The Measures of Muscular Fitness

People often associate muscular fitness exclusively with body building and weightlifting (the “big” muscle sports). However, there’s much more to muscular fitness than just bulk. Muscular fitness is an important part of overall fitness for all active people and should not be neglected.

The Essential Facts

1. Aerobic fitness is a measure of how well your body can produce energy for activity. Muscular fitness is an important factor in how efficiently your body can use its energy. In a muscular fit body, energy goes further. Strength complements cardiovascular fitness.

2. Muscular fitness is important for its own sake. It increases the ease with which you can perform everyday tasks. Everything from walking to a friend’s place to sitting at a desk for a long period of time without tiring.

3. Muscular fitness contributes to good health;
   i. Fit muscles hold your body straighter, and help maintain good posture.
   ii. Fit abdominal and lower-back muscles help to prevent curvature of the spine and lower-back pain. Eighty percent of back pain is due to weak abdominal muscles.
   iii. Fit muscles hold the joints in place and help to protect them from shock and injury. Examine mogul skiers whose knees take a lot of bumps and you’ll notice that their quadriceps and hamstrings muscles need to be very strong to protect the knee joint.
   iv. Strong and flexible muscles are more resistant to aches and pains and to injuries. When someone first starts working out, the muscle pain that occurs the next day will lessen as more workouts are performed.

4. Overall muscle fitness has three different components:
   i. Strength – the maximum force a muscle can exert
   ii. Power – a measure of the muscles explosive force (muscle contraction over time)
   iii. Endurance – the ability of a muscle to make repeated contractions against a small resistance

5. Improving your muscular fitness does not necessarily mean becoming muscle-bound. Only men have the hormone levels (testosterone) required to build really big muscles, and even then, they only develop them if they train with a specific bulk-building program.
6. There are three basic activity principles that govern muscular fitness:
   i. Overload – For muscular fitness to be improved, muscles require a training stimulus (or stress). When a muscle is made to work beyond its everyday limits, it will adapt to meet the increased demands.
   ii. Regularity – For muscular fitness to be improved muscles must be overloaded on a regular basis. This means a muscle group needs to be worked at least 2 – 3x per week to see any major improvements. Once a week will provide some stimulus, but only minor improvements will be made and these results are harder to measure.
   iii. Progression – For muscular fitness to be improved, overload should be increased in small increments. Moderately progressive overloading produces better results, is safer and it is more likely someone will stick to a program that is achievable yet challenging.

7. One method of measuring muscular fitness is the repetition maximum (RM). Although this may sound like it should be the most weight you can lift only once this is not always the case. Muscular fitness can be measured with any number of repetitions, depending upon which component (i.e., strength or endurance) the test is measuring. A 1 RM test is an excellent measure of strength, but a poor measure of endurance. A 15 RM test is an excellent measure of endurance, but a poor measure of strength. Determining a 15 RM is a difficult process. A lifter must be able to perform exactly 15 repetitions with a specific weight. More than or less than 15 repetitions during the test will not be a true 15 RM measure.

8. A second method of measuring muscular fitness is to lift a certain percentage of your body weight until failure. This method is easier to administer, which is why it is often used in the classroom, but may test very different components depending on the person lifting. For those individuals that can only lift this weight 0 to 6 times, muscular strength is being assessed. After lifting this weight 6 times, a progression into measuring muscular endurance begins to take place. Individuals lifting this weight more than 12 times are generally measuring muscular endurance. Although it is more difficult to measure a certain component of muscular fitness this way, it is better at assessing the overall general fitness of a muscle.
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Questions

1. Define the term aerobic fitness.

2. Explain why muscular fitness is important for its own sake.

3. List and explain the four items which classify muscular fitness as good for health.

4. Explain three different exercises you could use to develop your muscular strength, muscular power and muscular endurance.

5. What hormone is necessary for “bulking” muscles?

6. A grade 10 student is currently performing 3 sets of 10 repetitions for bench press at 120 pounds. Suggest 3 possible progressions that this student could make to continue to force his muscle to adapt.

7. Of the two tests explained in numbers 7 and 8, which test do you think would be better for you to use for your own goals? Explain why.