

## How to Design a Speed Program

By Lee Taft

How do you design a speed program? This is certainly a big question I get asked. As usual, I have to give the dreaded answer, "It depends." The reason it depends is because the question is so vague in nature.

Now, suppose someone came to me and asked, "How do you design a 3 month speed program for my seventh grade girls' basketball team?" I could certainly start to give them some clear answers. It would be even more helpful if in the question they told me how many days per week they planned on training, the amount of time they had, and if they had resources like a weight room.

What I am going to give you is how I would design a general program for 12- to 14-year-old athletes. Because it is general, you can use it with any athlete or sport. Remember, there is a big difference in the development of some 12- to 14-year-olds, not to mention the difference between boys and girls.

Days per week: 3

Time per day: 45 min.

Non-consecutive days: M-W-F

Off-Season: These athletes are not in the middle of a sports season, but do play some travel sports, just not consistent practices.

12-week program (4 cycles of 3 weeks):

I chose 3-week cycles because the program is general and the more exposure to different variables, the more challenged the athletes will be. Because the program is general, the exercises can become proficient in 3-week cycles.

Day #1

### **20 minute warm-up following this basic sequence:**

- Muscle preparation with foam rolling, stick, or tennis ball
- Functional flexibility to 3-dimensionally stretch and mobilize.
- Dynamic activation/running - running, skipping, lunging, shuffling, squatting, bending...
- Fast feet - jump rope, ladder, dot drills, line drills, low box drills...

### **5 minute landing, decelerating (force absorption mechanics)**

- Low jumps, leaps, hops and holds
  - All are done in the sagittal plane on Day #1 to challenge proprioception.
  - 1 - 2 exercises will be chosen and 2 - 3 sets of 5 - 10 reps.

### **10 minute linear acceleration training**

- Wall runs, arm drills, starts from various stances, ½ kneeling starts, get-ups...
  - All exercises are focused on the technical aspect of accelerating.
  - 2 different exercises will be chosen and 3-4 sets with varying reps depending on the drill and the amount of teaching that occurs during the first 3-week cycle.

### **25 minutes of strength training (all exercises in the first 3 weeks are bilateral)**

- 4 exercises will be chosen and performed in a super set fashion.
- 3-4 sets of 5-12 reps depending on exercise.
  - This is a time of breakdown and progression.
  - All strength exercises will be broken down so athletes understand the mechanics.
  - A large emphasis will be placed on handling body weight, managing suspension system like TRX or Jungle Gym Straps, Tubing, Medicine balls, DBs, and KBs.

### **Day #2**

#### **20 minute warm-up following this basic sequence:**

- Muscle preparation with foam rolling, stick, or tennis ball.
- Functional flexibility to 3-dimensionally stretch and mobilize
- Dynamic activation/running- running, skipping, lunging, shuffling, squatting, bending...
- Fast feet- jump rope, ladder, dot drills, line drills, low box drills...

#### **5 minute landing, decelerating (force absorption mechanics)**

- Low jumps, leaps, hops and holds
  - All are done in all the frontal plane on Day #2 to challenge proprioception.
  - 1-2 exercises will be chosen and 2-3 sets of 5-10 reps.

#### **10 minute lateral acceleration training**

- Because the focus will be on accelerating, the athletes will learn to produce power and maintain a level body through the acceleration.
- Lateral shuffles and crossovers will be the primary focus.
- 2 exercises will be chosen and 3-5 sets. Must consider the right and left.

#### **25 minutes of strength training**

- 4 exercises will be chosen and performed in a super set fashion.
- 3-4 sets of 5-12 reps depending on exercise.
- Different movement patterns and or variations of exercises will be performed.

- This is a time of breakdown and progression.
- All strength exercises will be broken down so athletes understand the mechanics.
- A large emphasis will be placed on handling body weight, managing suspension system like TRX or Jungle Gym Straps, Tubing, Medicine balls, DBs, and KBs.

### Day #3

#### **20 minute warm-up following this basic sequence:**

- Muscle preparation with foam rolling, stick, or tennis ball.
- Functional flexibility to 3-dimensionally stretch and mobilize.
- Dynamic activation/running- running, skipping, lunging, shuffling, squatting, bending...
- Fast feet- jump rope, ladder, dot drills, line drills, low box drills...

#### **5 minute landing, decelerating (force absorption mechanics)**

- Low jumps, leaps, hops and holds
  - All are done in the transverse plane on Day #3 to challenge proprioception.
  - 1-2 exercises will be chosen and 2-3 sets of 5-10 reps.

#### **10 minute linear and lateral change of direction training**

- Athletes will learn how to decelerate from a linear run and a lateral movement.
  - Retreating will be included in the linear.
  - One exercise from the linear patterns and one from the lateral patterns will be chosen and broken down in detail.
  - 3-5 sets will be performed based on the exercise and also considering the right and left sides of the body when performing lateral deceleration.

#### **25 minutes of strength training**

- 4 exercises will be chosen and performed in a super set fashion.
- 3-4 sets of 5-12 reps depending on exercise.
- The same exercises performed on Day #1 will be taught again. Day #1 for the following week will become Day #2 of this first week. This way all patterns are performed close to equal time.
  - This is a time of breakdown and progression.
  - All strength exercises will be broken down so athletes understand the mechanics.
  - A large emphasis will be placed on handling body weight, managing suspension system like TRX or Jungle Gym Straps, Tubing, Medicine balls, DBs, and KBs.

At the end of the end of the first 3-week cycle all athletes should have a basic understanding of how to properly perform the exercises prescribed. There have

been few exercises chosen in the first 3-week cycle, but the patterns learned allow new exercises to be easily implemented.

### **Second 3-week Cycle**

The second 3-week cycle will follow much the same sequence as the first cycle.

The warm-up will remain the same so the athletes learn it very well. There is enough variety to keep the body challenged, and the athletes focused.

The landing/decelerating or force absorption will also remain similar to week 3, but the addition of holding a light-medium medicine ball will be added to stress the posterior chain during landing.

The speed training will remain the same with respects to exercises, but the addition of random cuing to force a greater reaction will be instituted. Cuing can be verbal, visual, or combination.

Strength training exercises will now transfer from bilateral to unilateral, so all lower and upper body exercises will be performed with asymmetrical.

### **Third 3-week Cycle**

The warm-up remains the same. Additional exercises can be added if needed, but the same structure.

During the force absorption for these next 3 weeks athletes will now be introduced to sagittal, frontal, and transverse drivers while they are performing in the plane for the day. If they are performing sagittal leaps, they now will learn how to drive the arms in any of the other three planes to induce a reaction out of the body to create balance and stability. All driving will be done with the arms/hands and no external loading during this cycle.

Speed training will now be introduced to external resistance in the form of light tubing or sled resistance. The purpose during this cycle will be to increase force production, yet not change technique. If the resistance forces the athlete to drastically alter the look of the skill from a non-resisted state, it is too heavy. Athletes will also be introduced to light tubing to force the athlete to decelerate against this extra pull or assistance into deceleration. The goal is to keep the athlete in a focused body position in order to move very efficiently with external forces.

The strength training section will go back to bilateral loading, but now the introduction of power will be added. Athletes will learn how to accelerate the external load or body weight through the concentric portion of the lift. They will also be cued to control the load during the eccentric portion. The goal is to increase the neural drive, teach the athlete to maintain the correct posture during

a faster movement, and to decelerate the load when it is moving quickly away at the distal end of the movement.

#### **Fourth 3-week Cycle**

Once again the warm-up will remain pretty much the same.

During the force absorption for the final 3-week phase, the athlete will simply continue with the 3-dimensional driving during the different planes of landing, but there will be the reintroduction of the medicine ball load once again during the driving. The medicine ball can be held or caught while driving the arms in a plane.

The speed training will take a different turn in the final 3-week cycle. Athletes will now perform multidirectionally. In other words, linear and lateral movement will be linked together. An example might be an athlete performing a linear run to an immediate lateral shuffle followed by a retreating crossover back to the start. The purpose of this cycle is for the coach to evaluate how well the athletes can manipulate their bodies. Each workout will go from cone directed patterns which are outlined or rehearsed so the athlete knows exactly what to do. For the next workout the athlete will be randomly cued on where to go and how to move. Each workout will change between rehearsed and random. External forces can be added such as a light tubing resistance when appropriate.

Strength training will now transition back to unilateral training with an emphasis on power. The athlete will continue learning how to explode, but now there will be more asymmetrical loading through the body.

There it is. A basic program design outline that I would use with a young group of athletes training for 12 weeks. I believe there are many options, but I enjoy shorter cycles to allow me and the athlete to be challenged with variety. The main goal has to be technical proficiency. Strength and speed will come, but you don't want it built on a poor foundation of movement.

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