

Fitness Program Design STRENGTH & POWER	PHOENIX FIRE DEPARTMENT HEALTH & FITNESS M. P. 1-A05.02 08/1997-N Page 1 of 2
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INTRODUCTION

Strength and power are often used in the same context, but actually are quite different. Strength is defined as the maximum ability to apply or to resist a force. This can be seen as the ability to lift a maximal weight one time. Power is the ability an individual has to utilize strength in relation to time. It is often referred to as explosive strength.

TRAINING

The most common method for increasing levels of strength or power is through a progressive resistance program involving a variety of different equipment. These range from free weights to machines. Because most fire stations contain free weights, this manual will cover their use. The training guidelines presented in this manual are for a basic program. Specific or advanced training questions should be referred to the Wellness Center.

Duration

Because of concerns with over-training and mental fatigue it is recommended to keep individual workout sessions to less than one hour.

Frequency

Each major muscle group should be worked no more than three times a week and not on consecutive days.

Intensity

Between each set, allow ample recovery time, at least two minutes or until you get your wind back.

The optimal number of sets and repetitions vary depending on the program goals, but basically three sets of 6-10 repetitions per body part are considered acceptable.

The weights chosen for each exercise should be as follows:

- First, a determination should be made as to what weight could be lifted for a maximum effort of ten repetitions.
- Once this has been determined, the amount of weight used during the first two sets represents a percentage of the initial maximum weight. For example, a bench press of 100 lb. for a maximum of ten repetitions would use 50% of 100 lb. or 50 lb. for the first set. The weight you would use for your second set would be 75% of 100 lb. or 75 lb. The third set would use 85 to 100 lb.

Fitness Program Design STRENGTH & POWER	PHOENIX FIRE DEPARTMENT HEALTH & FITNESS M. P. 1-A05.02 08/1997-N Page 2 of 2
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General Guidelines

- Incorporate basic exercises that work the major muscle group.
- Every exercise should be performed in a strict, slow and deliberate manner if maximal gains are to be achieved without injury. A good rule of thumb is to take two seconds to lift and four seconds to lower.
- Perform all exercises through full range of motion to maintain flexibility and prevent muscle soreness.
- While lifting, or in the positive phase, remember to breathe out. While lowering, or in the negative phase, remember to breathe in. This is important in aiding blood return to the heart.

SUMMARY

Again, this type of strength program is very basic. It is illustrated because it is a basic program from which a solid foundation can be built. It is not the only method one can follow to gain strength; the effectiveness of isometric, eccentric and circuit training has also been proven. It is not within the scope of this manual to cover the specific characteristics of each, but to make aware that other avenues of training exist for the strength portion of a fitness program. It is highly recommended that one of the department's personal trainer's be consulted for assistance with program design.