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# The McGill Consensus Statement on Overdentures

## Mandibular two-implant overdentures as first choice standard of care for edentulous patients

A panel of experts who work in areas relevant to the consensus question, as well as patients and clinical trial participants who have experience with dental prostheses prepared this Consensus Statement.

It is based on (1) presentations given by these experts during a 1.5-day session; (2) available scientific knowledge on this topic; and (3) personal experience of the patients/participants.

This statement is an independent report and is not a policy statement for any profit-making body or business.

### Introduction

Most industrialized countries are experiencing a rapid decline in tooth loss. However, tooth loss increases with age, so the number of edentulous people within these societies will continue to increase for several decades because of the increase in mean age. Complete maxillary and mandibular dentures have been the traditional standard of care for edentulous patients for more than a century. Complete denture wearers are usually able to wear an upper denture without problems, but many struggle to eat with the complete lower denture because it is too mobile. Scientific studies have been carried out over the past decade to determine if the benefit of a mandibular two-implant overdenture is large enough to propose it, rather than the conventional denture, as the first treatment option.

It has already been established through longitudinal clinical studies, structured reviews and consensus conferences, that the survival of root form titanium implants is very high in the anterior mandible and that the incidence of surgical complications is very low. Furthermore, it has been shown that implants reduce the rate of resorption of the residual ridge in the anterior mandible.

### Patient perspective

Conventional dentures rely upon the residual alveolar ridge and mucosa for support and retention. Many patients have problems adapting to their complete dentures, and especially to the mandibular prosthesis. The widespread use of denture adhesives is one indication that these prostheses are inadequate for

many denture wearers. Numerous people wearing conventional dentures report that they cannot eat many foods, particular those that are hard or tough. This forces them to change their diets in unhealthy ways and causes their nutrition to be poorer than that of people with natural teeth.

Mandibular two-implant overdentures have been shown to be superior to conventional dentures in randomized and non-randomized clinical trials that ranged in duration from six months to nine years. Regardless of the type of attachment system used (bar, ball, magnet), participants are significantly more satisfied with 2-implant overdentures than with new conventional dentures. Patients find the implant overdentures significantly more stable, and they rate their ability to chew various foods as significantly easier. In addition, they are more comfortable and speak more easily with implant overdentures.

Studies of several populations have shown that ratings of quality of life are significantly higher for patients who receive 2-implant overdentures (opposing complete maxillary conventional dentures) than for those with new conventional dentures.

There is emerging evidence that people who receive mandibular two-implant overdentures modify their diets, while those who wear new conventional dentures do not. There is also preliminary evidence that this improves their nutritional state. Such improvements may have a strong positive impact on general health, particularly for senior adults who are vulnerable to malnutrition.

### **Cost**

Moreover, there is now conclusive evidence that oral implants may be placed in a single-stage procedure, which reduces cost. Nevertheless, the total cost of providing mandibular 2-implant overdentures is certainly greater than conventional dentures. However, the difference is not as large as one might expect and should be made affordable to everyone who is edentate.

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### **Conclusions**

The evidence currently available suggests that the restoration of the edentulous mandible with a conventional denture is no longer the most appropriate first choice prosthodontic treatment. There is now overwhelming evidence that a 2-implant overdenture should become the first choice of treatment for the edentulous mandible.

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This statement is supported by published studies which form the basis of the material to be published in *Mandibular Two-Implant Overdentures as Minimum Standard of Care for Edentulous Patients*, edited by JS Feine and GE Carlsson (Chicago: Quintessence, forthcoming).

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