

Teaching Fitness

One of our long-term goals in having young people play any sport at the YMCA is for them to learn to enjoy not just that sport, but to enjoy physical activity and to appreciate the value of being physically fit. As a YMCA coach, your short-term goal is to get your players fit to play the game. Your long-term goal is to help your players appreciate the sport as a physical activity that they can do for a very long time to stay fit.

One of your responsibilities as a coach is to get your players in shape to play the game. When your players are not fit, their fatigue leads to more errors and they are more likely to get injured. Playing the sport will help your players get fit, but your players can further improve their fitness through specific training apart from the practice setting. In this chapter we'll show you how to guide that training.

An old coaching tradition was to use fitness activities like running and push-ups as punishment when players made errors or misbehaved. Thank goodness that tradition is almost dead, because it certainly doesn't develop an appreciation for physical activity for a lifetime. Make practice and playing games fun, and you'll achieve both our short-term and long-term fitness goals.

Because we want to help young people develop an appreciation for physical activity and fitness, we not only want you to make practice fun, but we want you to teach your players the principles of fitness. In addition, we want you to educate them about other healthy habits. We'll explore these principles and habits in this chapter.

Cardiorespiratory Fitness

As you might guess from its name, cardiorespiratory fitness is fitness of the heart (cardio) and circulatory system as well as the lungs (respiratory). It's also known as aerobic fitness, endurance, or stamina. Cardiorespiratory fitness involves storing and using fuels to power muscle contractions.

Training for aerobic fitness helps toughen ligaments, tendons, and connective tissue and reduces the risk of injury while developing the toughness and endurance needed for more intense training. Good aerobic training includes these components:

- Low-intensity, long-duration activity (running, bicycling, swimming)
- Natural intervals (medium distance with occasional periods of increased intensity)
- Resistance effort (such as hills in running) once a week

As endurance grows, you can increase the aerobic overload with greater distance or intensity.

In working to improve your athletes' aerobic foundation, remember that prepubescent athletes differ from young adults in several respects. Whether or not their aerobic fitness is low, they are less efficient and less able to withstand high temperatures. Therefore, intense aerobic training can be more difficult and risky, especially in hot weather. And while training of aerobic energy pathways is less effective before puberty, aerobic training provides neuromuscular benefits, helping athletes relax and become

more efficient, using less energy to cover the distance. So prepubescent athletes can do aerobic training, but it shouldn't be hard training until they've reached puberty.

Muscular Strength and Endurance

Muscular fitness includes strength, endurance, power, speed, and flexibility. We'll focus here on two components of muscular fitness: muscular strength and muscular endurance. Muscular strength is the ability of a muscle to exert force against resistance, such as a weight. Strength improves when a muscle is overloaded. Prior to puberty, the difference between boys and girls is small, but at puberty boys increase in strength more rapidly because they add more muscle tissue than girls do.

Muscular endurance is the ability of a muscle to exercise for an extended period of time without too much fatigue. Muscular endurance is developed through repeated use of the movement for which it is needed—that is, to develop muscular endurance, players should practice a skill repeatedly. Performing a skill in practice more often than it's called on in a game will help build muscular endurance.

Prepubescent athletes can increase their strength, enhance their motor skills, and improve their athletic performance through resistance training without significant injury risk. In fact, a properly designed resistance training program can help prevent injuries, and it can improve the psychological and social well-being of youngsters, as well as enhance their overall health. The YMCA of the USA Medical Advisory Committee recommends the following:

- Strength-training facilities should be made available to youth under the age of 16 only with adult supervision and proper training for youth.
- Youth strength-training programs and facilities should be integrated to include education and activities that reflect the YMCA's commitment to the health and fitness of spirit, mind, and body.
- Youth strength-training programs should include all components of fitness.
- The strength-training component of a youth fitness program should concentrate on muscular endurance with the use of low weights and high repetitions.

Flexibility

Flexibility involves the joints and muscles. It is the ability of the muscles around a joint to allow the joint its full range of motion. Being flexible makes movement easier. The way to gain flexibility is to stretch—which your players will be doing at the beginning and end of each practice. Figures 15.1 through 15.10 illustrate stretches to incorporate into your practices and your warm-ups for contests. For all stretches, use these guidelines:

Warm up with 5 to 10 minutes of low-intensity aerobic activity (this is built into your practice plans).

- Perform two repetitions of each stretch.
- Stretch to the point of a gentle pull, then hold 10 counts without bouncing.
- For cool-downs, walk around to allow the heart and breathing rates to return to normal.
- Then perform three to five repetitions of each stretch before the muscles cool.



Figure 15.1 Shoulder stretch.



Figure 15.2 Triceps stretch.

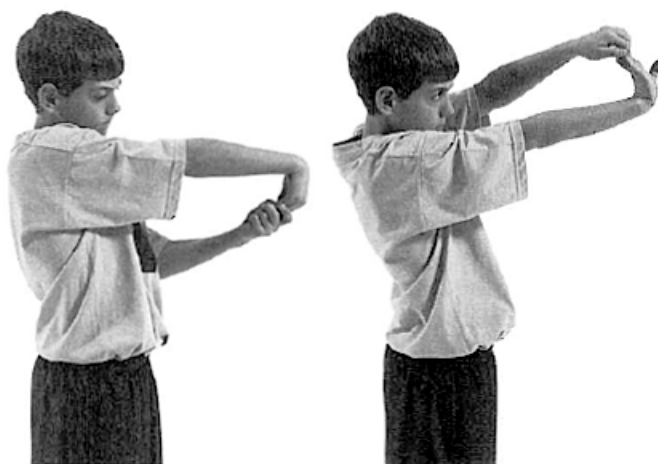


Figure 15.3 Elbow and forearm stretch.



Figure 15.4 Quadriceps stretch.



Figure 15.5 Iliotibial band stretch.



Figure 15.6 Hamstring stretch.



Figure 15.7 Hip flexor stretch.



Figure 15.8 Calf stretch.



Figure 15.9 Trunk stretch.



Figure 15.10 Lower back stretch.

Training Principles

Knowing the following principles of training will help you work with players:

- The warm-up and cooldown principle
- The overload principle
- The reversibility principle
- The specificity principle

The Warm-Up and Cooldown Principle

Before beginning strenuous activity, players should perform some moderate warm-up activity that will increase body temperature, respiration, and heart rate and help prevent muscle and tendon strains and ligament sprains. We have built warm-up games and activities into the practice plans for you, followed by stretching.

Once strenuous activity is over, players should then slow down gradually with a cooldown activity. Stopping heavy activity abruptly can cause blood to pool in the legs and feet and can slow the removal of waste products created by muscle use. Light activity such as jogging or walking and then stretching helps to keep blood circulating.

The Overload Principle

Luckily for us, our bodies are very adaptable. We can present them with a workload a bit higher than what we've done before, and they will, over time, adapt to it. Each time our bodies adapt, we can then add more to what we've done before. This is how we can improve our fitness.

Overloading the body can be done in three different ways:

- *Frequency*—doing an activity more often;
- *Intensity*—doing an activity harder; and
- *Time*—doing an activity longer.

To remember these methods of overloading, think of the acronym FIT. Increasing one or more of these aspects of activity or exercise will put a heavier load on the body.

The FIT principle can be used in all kinds of training. One player might increase her number of sit-ups and push-ups as she grows stronger, adding intensity. Another might add more minutes of jogging or running. Either one might choose to exercise more often during the week, increasing the frequency.

Overloading stimulates the body to make changes. Such changes involve the nervous system, which becomes able to recruit more muscle fibers; the circulation, which becomes better at distributing the blood to the working muscles; and the muscles, which produce new protein to meet working demands.

One caution about overloads—don't increase them too quickly, or you could cause injuries. A gradual approach is always safer.

The Reversibility Principle

To state this principle briefly: Use it or lose it! Just as the body can make adaptations when given an overload, it can also lose its capabilities when it is not used. It takes three times as long to gain endurance as it does to lose it. If you stayed in bed for a week, you would lose nearly 10 percent of your fitness. Your strength would also decline, although not as fast. This is why you want to encourage your players to be active, both during and after the season.

The Specificity Principle

This principle simply means that the type of training a person chooses to do should relate to his or her goal. For example, heavy weight training will not make a runner run faster. Bicycling will not improve swimming performance as much as additional swimming would. Performance improves most when the training done is specific to the desired activity.

Healthy Habits

In addition to getting your players physically fit, we want you to help your players appreciate other healthy habits. These habits include eating well, managing stress, staying active year-round, and staying away from tobacco, alcohol, and other drugs.

Eating Well

Disordered eating and unhealthy dietary habits are problems for youngsters as well as adults. Let players and parents know the importance of healthy eating and the dangers that can arise from efforts to lose weight too quickly. Players need to supply their bodies with the extra energy they need to keep up with the demands of practices and games. Ask your YMCA Sports Director about information that you can pass on to your players and their parents, and include a discussion of basic, common-sense nutrition in your parent-orientation meeting.

Good nutrition is not the first thing most of your players think about when they choose foods. At this age, they may not even know which foods are good for them and which are not. You can start to make them aware of which foods will make them healthier and why good nutrition is important.

A simple guide for a good diet is the U.S. Department of Agriculture's food pyramid (see figure 15.11). This is a guide that encourages us to eat lots of breads, cereals, rice, pasta, vegetables and fruits; a smaller amount of meat, cheese, eggs, dried beans, or nuts; and only a very little bit of fats, oils, and sweets. Eating this way cuts down on the amount of fats in the diet and helps ensure an adequate amount of vitamins and minerals.

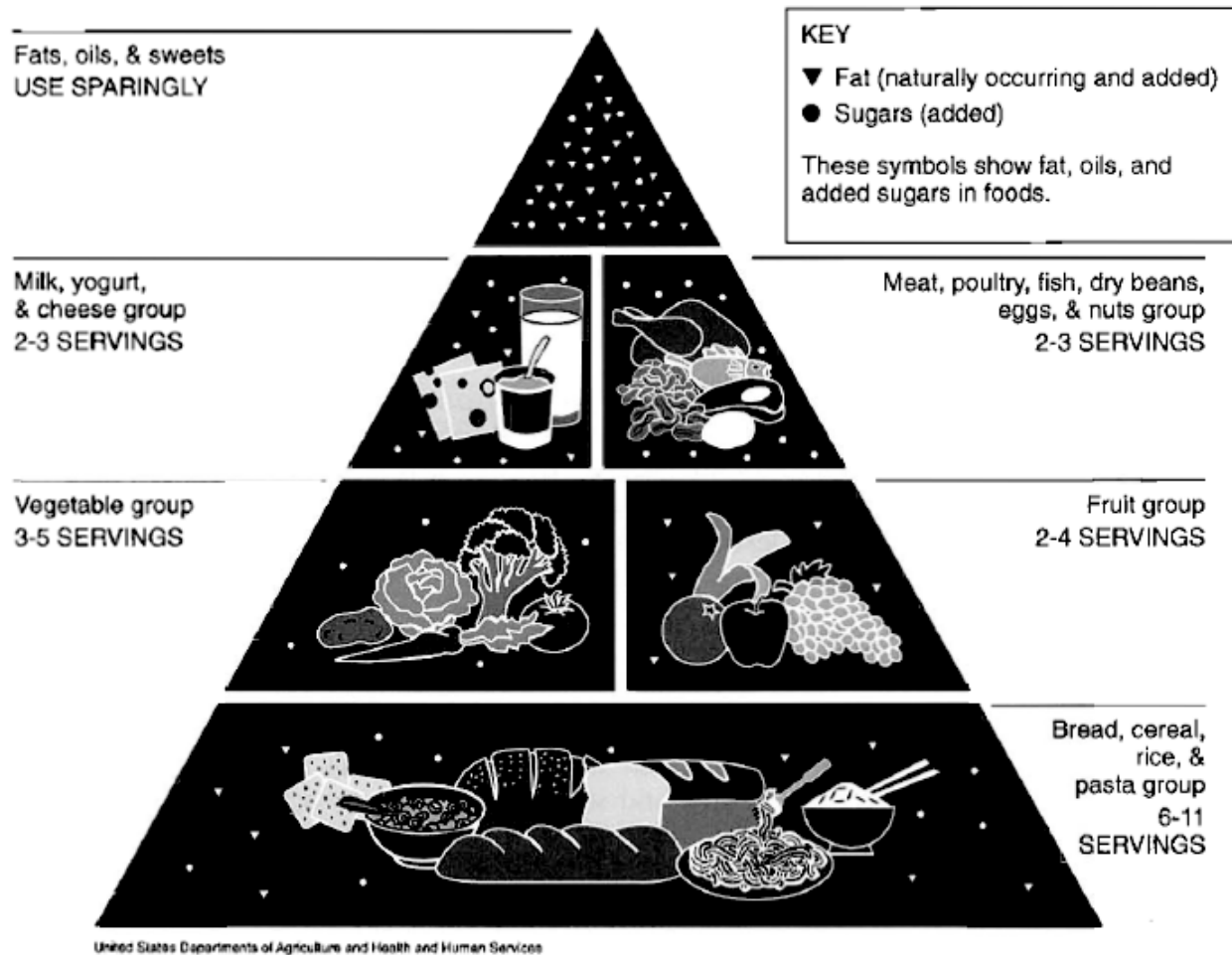


Figure 15.11 The food guide pyramid.

A serving of the foods in each of these groups is equal to the following:

- 1/2 cup of fruit or vegetables
- 3/4 cup of juice
- 1 slice of bread
- 1 cup of milk
- 1 average piece of fruit
- 1 cup of salad greens
- 1/2 cup of cooked pasta
- Lean meat about the size of a deck of cards

The number of servings your players should eat depends on their age, height, weight, and level of physical activity. One exception is milk; kids need to have three milk group servings a day.

Managing Stress

Stress is not something that is reserved only for adults; kids feel stress too. However, what's stressful for one player may not be stressful for another. Why? Stress is not caused directly by a demanding situation, but by how the person interprets the situation. For instance, your next game is against a tough

team that will be hard to beat. Derek, one of your players, is excited and looking forward to the challenge. Derek's teammate Sam is nervously anticipating it, worried about both individual and team performance. He hasn't been playing well lately. His Aunt Kristi is going to be at the game. The other team has bigger kids. He has a cold. And on and on.

Derek can't wait to play, and Sam wishes the game would go away. The point is, the situation alone doesn't dictate the stress. Nevertheless, most people who experience stress tend to blame their situations as the cause, not their interpretations of them. So what can you do as a coach to help your players manage stress?

You can guide your players through two options: They can either change the situation, or they can change their perception of the situation.

Sam can change the situation in two ways to relieve his stress: he can ask his Aunt Kristi not to attend the game, and he can (we hope) get over his cold. However, doing these two things will likely not fully relieve the stress he feels.

The better option is to help Sam interpret his situation differently. Once you find out what he's stressed about, help him focus on the good things he's done in practices and games, on the skills that he has. Remind him of how the team has prepared for this contest. Help him focus on his own performance and not worry about who's watching on the sidelines. And remind him that the bigger team doesn't always win and isn't always the better team.

The best way to manage stress is to change habitual negative thinking to more realistic and constructive thinking. Help kids who often feel stressed by negative thinking to think more realistically and constructively. This isn't easy, and it's often a complex issue, but you can help youngsters manage stress by helping them to interpret their situation in a more realistic and constructive vein.

Staying Active Year-Round

Playing a sport is a great way to get in shape and have fun. As the season progresses, your players will be getting in better shape. However, the fitness that is gained through participating will rapidly vanish if players aren't active in the off-season. One of the goals of YMCA Sports is to introduce kids to the value of fitness. We want kids to enjoy training, to want to become fit on their own, and to stay fit for a lifetime. As the season nears an end, encourage your players to stay active and fit in the off-season. Tell them about the benefits of being active year-round:

- It improves strength and endurance.
- It helps build healthy bones and muscles.
- It helps control weight.
- It reduces anxiety and stress and increases self-esteem.
- It may improve blood pressure and cholesterol levels.
- It helps people feel and look better.

Kids need to be active year-round just as much as adults do. The percent of kids ages 6 to 11 who are overweight has more than doubled in the past 30 years. In fact, kids today are more sedentary, weigh more, and have more body fat than their counterparts 20 years ago. Kids under 10 spend twice the time

watching television as they do actively playing. It's no wonder that half of all youngsters don't get enough exercise to strengthen their heart and lungs.

That's why youngsters need coaches to encourage them to be active in the off-season. Offer a variety of examples for remaining active throughout the year, and encourage a moderate amount of physical activity on most, if not all, days of the week. Examples of moderate activity include

- Walking 2 miles in 40 minutes
- Running 1-1/2 miles in 15 minutes
- Bicycling 5 miles in 30 minutes
- Playing basketball (shooting baskets) for 30 minutes
- Playing volleyball for 45 minutes
- Jumping rope for 15 minutes

Not Using Tobacco, Alcohol, and Other Drugs

Neither sports participation nor, to a lesser extent, age insulates kids from tobacco, alcohol, and other drug use. Alcohol is the most widely used drug at the upper ages of YMCA players (14 to 16). In the past 30 days (30-day use is commonly used as an indicator of current drug use), 26 percent of eighth-graders will have used alcohol, 17 percent will have smoked cigarettes, 7 percent will have used smokeless tobacco, and 5 percent will have smoked marijuana. The good news is that athletes are less likely to smoke cigarettes than non-athletes. But even among athletes, cigarette and alcohol use tends to double in the off-season. This is one more good reason to encourage remaining active in the off-season: Those who remain active are less likely to use tobacco, alcohol, or other drugs.

While these facts pertain to older kids, the risks of using tobacco, alcohol, and other drugs permeates all ages of kids in YMCA sports. It's to your advantage to understand why kids use tobacco, alcohol, and other drugs, and to be able to tell your players the benefits of not using these substances.

Why Kids Use Tobacco, Alcohol, and Other Drugs

There are many reasons why kids use tobacco, alcohol, and other drugs, but here are five important motives:

- To experience pleasure. Certain drugs give pleasurable feelings. Young athletes may like these feelings associated with drug use and may find that drugs quickly produce these desired sensations.
- To take risks. Some athletes are more likely to have a thrill-seeking personality, looking for excitement and stimulation through physical activity. This same quest for adventure may encourage some athletes to choose other risky behaviors, including the use of tobacco, alcohol, and other drugs.
- To belong. People often emulate the standards and actions of their peers. Young athletes may use tobacco, alcohol, and other drugs to fit in with others.
- To be like their heroes. Beer is advertised extensively during televised sporting events. Champagne corks pop in locker-room celebrations on TV. Major league baseball players come to bat with the unmistakable imprint of a smokeless tobacco canister showing in their back pocket.

Major league baseball players and managers are often seen in public—sometimes even in the dugout!—smoking cigarettes. Tobacco, alcohol, and other drugs are very closely linked to professional sports in a number of ways, leading perhaps to the idea that usage must not be so bad.

- To cope with stress. Many people use tobacco, alcohol, and other drugs to cope with stress or to escape from stressful situations. As we've mentioned earlier in this chapter, youngsters feel stress just as adults do.

Benefits of Not Using

If you want to make an impact on kids, don't just tell them that tobacco, alcohol, and other drugs are bad for them. Tell them about the benefits of not using tobacco, alcohol, and other drugs. Following are some of the benefits of not using:

- Their performance—not just in sports, but in academics and all other activities—won't be hampered.
- They won't encounter legal problems because of underage use of tobacco, alcohol, or illicit drugs.
- They are less likely to encounter the numerous health problems associated with usage.
- They won't become dependent or addicted.
- They will be less likely to be involved in accidents.
- They can better develop their skills in managing stress and solving problems.
- They will achieve normal physiological and hormonal growth and development.
- They can develop honest relationships.

Of course, it's of utmost importance that you be a good role model here. You have two choices: Either abstain from tobacco, alcohol, and other drug use, or use those substances moderately, appropriately, and legally. However, understand that as a YMCA coach, you must abstain from the use of tobacco, alcohol, and other drugs (other than prescription or over-the-counter drugs) while coaching your team.