

In season Training for High School Track and Field



Track and Field Needs Assessment

Learn from the science of sports performance.

Peak Performance/going to State Meet

**Technique Training-Competition Prep
Event Conditioning (Practice Plans)**

Improve Total Body Strength Training

Optimal Flexibility

Adequate rest and recovery

Nutrition/ Injury Prevention

Technique Training Competition Prep And Event Conditioning

- Lay out a progressive technique training plan that covers the entire length of your season before the start of the season.
- The training plan should be grounded in motor development and learning technical mastery of the basic skills of the event.
- Adjust training intensities daily, placing harder more intense workouts 48-72 hours away from competition.
- Be realistic about training expectations, beginner vs experienced athletes and make practice adjustments for the different skill levels you are working with. (all athletes will respond with differing degrees of training adaptation.)

- **Understand the metabolic needs of the event. (Anaerobic vs Aerobic) Higher volume lower intensity conditioning should happen earlier in the season, with lower volume high intensity conditioning occurring later in the season.**
- **The realization of training may take 5-10 days for the athlete to apply the actual training effects of that training session to performance gains.**
- **Develop a pre practice daily warm up model that reinforces the correct movement patterns of the competition event. Don't waste time on senseless endless volumes of work)**
- **When building your practice plan remember all the areas of the needs assessment need to work together.**
- **Remember what the athletes are physically going through as they are also experiencing puberty. Don't shrug off joint and muscle pain as just being weak mentally, remember that is someone's son or daughter you are training.**

How do athletes learn?

- **Complex motor skills take about 4 weeks from the introduction of a new skill to mastery of that skill.**
 - **Week 1 : introduction**
 - **Week 2 : development/improvement**
 - **Week 3 : sub- mastery**
 - **Week 4 : mastery**
- **Give your athletes the chance to get good at doing what you are asking of them and before you start adding new challenges.**
- **Remember, the great neurological overload occurring with practice, weight training, and conditioning. Set them up to succeed, and encourage them to expect more out of themselves.**

Strength Training For Track and Field

- How do you start with designing a strength training program?
- All sports equally require specificity – progression- and overload to improve sport performance. But all sports are unique to their energy requirements and physical demands.

• The Strength Training Continuum



- | <u>Anaerobic</u> | <u>Anaerobic/Aerobic</u> | <u>Aerobic</u> | |
|---------------------|------------------------------|------------------------|----------------------|
| <u>Max Strength</u> | <u>Strength/endurance</u> | <u>Endurance</u> | |
| • Throwers(4x) | • Short Sprint/Hurdles(3-4x) | • Mid Distance(2-3x) | • Cross Country (2x) |
| | • Pole Vault (3-4x) | • Hep/Decathlete(2-3x) | • Steeple Chase (2x) |
| | • Jumpers (3-4x) | | |

Utilizing the Strength Continuum

- Anaerobic sports training needs

- 4x per week
- 1 body part per day
- Work larger muscle groups early in the week to allow for recovery on competition day
- Work smaller muscle groups and core later in the week

- Anaerobic/Aerobic sport training needs

- 3x per week
- Lower body
- Upper body
- Olympic arms and core

Utilizing the Strength Continuum

- Aerobic strength training needs
 - 2 full body workouts per week
 - First workout heavier bilateral exercises
 - Second workout lighter unilateral exercises
 - Keep 48-72 hours between workouts
 - Emphasize full ranges of motion to promote motor development and muscle balance
 - Core work at every workout
 - Flexibility work needs to be done daily

Building the Program Phase 1

- Break your strength training progressions down into 4 week blocks.
- Take the first 4 weeks of training to introduce your exercises to the athletes. Starting with low volume low intensity and increasing volume weekly to educate and condition nervous system and the musculo skeletal system. (build muscle balance)
- Week 1: select 4-6 exercises per workout performing 3 sets of 4-6 repetitions on each exercise
- Week 2: use same exercises per workout performing 3 sets of 6-8 repetitions on each exercise
- Week 3: use same exercises per workout performing 3 sets of 8-10 repetitions per workout
- Week 4: Use same exercises per workout performing 3 sets of 10-12 repetitions per workout
- Use weights that teach yet still challenge the athlete every day. Monitor muscle soreness and total fatigue.

Building the Program

Weeks 5-8 M-T-W-F (Thursday competitions)

- 4-6 exercises after a warm up.
- 3-4 working sets of 6-10 repetitions per exercise (3sets for aerobic athletes 3-4 sets for anaerobic athletes).
- If technique is sound, add small increments of weight for each set.
- Try to improve weight used every week or as long as good form and technique will permit
- Muscle soreness should be reduced to about 24-48 hours for complete recovery between workouts.

Building the Program

Weeks 9-10 M-T-W-F (Competitions on Thurs and Sat)

- 4-6 exercises after a warm up.
- 3-4 working sets of 4-8 repetitions per exercise (3sets for aerobic athletes 3-4 sets for anaerobic athletes).
- If technique is sound, add small increments of weight for each set.
- Try to improve weight used every week or as long as good form and technique will permit
- Muscle soreness should be reduced to about 24-48 hours for complete recovery between workouts.

Building the Program

Weeks 11-12 M-T-TH (Compete Wed and Friday)

- 4-6 exercises after a warm up.
- 3-4 working sets of 2-6 repetitions per exercise (3sets for aerobic athletes 3-4 sets for anaerobic athletes).
- If technique is sound, add small increments of weight for each set.
- Try to improve weight used every week or as long as good form and technique will permit
- Muscle soreness should be reduced to about 24-48 hours for complete recovery between workouts.

Building the Program

Week 13: State meet week deload!!!

- 3-4 exercises after a warm up.
- 2-3 working sets of 2-6 repetitions per exercise (2 sets for aerobic athletes 2-3 sets for anaerobic athletes).
- Use 45-65% of weight load used on week 12
- Monday lower body and core work
- Tuesday Olympic or Plyos and Upper body work
- Wednesday light arm and core work
- Thursday off from lifting
- Friday Compete
- Saturday Compete

General Guidelines For Flexibility Training

- Flexibility Training is a great way to warm up or cool down.
- Flexibility Training is an often over looked area of performance enhancement.
- Flexibility Training is beneficial for injury prevention.
- There are several different forms of flexibility training that you can use to enhance your teams performance outcomes – Static- Dynamic – Ballistic – PNF. Learn and understand where and how.
- Try to relax the muscles throughout the passive movement of the stretch, as this will help to alleviate any unnecessary tension within the muscle.
- Do not hold your breath, breathing freely helps you relax and get the best stretch.
- Increasing total range of motion in a joint takes a daily commitment to flexibility training.
- Evaluate and assess your athletes prior to the start of the season to find out what your teams needs are for that season.

Rest and Recovery

- **Because of the isolated season save any weight training deload weeks for the week of the state meet. 13 weeks is just enough time to take full advantage of strength training and its effects for your athletes.**
- **If you have a multi sport athlete coming off of a winter sport take this into account** (see strength training multi sport athletes from last years clinic notes on the website) (a deload in training should have been accounted for in the previous season training program)
- **Make training challenging for your athletes and try to say one step ahead of them, but only one step.**
- **Some of the events of track and field take a larger toll on joints and bones than others. Know common injuries for each event and train accordingly. (see handout)**
- **Watch weekly performances and know the difference between the need for rest and the need to increase training intensity.**

Nutrition

(see website for more info)

- High School athletes typically have average to poor dietary habits.
- Track and Field is a sport of weight management, but remember some athletes are competing in track and field to better themselves for another sport. Know who these athletes are so you can give appropriate information to each athlete.
- Don't give dietary advice you don't understand, Don't give dietary advice that is not grounded in science. Don't regurgitate nutritional information that sounds like it makes sense.
- Encourage your athletes to stay hydrated regularly, avoid high sugar juices and gimmick energy drinks.
- Don't restrict water from your athletes in an effort to make them "mentally tougher" this is foolish and an unsafe training practice.
- Learn about the energy needs of each event and encourage each athlete to eat to compliment their training.
- Learn about the role of carbohydrates-fats-protein-vitamins-and minerals and how they influence sports performance before making any dietary recommendations.

Injury Prevention

- Don't get lost in preventative injury training methods.
- Beneficial for retraining or strengthening small muscle groups yes, time consuming yes, carry over into sports performance questionable.
- Injury prevention training happens automatically if you train your athletes within full ranges of motion, utilizing heavy weights, requiring the use of multiple joint movements (squatting – pressing- olympic lifting) and train for muscle balance.
- Core activation and stabilization is greatest and most resembles sports requirements for spinal stabilization when squatting, performing heavy olympic lifting, overhead lifting, or doing heavy closed chain unilateral exercises (lunges – single leg squat – single leg rdl – ISO DB Snatch....)
- Good additional training tools but some of these “special exercises” should not take precedence over teaching your athletes to do the basic tested tried and true training exercises that have been proven to enhance sports performance. Practicing the sport is the best specialized training you can do.

Don't Forget the little things



- **Teach athletes to be students of sport.**
- **Ego aside learn from others, conventions, conferences, books, tapes...**
- **Be patient don't forget they are still kids and the way you respond to every situation they experience with you will mold them for the rest of their lives.**
- **Be a positive influence on every athlete that you encounter.**