seca | mBCA

Medical background of the
medical field **sports medicine**

1 Definition

Rehabilitation is a term used in medicine to describe the treatment plan to restore the physical and / or psychological ability of a patient after a disease, injury or surgery. The secondary aim is to integrate the patient into social and working life again.

2 Prevalence

A number of injuries exist which are treated by medical rehabilitation. In professional football the most frequent injuries are muscle and tendon injuries (38 %) as well as joint and ligament injuries (24 %). Joint and tendon injuries require a long rehabilitation period. The minimum time is 30 days. In leisure and amateur sports injuries of the ankle (27 %) and knee joint injuries (18 %) have the highest numbers. Ball games have the highest prevalence for injuries. 60 - 70 % of athletes manage to achieve their prior level after cruciate ligament ruptures. It is common that this injury is the cause for the end of a competitive career.

3 Indications for rehabilitation therapy

Indications for prescribing a rehabilitation therapy or follow-up treatment after hospital care vary. Many accidents or diseases can require that after acute care or treatment in the hospital the patient is still being cared for intensively.

- Diseases of the musculoskeletal system (orthopedic rehabilitation)
- Myocardial infarction (cardiac rehabilitation)
- Traumatic brain injury (neurological rehabilitation)
- Spinal cord injury (neurological / sports rehabilitation)
- Polytraumatic injuries (complex injuries affecting several parts of the body / organ systems)
- Cancer diseases (oncological rehabilitation)

4 Types of rehabilitation

Most rehabilitation centers offer a large range of therapeutic services tailored to the patient's special rehabilitation needs. Services range from medical treatment up to many other methods such as physical therapy, classic massage, nursing treatment, diet consulting, group and individual psychotherapy, provision of prosthesis and social advisory services.

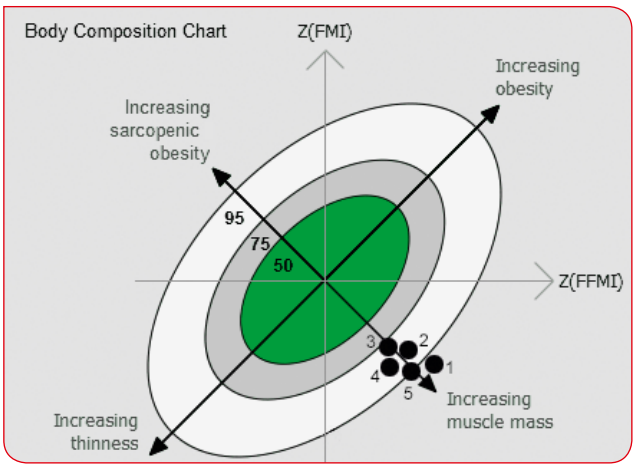
- Acute treatment
- Early rehabilitation
- Follow-up treatment
- Long-term treatment

5 Benefits offered by the seca mBCA

An injury that needs to heal over a longer period of time may result in changes in the body composition. Muscle mass is lost in the injured part of the body while, due to the lack of physical activity, fat mass may increase. The seca mBCA measurement is an important tool that enables these changes in the body to be detected. The body composition chart (BCC), for instance, can be used for evaluation; this is illustrated here on the example of an Achilles tendon rupture.

The **first measurement** was taken directly after the injury in the course of the initial examinations. **The second measuring point** was recorded after 4 weeks, the **third measuring point** after a total of 7 weeks. An almost complete break was taken during this time, with only a few physiotherapy measures instigated. Due to the severely restricted training frequency the muscle mass decreased (measuring points move to the left) and fat mass slightly increased. Following this phase of rest, a comparatively long one for well looked-after sportsmen, specific recovery training was initiated. In the course of the next 5 weeks **(measuring point 4)** it was possible to reduce fat mass (displacement downwards) and build up muscle mass (displacement to the right).

In the final phase, the load and volume of training were continuously increased: running training, training with the ball, reintegration to team training. The **fifth measuring point** was recorded after another 9 weeks. The player played his first match (substitution) following the injury after over 5 months. His body composition at this point was virtually at the same level as it was before the injury.



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