

REACTION TIME

by Dr. Greg Shepard



Reaction time can be improved!

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Reaction time is something I've been intrigued with throughout my coaching career. In 1967 I did my Master Thesis on reaction time with the University of Oregon football team. Most of the exercises were done on a signal. Offensive players would drive through a lift with an explosive movement on a sound. Defensive players went on a visual cue. A control group of non-football players trained without the procedure of reacting on signals. The football players improved significantly on their reaction time. The control group did not improve at all.

The testing was done with a device called the Hale Reaction Timer. It was an instrument which measured time in a hundredth of a second. It was impractical to take out on the field and impossible to time 40's or any other distance accurately. However, it could measure reaction time accurately.

It is thought by most coaches that reaction time cannot be improved. In fact, many coaches still believe speed cannot be improved. Nothing can be further from the truth. I am absolutely convinced and have a sure knowledge that not only can speed be improved, but so can reaction time.

Prior to timing 40's, coaches would use the 100-yard dash or a 50-yard dash. If an athlete ran a 10.0, he was fast. This was usually done at a track meet. However, since most football players did not run the 100, times on most players were not known.

Timing forty-yard dashes only started about 15 years ago. As more and more coaches timed 40's, and more publicity was given to their importance, times began to improve. Two ingredients were necessary. First, we had to have a way to measure times. Stopwatches became more accurate, timing in hundredths instead of tenths, and a way to time an athlete fairly well was established. By that I mean the method of starting the time when the athlete's hand moves. Secondly, great importance was placed on those times. No college coach in his right mind would recruit a 5.2 tailback. Now, because it became im-

portant, athletes will practice to get better and increase strength from better weight training programs which help muscles move faster.

I believe if we were to apply these two ingredients to reaction time, we could also see improvement. First, we have to have a way to measure reaction time accurately and consistently. With the BFS Precision Timer, you now can. It is the only timing device which measures in thousandth's of a second. You don't need thousandths of a second to time a forty, but you do need it for reaction time. It is very common to have a contest with times like .214 to .217 seconds. Second, since little things make big improvements, these improvements are seen very quickly on the Precision Timer. Once it is used, the importance will be apparent from the start. If a coach will chart times and contests are held, times will improve and it will be important.

A physiologist might say "hogwash." "Improving reaction time is physiologically impossible. You cannot improve the neurological impulses transmitting through the synapses from brain to muscle." This may be true. However, since I know we can improve times, I must look for another answer. I believe we can learn how to react more efficiently by learning through practice to relax, by concentrating and controlling our body properly *before* the signal to react.

Let us now discuss the difference between reaction time and quickness. They are closely related but yet different. Reaction time is the amount of time between when a signal is given and when the athlete begins to move. Quickness generally means moving very short distances rapidly. I could be slow reacting and even not very quick for 5 yards and still run a 4.6 forty. However, in a practical sense, it would be nearly impossible to be slow reacting and quick for five yards or vice versa. Most coaches will admit, "I'm more concerned about 5 or 10 yards than I am about that dang forty."

With the BFS Precision Timer you can improve quickness on the spot. Why? Because you can correct technique problems and get immediate feedback. You can measure one-yard starts with large groups quickly (10 per minute). You can measure 5, 10 or 20-yard sprints accurately. You cannot with a stopwatch. Coaches who live in colder areas during the winter usually do not time their athletes during this period. Now you can! You can now determine which is the correct technique for a pulling guard. Is it a lead step or crossover step? You can use it as a useful tool in selecting personnel; or determine offensive or defensive positions. You see, some people react better to sound than sight. It has unlimited uses for all sports. I feel the BFS Precision Timer should be the most important new training device in the 1980's.