

Effective Speed Work - How To Really Run *FAST*

In athletics, there are 3 components critical to peak performance, skill, strength and speed. Of these, speed is the most poorly trained and not optimally practiced. Too many times athletes are just told to run more sprints to try to get fast. Without the proper methods and techniques, running sprint after sprint is not going to increase the athlete's speed.

There are 2 aspects to getting from point A to point B as fast as possible, acceleration and top speed. Each of these components need to be trained differently and then brought together as one system. For acceleration, body position, forward lean, and power from the proper musculature are the elements that need to be emphasized. For top speed, stride length, stride frequency and arm action all play a role and need to be trained well.

To accelerate quickly, the body needs to be in the most efficient position possible. This position is a slight forward lean with the chest in front of the hips, hips in front of the knees. It is also important that the body is in a straight line from the top of the head through the heel. This allows the strongest most powerful muscle groups to be placed in the best anatomical positions to be used to well. Unfortunately, without the proper practice, the body does not necessarily want to be in this position. We are more comfortable upright and balanced. A more stable position but not as efficient to use the muscles we need to accelerate. It is important to get the body used to being in what it believes is an unstable position. With proper training we can get the body comfortable and subconsciously realize that the lower aspect will catch up to the upper body.

The object of the forward lean is to have the proper muscles in the best possible positions. We then need to maximize the work of these powerful muscle groups. The hip extensors, knee extensors and ankle extensors (dorsiflexors) work together to perform the triple extension mechanism. Each of these muscle groups need to be worked separately to gain isolated strength and then combined in order to work together properly. Once individually strong, techniques such as plyometrics are used to increase the output of this system. Plyometrics and power training overload the muscles in order to achieve the maximum results. In addition, the tasks used during these techniques force the body into the proper position and technique in order to correctly accomplish what is being done.

Increasing stride length and stride frequency seem to be diametrically opposed concepts. We need to try to get longer and faster at the same time. Flexibility training, both dynamic warm ups as well as longer static stretching post exercises are critical for improving the length of stride. Jump series training also get the body used to reaching out to maximize the distance of leg travel. Core muscle training to ensure tight abdominals and gluteals as well as to have efficient transfer of energy from upper body to lower body is important. To improve the frequency of the stride, try to have the body move quicker than it could before and quicker than it would like to. Techniques such as resisted band assisted running, stride component training – proper leg action, how to attack the ground as well as some plyometric techniques are used.

Having all the lower body aspects working well does the athlete no good if the upper body is not in coordination with it. Many times the athlete will have the arms moving across his body instead of in the direction of desired movement. An athlete may also have too much elbow motion instead of a linear lower arm, hand action with the motion coming from the shoulder. It must become natural and automatic to have all parts moving in the same direction if we are going to optimize the performance. Breaking down, re-training, sequencing the arm action in repetition exercises enhances the ability to

move properly.

As we have seen, speed training is more than just more running. Power, quickness and technique all need to be emphasized in a proper program. To maximize an athlete's performance, all the components of speed must be trained individually and then in concert. It is important to seek knowledgeable performance specialists who have the ability to identify where there may be a deficit and then be able to address that aspect as well as improve the overall system. Without proper speed training as part of a sport improvement program, 1/3 of performance is missing.