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# Interventions for cleaning dentures in adults (Review)

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### [Intervention Review]

# Interventions for cleaning dentures in adults

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#### **ABSTRACT**

# **Background**

Removing denture plaque may be essential for maintaining the oral health of edentulous people. Brushing and soaking in chemical products are two of the most commonly used methods of cleaning dentures.

#### **Objectives**

To evaluate the effectiveness and safety of different methods for cleansing removable dentures.

# **Search methods**

We searched the following databases: the Cochrane Oral Health Group Trials Register (to May 2009); CENTRAL (*The Cochrane Library* 2009, Issue 2); MEDLINE (1965 to May 2009); EMBASE (1980 to May 2009); LILACS (1980 to May 2009); and CINAHL (1997 to May 2009). There were no language restrictions.

# **Selection criteria**

Randomised controlled trials (RCTs) comparing any mechanical method (e.g. brushing or ultrasound) or chemical (e.g. enzymes, sodium hypochlorite, oral rinses or peroxide solutions) in adults over the age of 18 wearing removable partial dentures or complete dentures.

The primary outcomes considered were the health of denture bearing areas (soft tissues, periodontal tissues and teeth) and participants' satisfaction and preference. Secondary outcomes included denture plaque coverage area, indicators of halitosis and microbial counts on abutment teeth, soft tissues or denture base or saliva.

#### **Data collection and analysis**

Two independent review authors screened and extracted information from, and independently assessed the risk of bias in the included trials.

### **Main results**

Although six RCTs were included in this review, the wide range of different interventions and outcome variables did not permit pooling of data in a meta-analysis. Isolated reports indicated that chemicals and brushing appear to be more effective than placebo in the reduction of plaque coverage and microbial counts of anaerobes and aerobes on complete denture bases.



#### **Authors' conclusions**

There is a lack of evidence about the comparative effectiveness of the different denture cleaning methods considered in this review. Few well designed RCTs were found. Future research should focus on comparisons between mechanical and chemical methods; the assessment of the association of methods, primary variables and costs should also receive future attention.

# PLAIN LANGUAGE SUMMARY

# Interventions for cleaning dentures in adults

Plaque formed on the surfaces of removable dentures can have a significant impact on oral health, as long as it can lead to infection of denture-supporting mucosa (stomatitis), gum inflammation (gingivitis) and tooth decay. Denture plaque can be removed by several different methods which include: brushing with paste, soaking in chemicals (e.g. effervescent tablets or bleach) and using special devices (a microwave oven or ultrasonic device).

This review found weak evidence in support of soaking of dentures in effervescent tablets or enzymatic solutions and that brushing with paste can remove plaque and kill microbes better than inactive treatments. It is, however, unclear which is the most effective and there is a paucity of data on the use of alternative methods.

Futures studies should aim to provide reliable information about which method is more effective in maintaining oral health of removable denture wearers. The scarce data found was restricted to the cleansing of complete dentures made from an acrylic resin base. Further research should also investigate how removable partial dentures can be cleaned, and in particular on the corrosive effects of cleaners on their metallic components.