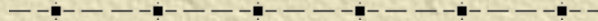


Chapter 8

Muscular Fitness



Chapter 8 Learning Targets

I know the difference between muscular strength and muscular endurance.

I can list the types of fibers found in skeletal muscles.

I know how to apply the principles of training to weight training.

I can tell the difference between training for muscular strength and muscular endurance.

I can follow the safety procedures for weight training.

Muscular Fitness

Consists of muscular strength and muscular endurance.

Good muscular fitness will improve both posture and appearance.

Muscular Strength

The ability of a muscle group to apply a maximal force against a resistance one time.

Muscular Endurance

The ability to repeat a muscle movement over a period of time.

Myths about weight training

You will develop a muscle-bound physique.

Weight training is not good for females.

Muscle will turn into fat.

ALL of the above statements are FALSE.

Females and Weight Training

Females will not develop a muscle bound physique because estrogen is their primary sex hormone and also because they have a higher body fat percentage than males.

Muscle Fiber Composition

Slow-twitch fibers (red muscle fibers) have the ability to contract for long periods of time and are used for aerobic or endurance activities.

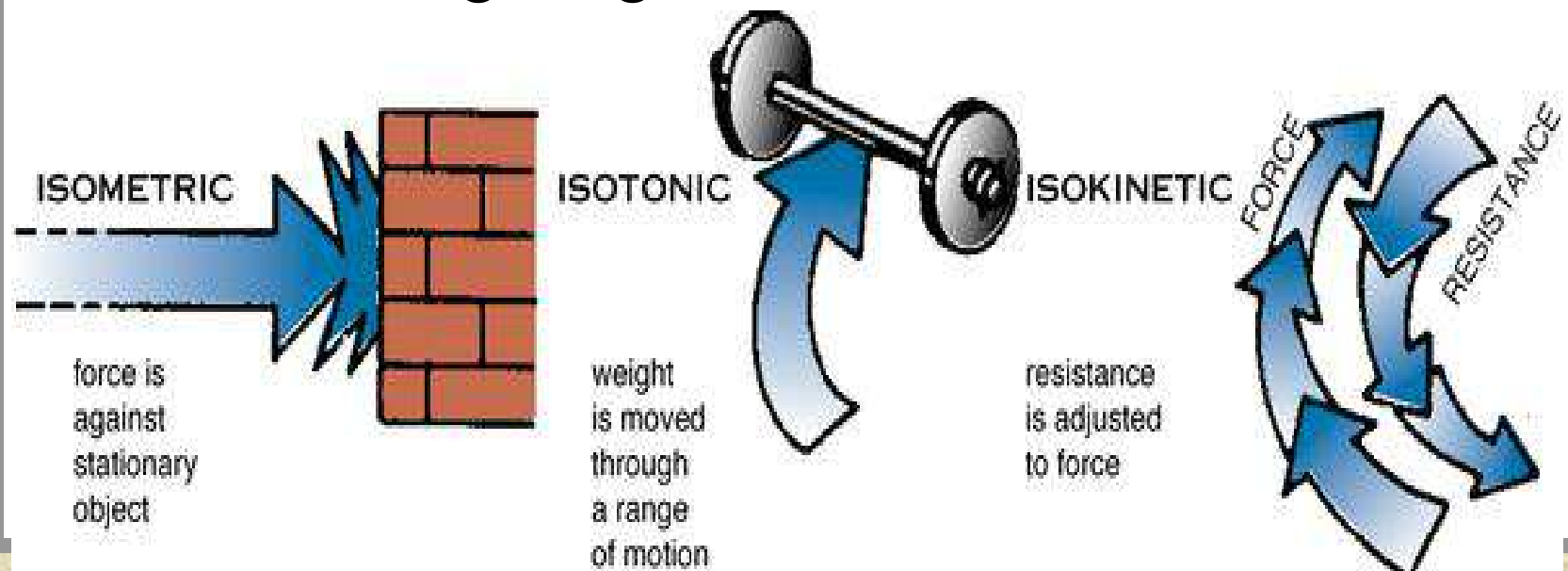
Fast-twitch fibers (white muscle fibers) contract quickly and are used for anaerobic or strength activities.

Methods of developing muscular fitness

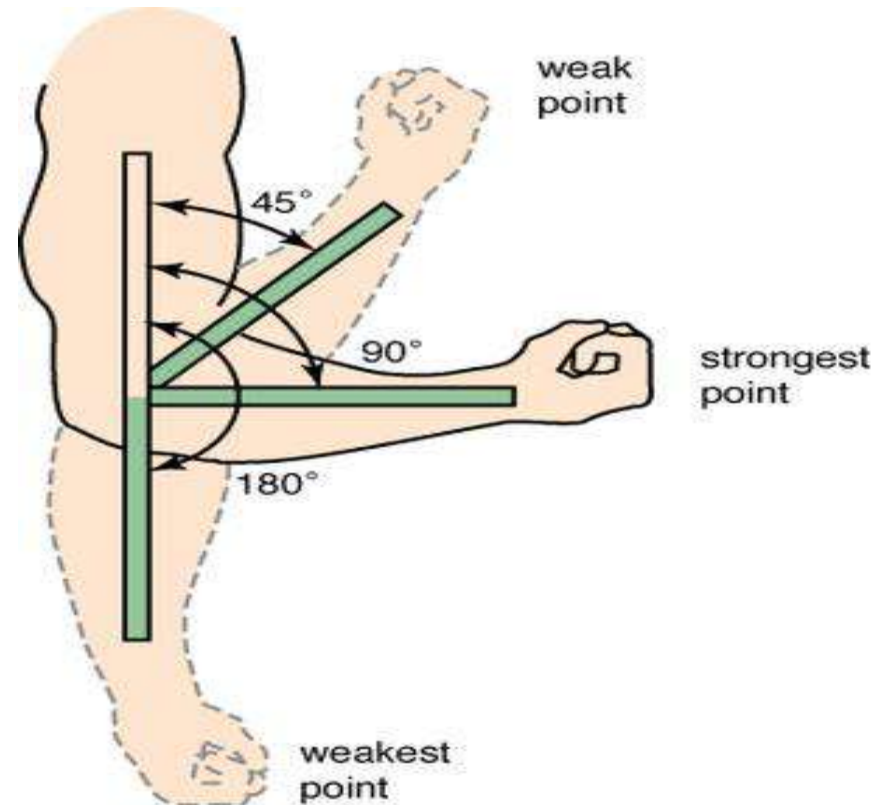
Isometric-length of muscle does not change

Isotonic-using free weights or body weight (as in a push-up or pull-up)

Isokinetic-using weight machines

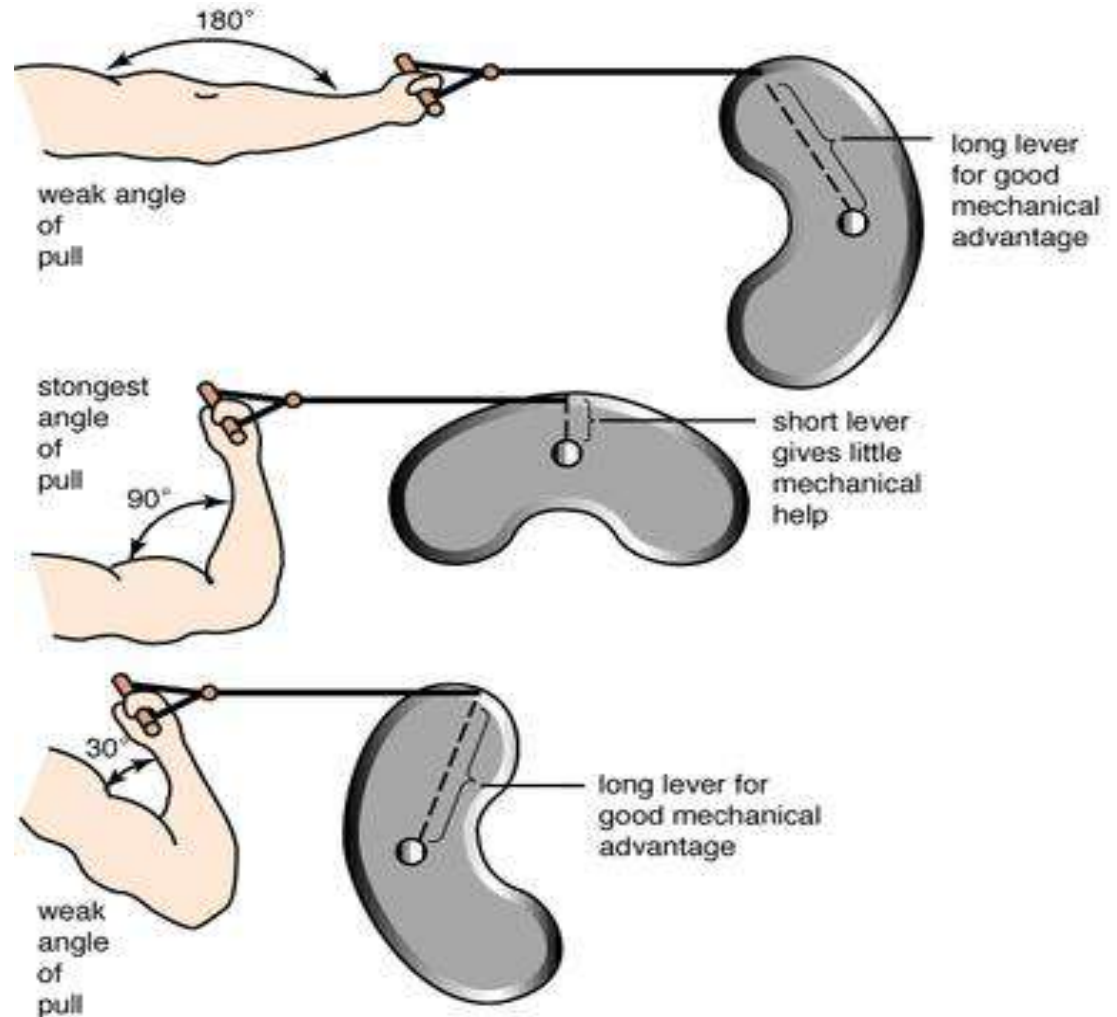


Strength varies according to the angle of the joint



Variable Weight Machines (Isokinetic)

Variable weight machines provide maximum resistance throughout the entire range of motion.



Overload applied to muscular strength and endurance

Frequency-increase from two to three workouts per week.

Intensity-increase the amount of resistance.

Time-increase number of repetitions.

Strength vs. Endurance

The primary difference in muscular strength and muscular endurance training is in the amount of weight and repetitions (the number of times it is lifted).

Muscular Endurance

30-60% of max

12-20 reps per set

Muscular Strength

60-90% of max

4-8 reps per set

A set is a group of repeated movements performed continuously .

Specificity

Specificity can be obtained by isolating the muscle.

Progression in Weight Training

Increase weight loads every several weeks.

Safety considerations

Do not hold your breath when lifting weights.

Exhale during the lifting phase

Use spotters

Go through the complete range of motion to increase flexibility

Muscles have to be given 48 hours to rest from intense work.