEROL:**

A fatty substance found only in foods that come from animals, not foods that come from plants.



## EXERCISE 6

Please answer the following question:

Do you have a family history of coronary artery disease or hardening of the arteries?

Yes     No    *(If yes, please explain.)*

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If so, you will be more likely to have these problems yourself, and you should consult a doctor about changing your diet.

### Salt

In the human body, salt acts like a sponge and absorbs water and other fluids. This fluid buildup can lead to high blood pressure (hypertension). Since high blood pressure cannot be felt by the individual who has it, it is known as “the silent killer.” African Americans are at particularly high risk for high blood pressure, but everybody should have his or her blood pressure checked annually.

In order to lower the amount of salt in your diet, try the following:

1. Cooked foods usually contain some salt already, so you should not add additional salt to prepared foods or food from a restaurant.
2. Eat fewer salted snack foods, such as salted crackers, chips, pretzels, and nuts, or try a no-salt alternative.
3. Use fewer condiments that have high salt contents, such as soy sauce, ketchup, steak sauces, and garlic salt. When unsure about the salt content, check the product label.





**EXERCISE 7**

Please answer the following questions:

1. How many salted snacks do you eat? What alternative snacks could you try?

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2. Do you automatically put salt on food?  
 Yes     No    *(If yes, please explain.)*

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3. Have you gotten used to eating salty food? If so, what can you do to cut back on your salt intake?

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**Sugar**

People who have used alcohol and other drugs for long periods of time may get in the habit of eating lots of fats and sweets in order to get calories. Sugar, in particular, is a source of “empty calories,” which have no nutritional value.

Using too much sugar can cause tooth decay and mood swings. For some people, the rush they get from sugar is similar to the rush associated with alcohol. For this reason, some say they are “addicted” to sugar. Sugar highs and sugar lows may affect the recovery process.



**Using too much sugar can cause tooth decay and mood swings.**

**Sugar, in particular, is a source of “empty calories,” which have no nutritional value.**

**Sugar highs and sugar lows may affect the recovery process.**

You may eat some sugar without even realizing it. There are many different types of sugar: honey, maple syrup, sucrose, brown sugar, turbinado sugar, dextrose, invert sugar, raw sugar, corn syrup, fructose, and high-fructose corn syrup. It can be found in many different foods, including breads, salad dressings, hot dogs, barbecue sauces, ketchup, pickles, and lots of processed foods.

Since it is hard to avoid sugar completely, you may want to just try cutting back on the amount you eat each day. You can also switch to a high-carbohydrate diet for your energy supply, which would include large amounts of breads, cereals, pasta, and fruit. Vitamin and mineral supplements can help your body release energy from food, but be careful not to take too much of any particular vitamin.



**EXERCISE 8**

*Please answer the following questions:*

1. Have you ever noticed that you crave sweets at certain times?  
 Yes     No

If so, why do you think that is the case?

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2. Have you ever noticed a “sugar rush” after eating sweets, followed by a slight depression?

Yes     No    *(If yes, please explain.)*

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3. What are your favorite “healthy” foods?

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**Caffeine**

Caffeine is a stimulant drug that can be found in coffee, tea, and chocolate, as well as some soft drinks and medications. Just like cocaine and other stimulants, it has mood-changing effects, increases tension and anxiety, can cause insomnia, raises the heart rate, and constricts blood vessels.

If you try to quit caffeine altogether, you may feel some uncomfortable withdrawal effects. However, because people who are new to recovery are already experiencing stress, cutting down or limiting their caffeine intake can help them feel less stressed out and able to sleep better.



**EXERCISE 9**

*Please answer the following questions:*

Do you eat or drink something that contains caffeine on a regular basis?

- Yes
- No

If so, how would you feel about stopping or decreasing your use of that product?

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**DEFINITION OF CAFFEINE:**

A stimulant drug that can be found in coffee, tea, and chocolate, as well as some soft drinks and medications.

### **Tips for Better Nutrition**

In order to improve your health during recovery, you should (1) reduce the amount of processed sugar you eat, (2) reduce how much fat you consume, (3) increase your nonsugar carbohydrate intake, and (4) decrease your use of salt. Some of the ways you can make these changes are listed below.

#### ***Reducing sugar and fat***

- Eat fewer foods containing sugar and fat, especially desserts.
- Avoid fried foods and snacks, such as fried chicken and potato chips.
- Eat lean meat, fish, poultry, dry beans, and peas for protein without much fat.
- Trim the fat from meat and remove the skin from poultry.
- Limit the amount of high-fat protein sources that you eat, such as spareribs, brisket, corned beef, bacon, pastrami, sausage, cheese, and nonlean ground beef.
- Drink low-fat or skim milk and eat low-fat dairy products.
- Cut down on high-cholesterol foods such as egg yolks and organ meats.
- Limit your use of high-fat products, such as mayonnaise, sour cream, butter, cream, margarine, cooking oil, and salad dressings.
- Broil, poach, or roast meats and drain the fat from the pan. Do not use the fat to make gravy or sauce.
- When soups and stews are chilled, the fat will harden on the top, and you should remove the fat before reheating and serving.
- Use polyunsaturated fats and vegetable oils rather than saturated fats, like lard or butter.

***Increasing carbohydrate intake***

- Eat plenty of fruits and vegetables, raw or lightly cooked.
- Eat more complex carbohydrates, such as corn, pasta, cereal, beans, whole wheat bread, grains, peas, and rice.
- Eat meatless meals such as spaghetti with tomato sauce, rice and beans, cereal and milk, bean soup, and bean salad.
- Eat whole grain breads, cereals, vegetables, and fruits each day.

***Decreasing salt intake***

- Don't automatically add extra salt during meals.
- Avoid or reduce salty foods such as potato chips.
- Read the salt content in regularly consumed foods (such as ketchup) and limit your use of those that are high in salt.

**EXERCISE 10**

*Please check true or false for the following statements:*

1. In order to cut down on fat, you need to avoid protein.  
 True     False
2. It is healthy not to have meat with every meal.  
 True     False
3. You are better off eating saturated fats than polyunsaturated ones.  
 True     False
4. Egg yolks and organ meats are high in cholesterol and should be avoided.  
 True     False

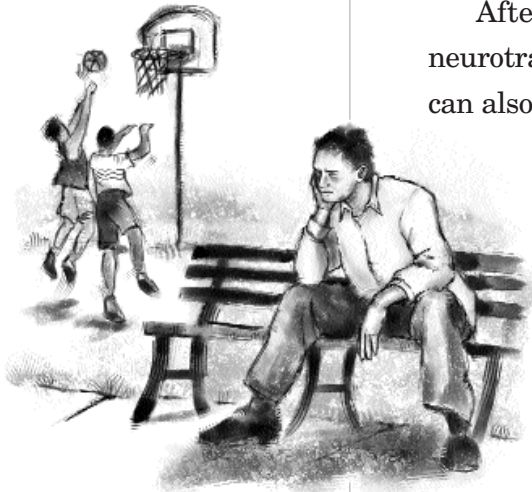


### LEARNER OBJECTIVES FOR PART 2:

You will

- Understand the value of exercise in promoting physical and mental well-being
- Identify the different types of exercise
- Understand what kinds of aerobic exercise you need to stay healthy

**Regular exercise can help restore balance to your physical and emotional states.**



## Part 2: Physical Exercise

In order to maintain your sobriety, you need to pay attention to your physical well-being. While your diet is an important part of this, you also need to learn to exercise in order to become physically fit.

### Drugs, Exercise, and Neurotransmitter “Borrowing”

Your body produces certain brain chemicals known as neurotransmitters, which alter feelings and thoughts and also communicate certain messages to other parts of the body. The body produces these neurotransmitters naturally. At certain times (such as during physical exercise) the body temporarily increases production of these brain chemicals.

Alcohol and other drugs also affect the production of these neurotransmitters. Different drugs affect different neurotransmitters. Stimulant drugs, such as speed or cocaine, for example, increase the production of the same kinds of neurotransmitters as exercise but in larger and longer-lasting amounts.

When a drug causes the overproduction of a neurotransmitter, the body temporarily “runs low” on those neurotransmitters. When this happens, people may feel like they have no energy and no strength, and they become depressed. This is what happens in the crash that follows stimulant use. Other drugs cause different kinds of neurotransmitter imbalances.

After you stop using drugs, exercise can help to restore the neurotransmitters back to normal, healthy levels. Regular exercise can also help restore balance to your physical and emotional states.



**EXERCISE 11**

*Please answer the following questions:*

1. Some people talk about getting “high” from exercise. Have you ever felt this?

Yes     No    *(If yes, please explain.)*

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2. What differences do you think there might be between the feelings one gets from exercising and from doing drugs?

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**Types of Exercise**

There are different types of exercise, and each serves a different purpose. The four basic types of exercise are isometric, isotonic, isokinetic, and aerobic.

**Isometric.** In isometric exercise, there is no movement. One group of muscles exerts pressure against an immovable object or another group of muscles. It is an effective means of increasing muscle strength, but it does not exercise the heart and lungs or aid in muscular endurance.

**The four basic types of exercise are isometric, isotonic, isokinetic, and aerobic.**

**Isotonic.** Isotonic exercise involves movement in which muscle tension remains more or less constant, and the body works against its own weight or external weights. Isotonic exercise includes lifting weights and calisthenics, such as push-ups. Isotonic exercise increases muscle strength, size, and endurance.

**Isokinetic.** Isokinetic exercise combines both isotonic and isometric exercises. The muscles move fairly heavy loads, but they are also put through their full range of movement. Isokinetics combine strength training with some aerobic exercise, but they require special equipment, such as Nautilus machines.

**Aerobic.** Aerobic exercise is a type of exertion in which the body continuously has to keep taking in additional oxygen to meet the muscles' increased demands. Regular aerobic exercise, such as jogging, swimming, cycling, and aerobics classes, and sports like basketball, improve the performance of the cardiovascular and respiratory systems.

Most people who go to a gym do a combination of these different types of exercises. Although some of these exercises (such as isokinetic Nautilus workouts) are excellent at building strength, aerobic exercise is the type of exercise that will help your body restore its neurotransmitter balance.



## EXERCISE 12

*Please answer the following questions:*

1. Did you engage in regular exercise while you were using?

Yes     No    *(If yes, please explain.)*

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2. Do you currently do any of the exercises that were just discussed?

Yes     No

If no, what reasons do you have for not exercising more?

If yes, describe.

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### Regular Aerobic Exercise

In order to obtain the full benefits from aerobic exercise, an individual should run, jog, cycle, swim, walk briskly, play basketball, or do other aerobic exercises for a minimum of twenty minutes *three times per week*.

A regular aerobic exercise program can involve a mix of exercises. For instance, someone can jog for twenty to thirty minutes on Monday afternoons, participate in aerobic exercises at the YMCA on Wednesdays, and play basketball with friends on Saturday afternoons. The key is to find exercise activities that you enjoy. Exercise does not have to be boring or tedious. Some examples of aerobic exercise are

- Organized aerobic exercises, such as step aerobics and low-impact aerobics
- Some team sports, such as basketball, soccer, and football
- Running, jogging, very fast walking, swimming, cycling
- Using aerobic machines such as a StairMaster, treadmill, or stationary bicycle
- Sustained dancing (slow dancing doesn't count)



**Aerobic exercise will  
lower your risk for  
developing heart disease  
and will lower blood  
pressure in most people.**

In addition to an aerobic exercise program, there are other physical fitness habits that can become part of everyday activities. These are not substitutes for regular aerobic exercise, but they can help to support it:

- Using the stairs instead of an escalator or elevator
- Walking rather than using a car or bus for short errands
- Playing nonaerobic sports such as baseball and softball
- Doing regular stretching exercises or yoga
- Casual bike riding and walking
- Weight lifting and weight training



### EXERCISE 13

*Please check the answer that seems most true:*

Which of the following is not an aerobic exercise?

- Playing basketball
- Running
- Playing softball
- Swimming

***Benefits to the heart from aerobic exercise.*** Regular *aerobic exercise* increases the production of a substance that protects against fat deposits in your arteries. It will lower your risk for developing heart disease and will lower blood pressure in most people.

With regular aerobic exercise, your heart muscle becomes thicker and stronger, and the amount of blood that is pumped with each beat increases. In fact, a fit person's heart pumps 25 percent more blood per minute when at rest, and 50 percent more blood per minute during physical exertion, than an unfit person's heart. A fit person's heart normally beats sixty to seventy times per minute; an unfit person's heart beats eighty to one

hundred times per minute. In general, aerobic exercise allows the heart to do the same amount of work with less strain.



**EXERCISE 14**

*Please answer the following questions:*

- Heart disease runs in families, but regular aerobic exercise can decrease your chance of getting it. Has anyone in your family suffered from heart disease?

Yes     No    *(If yes, please explain.)*

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- Do you know if you have high blood pressure?

Yes     No

If so, has your doctor suggested you exercise more?  
Please explain.

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**Regular aerobic exercise can help decrease depression by enabling your body to release natural antidepressant neurotransmitters.**

### **Psychological Benefits of Exercise**

For people in recovery, the psychological benefits of exercise can be tremendous. For example, regular aerobic exercise allows your body to start producing certain neurotransmitters that regulate mood, sleep, and appetite.

Depression is a serious problem for many addicted people, and regular aerobic exercise can help decrease depression by enabling your body to release natural antidepressant neurotransmitters. Regular exercise also promotes normal sleeping patterns.

In addition to fighting depression and promoting normal sleeping patterns, regular aerobic exercise can help restore your self-esteem by improving your appearance and physical fitness.



#### **EXERCISE 15**

*Please check the answer that seems most true:*

1. Aerobic exercise releases chemicals that act as
  - Antidepressants
  - Antacids
  - Depressants
  - None of the above
  
2. Which type of exercise releases neurotransmitters that affect your mood?
  - Isometric
  - Isotonic
  - Isokinetic
  - Aerobic

**Other Benefits of Exercise**

Isotonic exercises such as sit-ups and reverse leg lifts (done while lying on your stomach) can improve the strength of muscles in your back and abdomen and prevent or ease lower back pain. By increasing the strength of back muscles and tendons, you also help prevent future strain.

Exercise also decreases the risk for developing a number of different illnesses and diseases, such as infections and colds. Regular aerobic exercise will also increase general stamina and endurance.



**EXERCISE 16**

*Please answer the following questions:*

1. How would you rate your overall physical condition?  
Would you like to improve your physical fitness? Explain.

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2. What types of exercise do you enjoy?

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3. Why is exercise an important part of the recovery process?

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### **Session 17 Summary**

In this session you looked at the importance of a proper diet for mental and physical health. You also learned about different types of physical exercise and their role in your recovery. By making simple changes to your diet and exercise habits, you can have a healthier recovery. These simple changes can also decrease your stress and improve your overall well-being.