

Got Training?

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Not all the same

Variety is not only the spice of life, but also be the spice of training. Just as everything in life is not the same, everything in training is not the same. With numerous training methods available, the key is identifying the goal you wish to attain and then train accordingly for that goal.

In athletics, the off-season is the most critical time period to achieve physical goals. This is the time of the year when significant time can be devoted to getting bigger, stronger, and faster. Just as those three features are different, training to achieve these particular goals should be different as well. As the off-season time period progresses and the pre-season approaches, the goals of the training program will change and the physical qualities most heavily emphasized will change; this is a basic and simplistic explanation of periodization. Now that we have laid the groundwork for the topic, let's look at the different goals of training.

Training Methods

Some trainees are looking to get bigger, some are looking to get leaner, and some are looking to improve athletic performance, while others are just trying to get a date! All kidding aside, there are seven primary training goals:

1. General Fitness
2. General Strength/Hypertrophy
3. Maximal Strength
4. Strength Power (Strength-Speed)
5. Speed Power (Speed-Strength)
6. Strength Endurance
7. Power Endurance

General Fitness is a common goal of trainees who simply desire to look and feel better about themselves. This should be your aim or focus if you desire to improve your health, and decrease the chance of injuries and sickness. This is common at the beginning of training and at the onset of the training year.

General Strength/Hypertrophy is a common goal of trainees who desire to increase muscle mass, and develop appreciable levels of muscular strength. This is used in preparation for other training methods or as a goal in itself for sports such as bodybuilding.

Maximal Strength is a common goal of trainees who desire to develop higher levels of muscular strength. This is used for those interested in increasing the ability to produce high levels of force for sports such as powerlifting.

Strength Power is also referred to as strength-speed. Power is the product of force and velocity and can be improved by two methods: 1) by increasing the amount of force one can produce or 2) by increasing the speed of movement. Strength Power focuses on improving the muscle's ability to produce force. This is used in preparation for most sports. The ability to produce very high levels of force at a high rate is a key determining factor in sport, and must not be neglected. Compensatory acceleration should always be used during the concentric portion regardless of bar speed. The intent to move the implement as fast as possible is a key determinant in power development. This applies to all training methods.

Speed Power is also known as speed-strength. As mentioned above, power can be improved with two methods. Speed Power focuses on improving power by improving the rate of contraction of a muscle. This, again, is used in preparation for most sports. The ability to produce force quickly is the goal of this type of training. The primary difference between Strength Power and Speed Power is the load used. The table below will help to illustrate this.

Strength Endurance is a common goal for trainees who are looking to produce force over an extended period of time with minimal reduction in quality. This type of training is common for those athletes whose sport requires force production over an extended period of time, such as cyclists, long distance runners, and endurance event swimmers.

Power Endurance is a common goal for trainees who are looking to produce high levels of force at a high rate over an extended period of time with a minimal reduction in quality. This type of training is common for a wide variety of sports, including football, basketball, hockey, and tennis.

Breakdown

The chart below indicates how load, reps, rest, and tempo affect each training goal, and how these variables are manipulated to change the emphasis of training.

Training Goal	Reps	Load	Rest	Tempo	Exercise Example
General Fitness	10-30	0-60%	0-30 sec	Slow Eccentric, Moderate Pause, Controlled Concentric	Bodyweight Lunges
General Strength/Hypertrophy	6-15	20-80%	30-120 sec	Slow Eccentric, Moderate Pause, Controlled to Fast Concentric	DB Lunges
Maximal Strength	1-6	80-140%	2-10 min	Controlled Eccentric, short pause, Fast Concentric	BB Back Squat
Strength Power	1-5	80-100%	2-10 min	Controlled Eccentric, Fast Concentric	BB Back Squat
Speed Power	5-10	20-60%	30-120 sec	Fast Eccentric and Concentric	BB Jump Squats
Strength Endurance	>12	0-40%	<30 sec	Controlled Eccentric and Concentric	Any exercise
Power Endurance	>10	0-40%	<30 sec	Explosive	*Leg Circuit

*Note: These parameters are merely general guidelines, especially with respect to maximal strength and hypertrophy training. Hypertrophy training can also occur with the use of higher loads and lower reps, as higher rep training can facilitate the improvement of maximal strength via recovery mechanisms and increases in cross sectional area.

*Note: The leg circuit below is a variation of Gambetta's Super Leg Series and can be used for power endurance and general fitness. Every exercise is done as fast as possible and with bodyweight initially. The goal time to complete this is 90 seconds.

Squats x20
Lunges x20

Squat Jumps x20
Power Step-Ups x10

Summary

As you can see, there are a number of different training goals that one may have to consider when designing a program. Each has its own unique twist and requisite program inclusions. Regardless of whether you're training to look better, optimize health, or improve performance, there should always be a goal in mind when exercising or training. A goal helps to direct your efforts and attention; those who train without a goal in mind are simply wasting their time and energy.

Training programs for athletes are all based on goals. These goals change according to the time period of the year. At the beginning of the off-season, the primary goal is to increase general fitness, which then progresses to increasing muscle mass. This helps to prepare the connective tissue for the increased loading that will follow. The next goal is to increase maximal strength and strength power. This is usually about mid- to half way through the off-season. As the pre-season approaches, the goal should be to improve speed power. The goal of power endurance typically coincides with the pre-season preparation phase. This is just a brief explanation of a periodization model for sport, though; look for a more in-depth piece in the future.

References:

1. 2000. King, I. *So You Want To Become a Strength and Conditioning Coach*. P. 33-34
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