

**Reece's Speed Theory-An Essay**

**There is only one way improve actual speed**

Written By Reece Tedford

Copyright 2008

All rights reserved.

I would like to thank my Lord and Savior Jesus Christ  
for his sacrifice on the cross and for his gift of  
salvation.

Contact info for author Reece Tedford

[reeceracer@hotmail.com](mailto:reeceracer@hotmail.com)

Reece has researched and specialized in the  
coaching and development of actual speed with  
athletes in multiple sports but specifically track  
and field.

## **Contents**

1. The Basics
2. Actual Speed
3. Speed Performance
4. Long Jump

## **Chapter 1**

### **The Basic's-Actual Speed and Speed Performance**

There are only a few ways to improve speed performance and even fewer ways to improve actual speed. My speed theory is more than just a theory in that it has been tested and has worked for every athlete I have applied it to, but has hasn't been applied to enough athletes to be deemed anything more than a theory. However, I am convinced of the validity of these techniques via the drastic improvements that have been seen in athletes.

The ground work for improving actual speed is finding a way to make the muscles and neurons fire faster. Improving speed performance gives us

more things to work on as well. Speed performance encompasses everything but actual speed, but can improve ones performance times drastically.

Actual Speed is how fast your muscles are capable of firing, while speed performance is how fast you can run down a track via stopwatch. Speed performance factors in technique, strength, execution, form, and more. This book is going to deal with both aspects but we will provide many coaches with a valuable tool that hasn't been that their disposal earlier. The insight needed to develop and improve actual speed.

Very few athletes or coaches even at the elite level understand how to improve actual speed. You can't make a slow person fast, but you can make them faster. You can even make a fast person faster. Typically the improvements and results coaches see in performance is relegated to

improvements in speed performance while not actually improving how fast the muscles or neurons fire.

Using these techniques we can often turn a 5.0 40 yard dash into 4.5 or 4.6 and take .7 or .8 seconds off of a 100 meter dash for an athlete in the 11.7 or .8 range. This coupled with what most coaches already work on in regards to flexibility, form, and other performance techniques can create staggering results with even average athletes.

## **Chapter 2**

### **Actual Speed**

The concept is easy enough, but execution is more difficult. To get faster you must run faster. How can you run faster than you are capable of? How can a sprinter who races at top speed train faster than race pace? These are the dilemma's facing speed athletes. Distance runners have an easy time with speed work because most speed work is faster than their race pace, but sprinters always train slower than their race pace. To make improvements in actual speed you have to train the brain and the muscles to fire faster than they can on their own. This is done with a few techniques.

To achieve this you must incorporate over speed into your training. Over speed can be done safely a few ways and the only two I recommend are running on a slight downhill or on a grass surface with a rubber band. The rubber band method is for more advanced athletes who have learned how to safely use the method. It's easiest to start simple and find a slight downhill grade. A steep downhill grade will not serve the purpose.

Your accelerations and sprint work should be done on this downhill grade twice a week for at least 8 weeks and preferably 12 weeks to see best results. The more consistent the over speed training the better the results. For a season beginning in January, you'd want to begin in November. It takes that long to train the muscles and brain to fire that fast on their own.

Never exceed 120 meters when doing over speed and often 30-50 meters of over speed during acceleration is plenty. The acceleration can be longer, but the time spent at over speed should be limited. We are only trying train the muscles to be capable for firing faster and this will open the way to allow them to perform faster in races. A regimen that includes plyometrics once or twice a week, over speed twice a week, and a stable and balanced weight training program will provide the results you desire in the actual speed enhancement side of your program.

Be careful to use this only as a important supplement in your training and to adhere to the hard-rest theory. If you train at a high intensity, you must rest following for up to 48 hours and 72 hours in cases of races. This allows the tears time to heal and strengthen.

## **Chapter 3**

### **Performance Speed**

Many great authors and coaches have written about performance speed and this is a very well explored area. Stride frequency, stride length, and power are parts of the equation. Power is built thru hills, weights, and plyometrics. Stride Frequency is where the actual speed training comes into play. Stride length is determined by flexibility and one of the most important attributes of elite level sprinters and jumpers is extreme flexibility. The more flexible the athlete the more efficient.

The other aspect of performance speed is execution of technique. Technique and form can be enhanced by a variety of drills that should be

done daily and in fairly large quantities. Form should be second nature. Acceleration is also important in that many explosive athletes accelerate too quickly and are decelerating severely by the end of 100 meters. The key to proper acceleration is to keep one's head and eyes down until top speed is reached. This will prevent devastating technical errors of coming upright too soon.

The start is simple enough. Arms shoulder width or slightly wider than shoulder length and apply pressure on the back block. This allows the moment of reaction to apply all explosive energy to the front block and save valuable time. The front foot should be relaxed on the front block, while the back foot should be pressed and tense against the back block. This prevents what most athletes do "a double clutch start". The blocks themselves should be positioned according to the type of sprinter you are. Explosive sprinters can elongate the blocks more than less explosive

sprinters. Most female sprinters don't need a very elongated block formation.

The other basic element of a start is to inhale on "set" and exhale on the gun. Running fast is about staying relaxed and executing the technical aspects of your game. Once the technical aspects are mastered you can really work on maximizing your actual speed and see where your potential takes you.

## **Chapter 4**

### **Long Jump Technique**

I will address briefly some long jump techniques that are misunderstood by many athletes and coaches. The most important is that the athlete must not slow down at all as he comes off the board. The last two steps should be quicker if anything and the eyes up. The steps are simply a trust issue and technicality that must be worked out so the athlete can trust his steps and maximize performance. Many athletes look down or slow slightly to transfer their speed into height. This is not the most important aspect and height is probably the last technical element to be developed.

What results in the longest distances jumped by athletes are speed off the board and reach. Height is the 3<sup>rd</sup> and elite element, but many athletes go 24-25 feet with no height, so unless you are going over 25 feet you should master the other elements first. A less than fast sprinter can do well in the long jump by simply getting to top speed at take off. This will alone surpass many superior athletes who slow at take off.

The second element is the reach. This is sheer practice and flexibility, but most importantly flexibility. You must be flexible to long jump. An average athlete can add two feet onto their jump with reach alone. The last element and the perfect storm of the long jump is height, but height cannot be a substitute for speed and reach, it is a wonderful addition. Many athletes can't get height when looking straight ahead and going full speed. This is because they are not strong enough or experienced enough. It's the art of the last two

steps and that explosive “pop” off the board while hitting your top speed. This simply takes practice and probably years of practice! This is not something done overnight, it’s a long process, but the perfect leap is a combination of speed, height, and reach!