

# **Changes in masticatory muscle activity in children with cerebral palsy.**

## **Systematic review protocol**

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### **Abstract:**

The aim of this systematic review will be to analyze whether children with cerebral palsy (CP) have abnormal bilateral masseter and temporal muscle activation during mastication. This review will follow the recommendations of the Cochrane Handbook for Systematic Reviews of Interventions and PRISMA statement, and will be registered at the PROSPERO platform. A comprehensive search of the literature will be performed using an electronic search (MEDLINE, Embase, Cochrane Library, LILACS, BBO, Clinicaltrials.gov, and WHO/ICTRP) with no restriction regarding date and language. The grey literature will also be screened via OpenGrey. We will include randomized (RCT) observational comparative studies, that assessed as primary outcome masticatory muscles (temporal and masseter) activation, by using electromyography parameters such as time of activation, duration, masticatory cycle, and force peak. Two authors will independently select the references retrieved by search strategy using the software Rayyan and will extract the data from included studies. All discordance will be solved by a third author. The risk of bias assessment will be performed using the Newcastle-Ottawa scale. We will calculate the mean differences for continuous outcomes and risk ratios for dichotomous outcomes (CI 95%). If possible, electromyography parameters will be combined in meta-analysis using the random-effect model in the Review Manager 5.4 software. Heterogeneity between studies will be evaluated. The certainty of the body of the evidence will be assessed using the GRADE approach.

### **Biography:**

Rafael Zaratín Beltramin is a dental surgeon, a master's degree student in Rehabilitation Sciences from Universidade Nove de Julho, a specialist in Public Health from Universidade Nove de Julho and graduated in Dentistry from Universidade Nove de Julho. Rafael Zaratín Beltramin has improvement and complementary courses in the areas of bruxism, minor oral surgery, dental aesthetics, botulinum toxin and facial fillers.

