

PREVENTING INJURIES IN SWIMMING

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Statistics tell us that overall injury rates in swimming are very low in comparison with other sports. It is the elite swimmer that suffers the majority of injuries. This is largely due to the substantial training loads undertaken and the large reliance on the upper limbs for propulsion. The four strokes differ in subtle ways in their injury patterns.

Acute injuries are relatively rare due to the lack of bodily contact and the relatively slow speeds. Discipline in and around the pool and caution when diving are important. Blunt injuries for the majority are minor and self-limiting. Indirect muscle strains can occur following failure to perform a suitable warm-up.

Overuse injuries are often multi-factorial and present the greatest challenge. They result when biomechanical demands are not matched by appropriate adaptation and recovery. Training errors may be factors but these can be minimised by individualised, responsive programmes with in-built recovery periods for each physiological system. Any external demands on the athlete must not be underestimated.

Shoulder problems are most common. The joint relies heavily on dynamic control of the rotator cuff and the scapular stabilising muscles. Instability is exacerbated as muscles fatigue with activity. Specific strengthening exercises should be part of an overall training programme. The knees of Breaststrokes are vulnerable to combination stresses. Thigh strengthening should focus on closed-chain, terminal-range exercises. The streamline position encourages repeated hyperextension of the lumbar spine, particularly in Butterfly and Breaststroke. Such actions focus stress on the posterior structures of the spine. Core stability programmes concentrating on the endurance and tone of the major muscle masses are key. Inherent or acquired anatomical variations may make some athletes more susceptible to injury than others.

Understanding the causes of injury allows doctors and coaches to minimise risks and allow prompt intervention to prevent chronicity and underperformance.