

Jayachandra M S
Physical Education Director
Govt. Home Science College Holenarasipura
Email:- msjayachandra@gmail.com
Mobile:- 8880199693

Talent Identification in sports

Abstract

In this study I am going to explain my views that how can identify the hidden talent of the young sports persons according to their potential. One who born with physical gifts simply provides an advantage to such sports person and the body type has a direct impact on sports performance. The body type helps him/her to the potential event. also indicates that the process of identifying the types of the body for students help them to choose the appropriate event, and also type of muscle fibers of a trainee plays an important role and also it helps to identification of talent of an Athletes have to be a basic movement patterns such as running, jumping and throwing and he can choose his event according to his /her potential. And it will help the Coaches and athletes to refine these movements into sport specific skills. And also going to take an in-depth look at muscle fibers to better understand how they influence the selection process and training. And also I mentioned one test to estimate muscle fiber composition.

The Introduction of the Study:

Your physical appearance will actually depend on the specific muscles that are strengthened. Every athlete therefore develops a physique that is typical for that specific sport. The curricula and training methods have been developed for the various sporting disciplines and this process required many developments in the field of sports training with more scientific studies for. This kind of scientific training has proven feasibility by accessing to high and standardized athletic achievements. Though scientific sport training whether in sports competitions or in scientific the process of education and training as well as the related physiological and psychological effects on the athlete. . The body type has a direct impact on sports performance the body type to the physical activity which is being practiced. Also indicates that the process of identifying the types of the body for students help them to choose the appropriate physical activity,

and to the importance of determining and choosing the appropriate style before they start the training process. The explosion of genetic knowledge, there is now a search, not just for sport appropriate physique but also for “performance genes“. Several are implicated. Muscles are made up of two different types of fibers. The “slow twitch” fibers deliver prolonged contraction over many minutes or hours favoring endurance events. The “fast twitch” fibers deliver extreme amounts of power for a few seconds favoring sprint events or those requiring sudden power, such as weightlifting. The ratio of fast to slow fibers in each person is genetic.

Discussion:

Body Type for Sport Talent identification

Right Body Type to Suit Particular Sport Making the difference between success and failure is having the right body to suit that particular sport. Marathon runners tend to be light and lean, top swimmers are gangly things and tend to have larger feet and gold medal power-lifters are solid blocks of muscle with short arms and legs. So, the physical body type, and indeed the way the body functions, fit for particular sport. Or does the body develop and improve a certain way because of the chosen right suitable sport according to the body type

A five foot tall person has little chance of becoming an elite basketball player, but being six foot seven with the springiest tendons in the land doesn't automatically propel you to Olympic gold. Unless you have tactical sense where needed, access to decent equipment, medical backup and the optimum psychological conditions for a winning attitude. And be able to power yourself through pain, and of course, superb technique, all the physical attributes will be in vain.

Body Type: Ectomorph, Mesomorph, Endomorph?

Mesomorphs are large boned and have highly defined muscles, with a low, narrow waist. Men are rectangular, and women are hourglass-shaped. Ectomorphs are thin, lightly muscled with small wrists and ankles. Endomorphs are soft and round, with shorter limbs, high waists, small hands and feet. Generally most people are mixtures of body types, but those who are mesomorphic tend to do well in sports such as weightlifting, while running is where ectomorphs are found to excel.

Body type analyses provides gateway for sports selection, ability and training response. Although it seems certain body types are better suited to certain sports, there is still a considerable degree of ‘you are what you train for.’ Particularly found within certain parameters, this has been exemplified by research pointing to differences and anomalies within playing position in basketball (and other sports). In addition, the more recent research into sporting genes could have even greater implications than body type in terms of ‘determining’ who can be good at certain sports and who will be ‘made’ better at a sport.

Muscle Composition: Fast Twitch & Slow Twitch

Muscles are made up of two different types of fibers. The “slow twitch” fibers deliver prolonged contraction over many minutes or hours favoring endurance events. The “fast twitch” fibers deliver extreme amounts of power for a few seconds favoring sprint events or those requiring sudden power, such as weightlifting.. The ratio of fast to slow fibers in each person is genetic.

Types of Muscle Fibers

Skeletal muscle, the type that is responsible for moving our muscles when we run, is comprised of three different muscle fiber types, each with its own advantages, disadvantages and specialty.

Type I,

Red /Slow-twitch fibers are the body’s primary method for less explosive, sustained movements. They do not contract forcefully and thus require less energy to fire, which makes them well suited to long distance running. More importantly, they house our main supply of oxygen-boosting power plants mitochondria, myoglobin and capillaries.Type I fibers are used for repeated contractions of low intensity like jogging, walking, bicycling, 5k - 10k

Type IIa

Red / Fast (Type IIa fibers, ‘fast oxidative fibers’) are best known as fast-twitch muscle fibers. These are the muscle fibers primarily responsible for fast, explosive movements like sprinting. However, they lack the endurance-boosting ability of slow-twitch fibers and can only be used for short periods of time.Type IIa fibers are used in activity needing speed and strength like medium

weight lifting and medium sprints. Fast twitch but can use these muscles for endurance as well 800, 1500 Middle distance run.

Type IIb

White / Fast (Type IIb fibers, 'fast glycolytic fibers') are what we call intermediate fibers. These are a blend between fast- and slow-twitch fibers. They have some aerobic capability, but not as much as the slow-twitch fibers, and they can fire more forcefully, but not quite as explosively as the fast-twitch fibers

Each individual has a genetic predisposition to certain muscle fiber types. The misconception that many runners have is that each fiber type is exclusive (i.e. you can only use one or another), we can't train to improve how our fibers function, or to alter the percentage we have of each. In reality, with the right training, we can manipulate and improve all three. Type IIb fibers are used in activity needing short bursts of speed and strength like heavy weight lifting and short sprints. Fast twitch, these are the muscles you use for 400, 200 and 100m dash or less.

1-RM Test to Estimate Muscle Fiber Composition

This is a simple indirect test that is used to estimate the predominant muscle fiber type - slow twitch or fast twitch. It is interesting for athletes to know the composition of their muscle fibers. If they are primarily a strength or speed athlete, they want fast twitch fibers. For endurance athletes, slower twitch fibers is optimal. This test does not replace an actual muscle fiber composition test, which would be more accurate but involves an invasive muscle biopsy and more sophisticated analysis.

Purpose: to estimate the predominant muscle fiber type for any given muscle group.

Equipment required: Free weights (barbells, dumbbells) or other gym equipment, assistant/spotter.

Pre-test: Explain the test procedures to the subject. Perform screening of health risks and obtain informed consent. Prepare forms and record basic information such as age, height, body weight, gender and test conditions. Perform a standardized warm-up. See more details of pre-test procedures.

Procedure: Determine your one repetition maximum (1RM) on a given exercise - a measure of the maximal weight a subject can lift with one repetition. Have a rest for 15 minutes. Then use 80% of your measured 1RM to perform as many repetitions as possible in a single attempt.

Scoring: the maximum number of times the weight is correctly lifted is recorded. Use the values in the table below to determine the muscle fiber type based on the number of repetitions at 80% of 1RM (Pipes, 1994).

Variations: There are two other protocols / assessments. These variations are replicated on many sites online, though no cited references can be found. One variation also uses 80% of your 1RM (Dr F. Hatfield Test), though the interpretation is different, and the other uses 85% 1RM (Charles Poliquin Test). As in the test above, the maximum number of reps at that level is recorded. The results for this variation are interpreted as follows.

Conclusion:

Sports identification is a very important aspect for better and scientific training which effects on performance of the sports persons, being born with physical gifts simply provides an advantage to any sports persons, the body type and muscle fibers will direct impact on sports performance so have to choose the event according to their potential. The body type to the physical activity which is being practiced. also indicates that the process of identifying the types of the body for students help them to choose the appropriate event, type of muscle fibers of a trainee and also In the identification of talent of an Athletes.Coaches help athletes refine these movements into sport specific skills.

References:

- Diwan, Lamia Hassan Mohammed and Malih, Fatima Abd (1999) type body and its relation to the level of learning some skills fencing" the journal of a university teacher number 204
- <http://www.ncbi.nlm.nih.gov/pubmed/16306506>
- <http://www.ncbi.nlm.nih.gov/pubmed/4077363>
- Mackenzie, Colin (1918). The Action of Muscles: Including Muscle Rest and Muscle Re-education. England: Paul B. Hoeber. p. 1. Retrieved 18 April 2015.
- McCloud, Aaron (30 November 2011). "Build Fast Twitch Muscle Fibers". Complete Strength Training. Retrieved 30 November 2011.