



PHYSICAL PREPARATION IN REFEREEING

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Refereeing in Football and its Performance in Extreme External Conditions: Height, Heat, Cold and Humidity

External physical conditions created by the different climates in which we practise High Performance sport limit our capacity and evaluations, and must be always taken into account. When we compete at a height of 2.500 metres above sea level (m.s.n.m.) performance in explosive-force improves extraordinarily, however, performance in aerobic endurance diminishes. Also in extreme hot, temperature higher than 35º centigrades not only contributes to dehydration of the sport person, but it also limits his effort as a result of it, creating a rise of body temperature up to dangerous extremes. When cold exceeds 10º centigrades it makes performance efficiency impossible, and of course sport in environments with a humidity above 80%, combined with hot in tropical and subtropical environments, make the efficiency of aerobic exercises diminish greatly.

On the other hand, football referees, although in case of injury can be substituted, however, due to lack of preparation/adaptation, none will be able to ask for substitution and therefore the conditions in which their performance develops during 90' must be taken into account to be solved in the training plan.

FIFA's Refereeing Committee over 10 years ago carried out a study of the referee's physical necessities in the game field, and according to these, they approved the new Physical Tests, developed by a group of professional experts, representatives of the Confederations, which in convenient progression were settled worldwide by the Referees' National Committees and their Confederations.

These tests:

- 6x40 metres with 90'' of recuperation between each one of the repetitions.
- 10 laps of 400 metres changing intermittent pace of 150 metres in intensity (30'') and 50 metres of recuperation (30''), which turns this test of Aerobic Power into the base on which the referee can endure the 90' game, in which he very often does over 11 kilometres running, walking and sprinting.

HOW MUST THE REFEREE'S PREPARATION BE FOR EXTREME ENVIRONMENT COMPETITIONS?

Mexico's Olympic Games-1968 posed many problems especially for sports where Endurance has predominance in the results. For a better adaptation and in order to study the performance at an extreme height, the French built a Heights Sports Centre in the Pyrenees at 2.400 metres in Font Romeu, by trying to create the same height conditions above sea level that were in the city of Mexico, also the USA took their Athletics team for the Olympic Games to Salt Lake City in the state of Utah, in extreme height conditions, where several world records were broken in speed and jumping events, but with poor results in endurance events.

Only the announcement of football's World Cup-2022 in the Arab Emirates has alerted the medical committees from the countries who consider it a challenge to prepare their teams to play/train in temperatures which are feared to be suffered in this place. We all know that high levels of humidity combined with cold or hot causes dysfunctions in the human body which lead us far from a good performance.

In all these environments the physical quality that bears the greatest importance regarding minimizing the negative effects of extreme environments is the Aerobic Capacity and the Maximum Aerobic Power.

TRAINING PROPOSAL

It is only about the predominance that in the 8 weeks previous to the competitions in extreme conditions must be imposed on the training plan, which on the other hand must continue developing the rest of the qualities.

Predominance of Aerobic Capacity:

- In all the warm-ups and ends of daily training run 10' (2k.) of aerobic jogging at a pace of 5' per kilometre.

Predominance of Maximum Aerobic Power

- At least 1 session per week, better 2, where it is possible to work at a pace of anaerobic threshold over 4k. Example anaerobic threshold 4'30"x4k = 18'00".
- And finally, a session every 10 days of training, where we will work the Maximum Aerobic Power: 2 x 5 laps on the track (400 metres) of the Test at intervals of 150-50-150-50, in paces of 35"-35", 34"-34"...30"-30".

It is obvious that with these trainings we will not only go better prepared to cope with extreme environments, but also, and this is very important, for the referees to succeed in the Physical Tests.