

PURDUETM

STRENGTH & CONDITIONING



Year round strength training programs for multi-sport athletes in high school

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Key Training Priorities

- **STRENGTH**
- **POWER**
- **SPEED**
- **QUICKNESS/AGILITY**
- **ENDURANCE**
- **EXPLOSIVE**



STRENGTH TRAINING

- **STRENGTH** is the basis of all movements. The higher your level of strength, the higher your potential for more forceful movements. I emphasize primarily on multi-joint, multi-plane, ground base exercises. I believe that type of exercise improves your strength, as well as good position, balance, functional flexibility and inter-muscular coordination.

Workout Design

- Linear periodization, depending on season 2 to 4 days per week
- Lifting sessions should begin with most complex lift ending with prehab work.
- Supersets are a great way to maximize allotted time.
- Manipulate loads and intensities for different outcomes.
- Program unload weeks to allow for recovery. (every 4 to 6 weeks approx.)

Sample 2 Day Lifting Sessions

Day 1

1. Dynamic Warm-Up
2. Power Shrugs 3 x 5
3. Banded Facepulls 1 x 20
4. Bench Press 3 x 8
5. Conditioning Circuit:
 - Prone DB Row
 - Upright Row
 - Overhead Sit-ups
 - Straight Bar Curls
 - Russian Twist
 - Banded Pull Apart

Day 2

1. Dynamic Warm-Up
2. Hang Clean 3 x 5
3. Squat 3 x 10
4. Single Leg Squat
5. RDL
6. Conditioning Circuit:
 - Banded Slides
 - Banded Glute Bridge
 - Horizontal Pull-Up or Pull-Ups
 - Row to Press
 - Overhead MB Sit-Ups (wall)
 - MB Side Toss (Wall)

Linear Periodization

- Most common form of periodization for beginning lifters.
- Gradually increase volume, intensities and loads in different training cycles within annual plan.
- Each training cycle is typically 3 to 6 weeks in length.

POWER / EXPLOSIVENESS

- Refers to the ability of the neuromuscular system to produce the greatest possible force in the shortest period of time.

Ways to increase power/explosiveness:

1. Plyometrics
2. Olympic Lifting
3. Accommodating resistance with the use of chains and/or bands.
4. Increase speed of the bar during movements.

Speed/Agility

- **AGILITY** refers to the developing multi-directional movement capacity. With proper development, you should be able react at a given moment and accelerate in a given direction.

Training Tools:

1. Form Running
2. Jump Rope
3. Speed Ladder
4. Dot Drills
5. Various drills utilizing cones and change of direction.

Energy Systems

❖ **ATP-PC System** – the first 5 seconds of training regardless of intensity this system is used. Very short bursts example 20yd sprints.

Examples of Sports which use this system:

- Field events, Baseball, Softball

❖ **Anaerobic Glycolytic System** – This system provides energy for intense exercise ranging in length from 10 seconds to 2 minutes during maximum effort.

Examples of Sports which use this system:

- Basketball, Tennis, Football

❖ **Aerobic System** – much slower at making energy, but continues to produce energy for a very long time without fatigue.

Examples of Sports which use this source of energy:

- Cross-country, Soccer

Sample Conditioning Workouts

❖ ATP-PC System – the first 5 seconds of training regardless of intensity this system is used. Very short bursts example 20yd sprints.

Examples of Sports which use this system:

- Field events, Baseball, Softball

- I. Quarters (repeated sprints)
- II. $\frac{1}{2}$ gassers


Sample Conditioning Workouts

- ❖ Anaerobic Glycolytic System – This system provides energy for intense exercise ranging in length from 10 seconds to 2 minutes during maximum effort.

Examples of Sports which use this system:

- Basketball, Tennis, Football

- I. 300 yd Shuttle Run (25yd apart)
- II. Gasser Series
- III. Ladder (on basketball court)



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