

Sports technology for para-athletes: Closing the gap

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This issue of *Sports Technology*, published by Wiley-Blackwell, spotlights recent developments that seek to close the gap between able-bodied athletes and para-athletes, with two published articles highlighting running prostheses.

The first article, entitled "Biomechanics of double transtibial amputee sprinting using dedicated sprinting prostheses" by Bruggemann et al., compares the sprinting mechanics data of able-bodied sprinters with that of a double transtibial amputee by examining the overall kinetics and the kinetics at the joints - while sprinting at maximum speed.

The carbon blade used by the amputee sprinter has a significant advantage in both energy storage and return in fast sprinting, in comparison to the healthy human ankle joint. The blade allows the disabled sprinter to deliver the same level of performance as an able-bodied athlete - but at a lower metabolic cost.

The other article, "Lower Extremity Leg Amputation: an advantage in running?", authored by Lechler and Lilja describes the clinical view of fitting an amputee with a prosthetic leg.

The paper provides a general overview on prosthesis technology. It highlights the challenges and disadvantages of a prosthetic fitting - including the difficulties in selection, fitting and the alignment adaptation of the socket; as well as other issues such as the compensatory strategies of the amputee.

These papers are published in the January 2009 issue of *Sports Technology* (Vol. 1, Issue 4-5).

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