

# CLIMBING MEANS UNDERSTANDING THE WORLD

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*The smear for both feet is really small. I have to keep my knees far apart to bring my center of gravity as close to the wall as possible. The small crimp on the right, which I am holding on to with my left hand, doesn't really give me much stability either. Without the indentation, which my right hand is holding on to with two fingers, I couldn't do this at all. The strength in my forearms is draining out of me. I have to make the right strategic decision quickly and keep a clear head in spite of the rising levels of lactic acid in my body. Do I make the next move with a crossover using my left hand, or do I go for a dyno so I can grab the jug three feet above me with both hands? That would finally solve the problem—for the first time! But time is running out. It is the seventh move, and my strength is about to give out.*

A typical boulder demands an athlete's entire arsenal of athletic motor and mental skills.<sup>1</sup> To be able to stand on a small smear, you need a strong sense of balance and good coordination. Without agility, you cannot get your body close enough to the wall. To grip a small crimp or indentation, you need a high degree of local endurance and strength. In addition, you also need good body tension (intermuscular coordination) to minimize the force required to hold your body in position.

<sup>1</sup> Phillips, K. C.; Sassaman, J. M.; Smoliga, J. M.: "Optimizing rock climbing performance through sport-specific strength and conditioning." In: *Strength & Conditioning Journal* 34(3) / 2012, pp. 1–18.

*After the previous six moves, the situation is no longer comfortable, either physiologically or psychologically (mental stamina). My pulse begins to accelerate again (endurance). The decision whether to do a dyno or an intermediate move requires good anticipation, the requisite physical strength needed to generate momentum, and willpower, determination, and courage on the mental side. To reach the jug, I will need coordination skills of the highest order; to get a grip on the hold, I will need significant maximum strength. The critical success factors needed for solving a boulder problem cover the entire range of basic, and complex sports motor skills, as well as mental abilities.*

So, there it is: the sport that demands everything from you, but in a relatively balanced way. If you allow for a little tolerance as far as basic endurance is concerned, and you subtract the group experience inherent in team sports that dictates that success can be achieved only as a team, then climbing comes very close to being the "golden goose" of basic sports training for children. From a sports science perspective, the physical and psychological benefits of climbing for young boulderers are considerable.

## STRENGTH

This basic aspect of motor skills is used in all its manifestations, such as strength endurance, local strength endurance, body tension, maximum strength,

For children, bouldering is the most natural thing in the world. Bernd Zangerl shows some of the youngest children how to tackle climbing rocks during a "school bouldering week" in Galtür.

