

# The Effectiveness Of Exercise Therapy For Temporomandibular Disorders

A report submitted to the University of Adelaide  
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DOCTOR OF CLINICAL DENTISTRY

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# ABSTRACT

**Background:** Therapeutic exercises have been used by Physiotherapists to manage musculoskeletal disorders, specifically Temporomandibular Disorders (TMD) for some time but they are less commonly used in dental practice. The current evidence about home exercise programs to treat TMD is weak despite some generally recognised benefits such as low cost, reversibility and reinforcement of the patient's coping skill, essential for management of chronic conditions like TMDs.

**Objective:** To evaluate the effectiveness of home exercise programs used as part of dental management for TMDs.

**Methods:** A search of the Cochrane Central Register of Controlled Trials (Cochrane Library Issue 7, 2012), Medline, Web of Knowledge and Scopus databases (January 1966 to February 2012) and reference lists of articles. Only randomized and quasi-randomised controlled trials published in English that compare exercise therapy to treatments without exercise therapy for TMDs were included. Two authors independently assessed the suitability of trials for final inclusion and also contacted study authors for additional information as required.

**Results:** Eleven trials involving 688 people were included. Two trials compared exercise programs to no-treatment control subjects for Anterior Disc-Displacement with Reduction (ADDwR). A significant risk ratio of 0.44 (0.29-0.59) (44% improvement rate) for improvement in clicking after at least four weeks of exercise therapy was revealed. Three trials compared exercise programs for Anterior Disc-Displacement without Reduction (ADDwoR) with no-treatment control subjects. An overall improvement in the pain-free range of maximal mouth opening with exercise intervention was observed although the differences were not statistically significant in one of three trials. Six trials compared exercise programs for Myofascial Pain patients with no-treatment controls. A standardised mean difference in jaw pain score of 0.73 (95% CI -0.63 – 2.10) indicates no effect from exercise therapy for this TMD subgroup.

**Conclusion:** Exercise therapy appears to be effective for treatment of some TMD subcategories and unlikely to present any adverse outcomes.

# DECLARATION

I, Sofie Chau Diem Bui certify that this work contains no material which has been accepted for the award of any other degree or diploma in any university or other tertiary institution in my name and, to the best of my knowledge and belief, contains no material previously published or written by another person, except where due reference has been made in the text. In addition, I certify that no part of this work will, in the future, be used in a submission in my name, for any other degree or diploma in any university or other tertiary institution without the prior approval of the University of Adelaide and where applicable, any partner institution responsible for the joint-award of this degree.

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Declared by

Dr. Sofie Chau Diem Bui

Date: 17<sup>th</sup> July 2013

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## DEDICATIONS

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*Con cảm ơn Ba và Mẹ đã sinh con, nuôi con lớn đến ngày hôm nay và tạo cơ hội cho con được học hành. Đặc biệt Ba Mẹ đã hy sinh tất cả, cũng như đã bỏ qua những cái bất toàn của con và chấp nhận con. Công ơn của Ba Mẹ con chỉ bù đắp lại bằng mảnh bằng nhỏ này, hy vọng Ba Mẹ vui và mãn nguyện như Ba Mẹ sẽ rất vui với những năm còn lại của cuộc đời với con cháu.*

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