# Nerve conduits for treating peripheral nerve injuries: A systematic literature review

**Objective:** systematic review aims to gather evidence regarding the use of nerve conduits for peripheral nerve repair. Peripheral nerve injuries are a major public health problem. Nerve conduits have been developed in the recent years, although it is still not clear if they should replace nerve grafting and neurorrhaphy.

**Methods:** the following electronic databases were searched: MEDLINE, Cochrane Library (CENTRAL) and Embase. Study selection and data extraction followed the PRISMA guidelines. The systematic review of the literature retrieved 6767 articles. Only 27 studies were retained accounting for 1022 patients: 10 randomized controlled trials, 15 case series and 2 cohort studies.

**Results:** ten different types of tubes were described and a variety of evaluation methods were used to assess outcomes in terms of efficacy (motor and sensory recovery) and complications. The Semmes–Weinstein monofilament test and the static and moving 2-point discrimination test were the most commonly applied tests to evaluate nerve recovery. In general, outcomes showed no significant difference between groups.

**Conclusions:** synthetic conduits had more complications. Despite major methodological limitations in the studies, we can conclude that use of nerve conduits is preferable over suture repair and nerve grafting, as the functional recovery rates are above 80%. The choice of conduit is based on the surgeon’s expertise, but use of synthetic conduits is discouraged due to their higher complication rates.