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COMBINATION OF EXERCISE IN THE POOL AND IN THE GYM IN FOOTBALL RECONDITIONING

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Reconditioning is a term recently introduced and utilized to describe a Performance Based Model that leads the athlete to return to competition in the process of recovery after a sport's injury (3). Starting with this point of view, a functional rehabilitation pathway is designed not only for the treatment of the injury site but also for the recovery of the general physical condition and sport specific characteristics of the footballer. Therefore the cooperation of many different professional figures that work on clinical, functional, mental, psychological, nutritional, technical and tactical aspects, is required for a complete restoration.

Particularly important is the last phase of the process under the supervision of a qualified trainer that will lead the athlete to a complete recovery of functionality and physical level to join again the team. However, the final recovery can be enhanced by a rehabilitation program that focuses on the end goal from the initial stages: the return to competition. In fact a rehabilitation process built upside-down starting from the end and keeping constantly in mind the final function goal (for the footballers the match with the team) can help the rehab specialist in the preparation of the proper rehabilitation protocol. The athlete must achieve specific goals in the different rehabilitation phases (5 phases) that are necessary to come back to sport at a level at least as before the injury.

Medical supervision is necessary to control the process and lead the rhythm of the recovery. The Case Manager can monitor the level of improvement of the player through periodical clinical and physiological evaluations, and establish if the patient is ready to progress to the subsequent rehabilitation phase or not.

Aerobic and anaerobic fitness characteristics, strength, neuromuscular and functional exercises, neuroplasticity and recovery of sport specific skills are fundamental aspects for a complete recovery (2). This can be done from the beginning of the rehabilitation in the pool and in the gym, where the footballer is typically treated during the first phases after a trauma or surgery. To reduce the time of immobilization and to introduce early neuromuscular control and coordination patterns may allow a fast and complete recovery. Moreover exercise performed in a certain modality and within a positive setting can modify physical and psychological aspects.

There is evidence that environmental factors, including exercise, can influence general health and performance (1). The combination of exercises in the pool and in the gym give different rehabilitation stimuli to the patient based on the characteristics and advantages of the each of the two environments. Particularly, the pool can be used not only at the beginning of rehabilitation to regain range of motion and early movements, but also in the last phase - just before the start of on field rehabilitation - to anticipate specific sport movement patterns in controlled and reduced load conditions.

It is important to monitor the intensity of rehabilitation exercise In the pool and in the gym through different modalities: number of repetition and sets, loads, volume of exercise, recovery time, perceived rate of exertion are normally checked in every rehabilitation session to understand the external load. Heart rate monitor can be used to control the percentage of maximal heart rate of the player during the rehabilitation session.

The determination of aerobic and anaerobic threshold permits us to evaluate the physical condition and to individualized the intensity of cardiovascular exercises during rehabilitation. In the same way measurements of strength, like isokinetic test and jump tests, give us a feed back on remaining deficit of muscle strength and to set the load and type of exercises.
The reconditioning process leads to a more complete and safer recovery of the athlete not because is an accelerated protocol, but because looks for the higher level of recovery and performance in the shorter period of time, while respecting the tissue homeostasis. This means that sometimes long periods of training are needed to reach the levels of performance required for sport, and moreover to keep these characteristics over the time.

References

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