The aims of the thesis were to: (i.) evaluate the immediate effects of a soft brace in persons with knee OA; (ii.) compare the immediate effects between a non-tight and a tight soft brace; and (iii.) identify mechanisms underlying beneficial effects of a soft knee brace in persons with knee OA. A laboratory trial was conducted where a within-subject cross-over design was used, comparing wearing a soft brace with not wearing a soft brace and comparing wearing a non-tight brace with wearing a tight brace. A total of 44 persons with knee OA and self-reported knee instability were enrolled from the Amsterdam Osteoarthritis (AMS-OA) cohort. Primary outcome measure was pain assessed with Numeric Rating Scale. Secondary outcome measures were: activity limitations assessed with time to complete the Get up and Go test (GUG) and the 10-m walk test; self-reported knee instability; self-reported knee confidence (KOOS); and dynamic knee instability expressed by the Perturbation Response (PR) i.e., a biomechanics-based measured reflecting deviation in knee varus-valgus angle after a controlled mechanical perturbation on the treadmill, in respect to level walking. Linear mixed model analysis and generalized estimating equations (GEE) were used to assess the effect of wearing a soft knee brace on the outcome measures. Mediation analysis was used to identify the mechanisms underlying the beneficial effects of wearing a soft knee brace in persons with knee OA. In comparison to not wearing a soft knee brace, wearing a soft knee brace reduced pain, activity limitations, self-reported and dynamic knee instability and improved knee confidence during walking. There was no difference in the observed effects between a non-tight and a tight soft brace, except for the 10-meter walk test. Reduction in pain and in dynamic knee instability mediated the effect of wearing a soft knee brace on decrease in activity limitations in persons with knee OA. The results of the thesis strengthen current evidence for the use of knee soft braces in persons with knee OA.