PERFORMANCE TRAINING FOR HIGH SCHOOL ATHLETES

Presented by:

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SPORTS MEDICINE CENTER

Five questions to consider...

1. What does a typical workout look like for the sport you coach?
2. When your players report for pre-season training, do you have a workout manual already prepared? What is it based on?
3. Do your freshman use the same workout program as your seniors? Do you account for variances in ability? Exercise History? Physical Limitations?
4. Do you test your players at the beginning of the sports year? Is training designed around the athlete's results? Do you re-test?
5. How do you plan workouts for year round athletes?

An effective performance training program addresses the following:

1. Muscle Imbalances
2. Overcoming Sport Specificity
3. Overuse Injuries
4. Movement Fundamentals
   - Balance
   - Coordination
   - Stability
   - Reaction/ Change of Direction
5. Strength, Speed, and Power Development

The evolution of the athlete

- The average weight of a high school football lineman has increased 30 pounds since 1995
- The average spike of a high school volleyball player has increased 7mph since 2000
- The average age a youth athlete begins sport specific training is the lowest in history
- In 2012, more than 1/3 of adolescents were overweight or obese
- Girls soccer has the highest rate of ACL tears of any high school sport (12.2%)
- Up to 12% of male high school athletes and 3% of female high school athletes have used some sort of performance enhancing drug

Muscle Imbalances

- Over 3.5 million children treated for sports related injuries/year
- 50% are from OVERUSE
- Movement Assessments show that 80% of all athletes are weak/ tight in their hips, creating a dysfunctional CORE

Correcting Muscle Imbalances

- Avoid Bad Posture
- Keep Abdomen Tight
- Chest High
- Shoulder Blades Back
- Butt Squeezed
- Don’t Arch Low Back
- Don’t Lock your knees

- 3 Pull:1 Push for Exercises
- Keep These Muscles Flexible:
  - PEC AND LATS
  - HIP FLEXORS, GROIN, GLUTES
  - HAMSTRINGS AND QUADS
  - CALVES

Early Sport Specialization

- 50% of all injuries are from OVERUSE.
  - ie: Softball pitcher pitching year-round
- 2-3 months off from 1 sport during year is needed for proper rest
- Use this time to work on weak areas, correct imbalances, and increase flexibility
- Cross-train with other sports

Preventing Overuse Injuries

- Don’t play year round
- Don’t increase training by more than 10% a week.
- If you are sore…REST and ICE!!
- If it’s the first time playing a sport or training…Don’t think you have to go all-out right away…ease into it over 2-3 weeks.
- Have a professional assess your child for movement dysfunctions.

How To Improve Athletic Fundamentals

- Don’t use machines!!!
- Constantly train for function
- Move through large ranges of motion
- Only add external resistance (weights) once the movement is mastered without weight

Examples:

- Rolling, sitting up, Bridging
- Pull/push ups
- Planking
- Kneeling/ Half-Kneeling
- Lunging, Squatting
- Running and Jumping
- Rotation
- Throwing
- Unilateral work
- Tag/Keep Away (change of direction)

Performance Training Program Design

- Pre-test
  - Functional Movement Screen
    - Identify weak links
  - Fitness Test
    - Sub-max testing
    - Specific to the sport
  - Cardiovascular Test
    - Specific to the sport
- Interim testing/ Post-test
  - Re-test based on same protocol
  - Chart results

- Strength
  - Form! Form! Form!
  - Functional training based
  - Core focused
  - Allow for auxiliary muscle development
  - Don’t pound the heavy weights
  - Periodized approach
    - High intensity/ low volume
    - Medium intensity/ medium volume
    - Low intensity/ high volume
  - Cycle throughout the year

Performance Training Program Design (Cont'd)

- Conditioning
  - 1-2 days per week
  - 30-45 minutes
  - Sub-max effort
- Speed Development
  - 2-4 days per week
  - Reaction time
  - Quickness drills
  - Sprints
- Flexibility/ Balance
  - Train from the core out
  - Spend time on flexibility work
    - Dynamic vs. static
    - 10-15 minutes per session
  - Balance creates control
  - Control reduces the chance for injury
  - Yoga as part of sport training
- Fun & Games
  - Tag
  - Relay races
  - Related sports (football players play soccer, vice versa)

Putting it all together

- Think outside the box
  - Don’t get stuck on deadlifts, cleans, squats and bench work
  - Train for the sport, not to get big
- Get fast first!
  - Speed development in any sport is necessary
- Do it right
  - Train your athletes to do a handful of key exercises perfectly

- Cycle your training program throughout the season
  - Periods of lower intensity, higher volume will help recovery
  - Maintains a strength base
  - Strengthens the bonds of the team
- Let kids be kids
  - Youth athletes aren’t just mini-adults
  - Let them have fun

Sample Program

Each training day begins with a 5-10 minute general warm up (jogging, jumping rope, etc.)
Specific exercises, sets, and reps are determined on a per player basis and based on pre-season testing and assessments

Monday

Dynamic Warm Up- Mobility Work
Lower Body Plyometrics
Linear/ Lateral Speed Development/ Running Mechanics
Torso Training
Specific Warm Up
Strength Training- Ground based power followed by lower body and back strength
Post Workout Flexibility/ Restoration

Tuesday

Dynamic Warm Up- Mobility Work, Foot Quickness
Upper Body Plyometrics
Torso Training
Specific Warmup
Strength Training- Ground based power followed by upper body pressing/ posterior chain
Change of Direction, Conditioning
Post Workout Flexibility and Restoration

Thursday

Dynamic Warm Up- Mobility Work
Lower Body Plyometrics
Linear/ Lateral Speed Development/ Running Mechanics
Torso Training
Specific Warm Up
Strength Training- Ground based power followed by lower body and back strength
Post Workout Flexibility/ Restoration

Friday

Dynamic Warm Up- Mobility Work, Foot Quickness
Upper Body Plyometrics
Torso Training
Specific Warmup
Strength Training- Ground based power followed by upper body pressing/ posterior chain
Change of Direction, Conditioning
Post Workout Flexibility and Restoration

Those same five questions...

1. What *should* a typical workout look like for the sport you coach?
2. When your players report for pre-season training, *should* you have a workout manual already prepared? What is it based on?
3. *Should* your freshman use the same workout program as your seniors? Did you account for variances in ability? Exercise History? Physical Limitations?
4. *Did you* test your players at the beginning of the sports year? Is training designed around the athlete's results? Do you re-test?
5. *How many* workout plans do you have for the year?

Questions?

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