**Master thesis opportunity**

## Carotid artery stenting versus endarterectomy for treatment of carotid artery stenosis: An update of the systematic Cochrane Review

**Background:**
Carotid stenosis, a narrowing of a major blood vessel in the neck carrying blood to the brain, can cause a stroke. The standard treatment is carotid endarterectomy. An alternative treatment (carotid artery stenting) uses a fine catheter tube, which is passed through the skin and into the narrowed blood vessel. A stent is placed inside the vessel to prevent a re-occurring stenosis. A systematic Cochrane review from early 2020 found stenting for symptomatic carotid stenosis is associated with a higher risk of periprocedural stroke or death than endarterectomy. This extra risk is mostly attributed to an increase in minor, non-disabling strokes occurring in people older than 70 years. Beyond the periprocedural period, carotid stenting is as effective in preventing recurrent stroke as endarterectomy. However, combining procedural safety and long-term efficacy in preventing recurrent stroke still favours endarterectomy. At the time of the review, evidence on stenting of asymptomatic carotid stenosis was still scarce, precluding treatment recommendations. Since then, a large amount of randomised trial evidence on treatment of asymptomatic carotid stenosis has emerged, warranting an update of the review.

**Aim:**
The aim of this systematic review will be to update the Cochrane Review from 2020, add new literature and new data, (re-)run data analysis and add a sensitivity analysis to different aspects of the results.

**Tasks:**
The successful candidate will specify the research question with help of the supervisor and compile a review protocol. Using academic research libraries and appropriate assessment tools, the results of the protocol's search will be extracted and synthesised in line with accepted guidelines (e.g. PRISMA, Cochrane).

**Requirements:**
- Interest in stroke prevention
- Proficiency in use of MS Office and a literature management software, e.g. EndNote, Citavi, Zotero, Mendeley
- Basic knowledge of statistical analysis with appropriate software, e.g. RevMan
- Highly motivated and team-oriented working morale

**Offer:**
- Introduction and supervision throughout the entire project
- Exciting opportunities in an interdisciplinary environment of clinical research and rehabilitation
- Possibility to visit various departments involved in rehabilitation of neurologic, orthopaedic, or geriatric patients.

**Time period:** Begin and duration is negotiable.

For further questions, please contact Dr. phil. C. Schuster-Amft, Head, Research Department, Reha Rheinfelden (c.schuster@reha-rhf.ch) or Prof. Dr. med. L. Bonati, Head physician, Reha Rheinfelden (l.bonati@reha-rhf.ch).

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