

COACHES: This material is for those players and coaches who want to learn more about developing strength, especially for hitting. Once players understand the principles of gaining strength, they can refer to the parallel exercise - Strength Program.

STRENGTH PRINCIPLES

This items in the left column represent the principles you need to apply in any strength program. Use your own resources (teacher, coach, internet) to find out what each means, then discuss how they apply to hitting in softball. The short quiz that follows is a good way to get started.

STRENGTH PRINCIPLE	EXAMPLE/DEFINITION	APPLICATION TO HITTING
1. OVERLOAD		
2. RECOVERY		
3. PROGRESSION		
4. FREQUENCY		
5. DURATION		
6. INTENSITY		
7. SPECIFICITY		

STRENGTH PRINCIPLES**EXERCISE**

The purpose of this exercise is to provide practice in identifying and applying strength principles to hitting in softball.

Review each of the examples listed, then name the principle it represents. Check your answers against those on the next page. If you are not sure of any strength principle, ask someone who knows.

EXAMPLE**PRINCIPLE**

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| 1. You start swinging the bat in the spring.
You take 50 swings at 70% of maximum force. | _____ |
| 2. You increase the number of swings
each session by 5 swings. | _____ |
| 3. After one week, you increase the velocity of your
swings to 75% of maximum force. | _____ |
| 4. After two weeks you decide to space
your workouts to every second day. | _____ |
| 5. After three weeks you add some explosive swings
to your program using surgical tubing for resistance. | _____ |
| 6. In the fourth week you add some speed
swings and you swing hard for 30 seconds | _____ |
| 7. You gradually increase the speed swings
to continue for 60 seconds. | _____ |
| 8. Next you add some Snap Backs to your
swing program, starting with 15. | _____ |
| 9. Over the first five weeks you have increased the
workout time from 10 minutes to 20 minutes per session. | _____ |
| 10. As your arms get stronger you use a
heavier bat. | _____ |

NOW CHECK YOUR ANSWERS ON THE NEXT PAGE.

STRENGTH PRINCIPLES**ANSWER SHEET.**

Here are the answers to this exercise. If any of yours do not match those listed here, and you don't understand why, review the appropriate portion of the resources.

1. This is an example of the OVERLOAD, INTENSITY and SPECIFICITY principles. Because you are just starting your program you should use a moderate workload and intensity. But you have to apply at least 70% of maximum force to experience a strength gain. The activity is specific to what you will do in a game.
2. Increasing the number of repetitions represents the principle of PROGRESSION.
3. By increasing the velocity (force) of your swings, you are applying the INTENSITY, and PROGRESSION principles.
4. Principle of RECOVERY and FREQUENCY. Spacing the workouts to every second day applies the principle of FREQUENCY, and allows your body to rest and RECOVER from the exertion.
5. Using surgical tubing increases the INTENSITY, and probably the DURATION of the sessions. The increased work represents a greater OVERLOAD and more PROGRESSION. Because you are using the specific swing muscles, you are still applying SPECIFICITY.
6. The speed swings further increase the OVERLOAD and PROGRESSION, and represent maximum INTENSITY of work. The additional work increases the DURATION of the workout.
7. Increasing to 60 seconds represents further OVERLOAD and PROGRESSION. If these swings were done in sets of 10 seconds each, the rest interval between sets would be your RECOVERY period.
8. Snap Backs use the muscles both concentrically and eccentrically, speeding up the strength gains. This represents further OVERLOAD, PROGRESSION, INTENSITY and probably DURATION.
9. Increase in workout time is the principle of DURATION.
10. This is a straight application of OVERLOAD and PROGRESSION. Remember never to use a bat so heavy that it distorts your swing.

Once you understand these principles, you should be able to apply them in your program to enhance your own strength improvements.

FOR MORE INFORMATION ON CONDITIONING FOR SOFTBALL, SEE, "***GOLD MEDAL SOFTBALL CONDITIONING***".