



## *Program Design 101*

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### **Training Goal**

The first step to designing a successful workout routine is determining your training goal. The other variables will change according to the goal in place. For the purpose of this article, we will discuss three main training goals:

1. Strength
2. Size (hypertrophy)
3. Overall fitness (weight loss, toning, and overall health)

### **Exercise Selection**

**Strength** – Multi-joint exercises such as deadlifts, squats, pull-ups, and the bench press must be incorporated into a strength routine in order to recruit major muscle groups (maximal amount of motor units). When trying to improve maximal strength focus on movement patterns such as pushing, pulling, and squatting instead of individual muscles.

**Hypertrophy** – Both multi-joint (as mentioned above) and isolation exercises such as lateral raises, hamstring curls, and bicep curls will improve muscle hypertrophy. However, it is important to understand that isolation exercises are not necessary to improve muscle size. For example, the triceps receive plenty of activation during pressing movements such as the bench press and shoulder press.

**Fitness** – Multi-joint exercises such as lunges, push presses, and bentover rows are important to implement into your routine because the goal is to improve strength, lean muscle mass, and burn calories.

### **Training Split**

With an emphasis on **strength** development, you may either incorporate multiple muscle groups within the same session or separate the days by body parts. The key principle to understand is that you need time to recovery between sets in order to recruit the maximal amount of motor units per repetition. Strength training workouts should take place 3 – 6 days a week (fewer workouts per week when implementing a full body routine and more workouts per week when implementing a split routine.)

When your goal is to improve **muscle size**, the training program needs to exhausts the targeted muscle group. With this in mind, try to develop a training split where each day emphasizes a different body part. It would be typical to have a 4 – 5 day training split, for example: chest/triceps, legs, back/biceps, core/shoulders. Muscle groups will receive adequate rest during the split routine (on their “off” day). Strength training should take place 4 – 6 times per week to achieve desired results.

For **general fitness**, a full body routine is ideal for each training session. Set up exercises in a circuit to target all major muscle groups and keep the heart rate elevated. Incorporate strength training 2- 4 days when working towards your goal of improving overall fitness.

### **Training Intensity**

Training intensity is calculated and discussed as the percentage of your one repetition maximum for each exercise. The amount of weight prescribed for each exercise associated with the specific training goals are:

- Strength = heavy resistance 80 – 100% 1RM
- Hypertrophy = moderate/heavy resistance 60 – 80% 1RM
- General Fitness = varied resistance throughout program 40 – 80% 1RM

### **Volume (Repetitions/Sets)**

Train with multiple sets regardless of your specific training goal. When the goal is to improve maximal strength, the repetitions should low (1-5) and the sets can range from 4 – 8. For both muscle hypertrophy and general fitness, the repetitions are similar (see Table 1) and the number of sets can vary from 3 – 6.

Table 1. Repetition Ranges

| <b><u>Training Goal</u></b> | <b><u>Repetition Range – Per Set</u></b> |
|-----------------------------|--|
| Maximal Strength            | 1-4                                      |
| Power                       | 1-6                                      |
| Hypertrophy (size)          | 10-12                                    |
| General Fitness             | 8-15                                     |

### **Rest Interval**

Recovery between sets is extremely important if your goal is to increase maximal strength. It takes 2 – 5 minutes for full recovery between sets when lifting 90 – 100% 1RM. However, if you goal is muscle hypertrophy then short rest periods are recommended. With shorter rest intervals, along with using the repetition and intensity ranges prescribed above, there is an increase in the release of growth hormones, which are partially responsible for increases in muscle size. The rest interval range for hypertrophy and general fitness is 30 seconds – 2 minutes. Be sure to keep the heart rate elevated throughout the workout if your goal is to improve overall fitness.

If you fail to plan, you plan to fail. The best training routine is the one that is customized for your specific fitness goals. Let this article serve as a template to lead to success in the gym or weight room.

### **Sources:**

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