

Name \_\_\_\_\_

Period \_\_\_\_\_

## Fitness Notes:

# Muscular Strength

- The most weight you can lift or the most force you can exert at one time
- Is needed for all movement, which is created by the contraction of specific muscle groups
- Through exercise muscle strength can be increased
- Muscle tissue uses energy even when at rest, fatty tissue uses little, if any energy
- Each additional pound of muscle increases resting metabolism by 50 - 100 calories per day

## Ways to Improve Strength:

**CALISTHENICS** - Exercises which use body weight as resistance  
- Examples: Push ups, Pull ups, Sit ups

**PLYOMETRICS** - Exercises used to develop power  
- Power is the rapid application of strength  
- Includes a quick stretch followed by a strong muscle contraction  
- Not recommended for teenagers : places a great deal of stress on tendons

## WEIGHT LIFTING: 3 different types

1. ***ISOMETRIC*** - Contract, or tighten muscle, but doesn't change length  
- Should do for only 6-8 seconds, then relax  
- This will improve strength, but you couldn't exercise all positions effectively

***WHY IS IT GOOD?*** Because you can do it anywhere

***ADVANTAGES:*** Don't need equipment, good for certain disabilities,  
good in small places

2. ***ISOTONIC*** - Muscle lengthens and shortens through full range of movement while lowering and raising a resistance  
- The most weight you can lift is equal to your strength at your weakest point  
- This is the most common form of contraction  
- The greatest effort is required at the start and finish of the movement

***WHY IS IT GOOD?*** Uses entire range range of motion

3. ***ISOKINETIC*** - Muscle is overloaded through entire range of motion  
- Currently believed to be the most effective type of exercise to promote strength of a specific muscle group

***WHY IS IT GOOD?*** Overloads the entire range of motion