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For probably the first time ever, a double amputee has been able to ski on two skis. Tests on the newly developed hydraulic prostheses was carried by the [CU Sports Centre for Handicapped Students](#) in the Italian resort of Passo Tonale in the second half of December.

The seminar was the result of long-term cooperation between the Centre and the OTTO BOCK ČR prosthetics company, which imports state-of-the-art prostheses produced by its German sister company. Participating in the tests were three skiers with single, above-the-knee amputations and one skier with both legs amputated. Tests were overseen by a team of prosthetics experts and ski instructors specialising in handicapped skiers.

The Italian resort Passo Tonale was chosen as the venue of the tests. With its only very slight gradients, allowing skiers to rest whenever they want to, conditions at the resort are highly favourable for handicapped beginners. Another important factor in the choice of venue was the easy accessibility of ski tows and cable-cars from accommodation facilities.

“The aim of the seminar was to test the newly-developed hydraulic prostheses for skiers with above-the-knee amputations and to find whether a double amputee could ski on two skis,” said Dr. Jan Hruša, CSc., head of the CU Sports Centre for Handicapped Students. This required the fitting of subjects with special prosthetic aids – one prosthesis for below-the-knee, and one for above-the-knee, amputations. Adjustments also had to be made to the skiing techniques and methodology and coaching was required for the double amputee.

“A person with one above-the-knee amputation on two skis is unique in the world of skiing. It lets the person stay on their skies for longer and reduces stress on the healthy leg and the spine. For a double amputee to ski on two skis is practically unheard-of, and we are probably the first to try it,” said Dr. Hruša, describing the group’s results.

Participants in the seminar were able to see for themselves in the field how OTTO BOCK’s new hydraulic thigh prostheses could replace both the knee and astragalar (ankle) joints. The rigidity of both joints is adjusted – a highly important function when skiing – with the aid of hydraulic pumps. The knee joint has a further modification allowing the subject to sit on a cable-car. Individual segments of the prostheses were adjusted by an experienced specialist on-site according to skiers’ needs.