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2020

# Understanding Health & Fitness Education Series 5a

## MUSCLE AND STRENGTH BUILDING EXERCISE

### WHAT IS RESISTANCE (STRENGTH AND MUSCLE BUILDING) TRAINING:

Resistance training can be accomplished with traditional free weights and dumbbells, weight machines, body weight, elastic tubing, medicine balls, or even common household products like milk jugs filled with sand or soup cans. The choice to incorporate a certain type of resistance depends on level of physical fitness, how familiar a person is with specific exercise movements, and individual goals. For example, low fit individuals can focus primarily on machine-based exercises as they have been regarded as safer to use compared to more complex free weight exercises. The incorporation of free weight movements can be performed as a person increases his or her muscular fitness. For example, advanced individuals can perform multiple sets and heavier resistances using multiple-joint exercises, such as squats and deadlifts. Whichever form of resistance is chosen, multiple-joint, large muscle group exercises should be considered and probably performed before single-joint, smaller group exercises. Program design recommendation will be mentioned at another point.

### WHY RESISTANCE TRAINING:

Strasser et al. (2018) shows that muscular strength is an important component of physical fitness with an independent role in the prevention of many chronic diseases.

Several epidemiological studies have shown that muscular weakness in middle-aged and older individuals is strongly related to functional limitations and physical disability.

A growing body of evidence suggests that muscular strength is inversely and independently associated with all-cause and cardiovascular mortality even after adjusting for cardiorespiratory fitness and other cofactors such as age, body fat, and smoking.

Several studies have shown that muscular strength is inversely associated with the incidence of many chronic diseases such as cardiovascular disease and stroke, hypertension, metabolic syndrome or hyperinsulinemia, and type 2 diabetes.

### ACCORDING TO THE ACSM RESISTANCE TRAINING BENEFITS EVERYONE!

As we age we tend to lose lean muscle mass, which is a condition known as sarcopenia.

Resistance training helps maintain and combat the loss of muscle mass by increasing muscular fitness.

This form of training can also prevent osteoporosis by augmenting bone mineral density. What's more? Regular resistance training can decrease the risk of heart disease by lowering body fat, decreasing blood pressure, improving cholesterol, and lowering the stress placed on the heart while lifting a particular load. Improving muscular fitness is very important for enhancing quality of life.

On top of that muscular fitness tones your body making you feel and look better by improving posture, sculpting muscle, and losing body fat. Several studies have shown that resistance training decreases belly fat better than other forms of exercise.

**Sobering Research: Human skeletal muscle inevitably undergoes remarkable changes with aging, characterized by a decline in muscle mass and strength of about 1% per year from the age of around 40 years**

