

# Comparison of two denture adhesives and no adhesive on chewing performance and satisfaction in complete denture wearers

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|----------------------------------------|---------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|
| <b>Submission date</b><br>30/09/2026   | <b>Recruitment status</b><br>No longer recruiting | <input type="checkbox"/> Prospectively registered<br><input type="checkbox"/> Protocol                                  |
| <b>Registration date</b><br>02/10/2026 | <b>Overall study status</b><br>Completed          | <input type="checkbox"/> Statistical analysis plan<br><input type="checkbox"/> Results                                  |
| <b>Last Edited</b><br>02/10/2026       | <b>Condition category</b><br>Oral Health          | <input type="checkbox"/> Individual participant data<br><input checked="" type="checkbox"/> Record updated in last year |

## Plain English summary of protocol

### Background and study aims

People who have lost all of their natural teeth may use complete upper and lower dentures. Denture adhesives can help keep dentures in place, but different adhesive products may not work in the same way.

This study compared two denture adhesive creams, Corega and Fittydent, with using dentures without any adhesive. The researchers wanted to find out whether the adhesives affected how well people could chew food and how satisfied they were when using their dentures. They also wanted to see whether there were differences between the two adhesive products

### Who can participate?

Adults aged 18 to 100 years in Spain could take part if they had lost all of their natural teeth and wore complete upper and lower dentures. They needed to have used their dentures for at least 1 month, have no active problems affecting their mouth and be able to understand the study and give written consent

People could not take part if they still had some natural teeth, had previously had certain types of jaw surgery, had a known allergy to denture adhesives, had severe problems with thinking or understanding, or had a medical or muscle and nerve condition that could affect chewing

### What does the study involve?

A total of 25 people took part. Each participant tried three conditions: Corega denture adhesive, Fittydent denture adhesive and no denture adhesive. The order in which they tried these was decided at random. There was a 1-week break between each study session

During each session, participants chewed a standard 2.5-g test disc for 60 chewing cycles. The researchers collected the chewed material and passed it through laboratory sieves to measure how well it had been broken down. Participants were also asked to rate their satisfaction with each condition on a five-point scale

### What are the possible benefits and risks of participating?

The study information does not state that participants received any direct personal benefit from taking part. The results may help researchers understand whether different denture adhesives

affect chewing performance and satisfaction among people who wear complete dentures  
The study information does not describe any specific risks of taking part. People with a known allergy to denture adhesive materials were not allowed to participate

Where is the study run from?

Hospital Odontològic Universitat de Barcelona (Spain)

When is the study starting and how long is it expected to run for?

September 2019 to July 2020

Who is funding the study?

Investigator initiated and funded

Who is the main contact?

Dr Sergi Torné-Durán, [sergitorne@ub.edu](mailto:sergitorne@ub.edu) or [sergitorne@gmail.com](mailto:sergitorne@gmail.com)

## Contact information

### Type(s)

Principal investigator, Scientific, Public

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## Additional identifiers

## Study information

### Scientific Title

Denture adhesives, fragmentation and satisfaction: a randomized crossover pilot study

### Study objectives

To explore product-specific differences in fine-particle production and patient satisfaction in complete denture wearers using two commercially available denture adhesives, Corega and Fittydent, compared with a no-adhesive condition. The study also aimed to assess whether the effects of denture adhesives differed according to the product used.

## **Ethics approval required**

Ethics approval required

## **Ethics approval(s)**

Approved 20/11/2018, Comitè d'Ètica i Investigació Clínica (CEIm), Hospital Odontològic Universitat de Barcelona (Campus Ciències de la Salut de Bellvitge, Feixa Llarga, s/n, L'Hospitalet de Llobregat, Barcelona, 08907, Spain; +34 933 35 80 54; hospital.odontologic@ub.edu), ref: 39 /2018

## **Primary study design**

Interventional

## **Allocation**

Randomized controlled trial

## **Masking**

Blinded (masking used)

## **Control**

Active

## **Assignment**

Crossover

## **Purpose**

Treatment

## **Study type(s)**

## **Health condition(s) or problem(s) studied**

Complete edentulism in adults wearing complete maxillary and mandibular dentures, with assessment of masticatory performance and patient satisfaction during denture adhesive use.

## **Interventions**

Each participant received all three study conditions in randomized order in a three-period crossover design, with a one-week washout between sessions.

1. Corega denture adhesive cream: a 1-cm strip was applied to each of three areas of both the maxillary and mandibular complete dentures, giving six 1-cm strips in total
2. Fittydent Super Adhesive: applied using the same standardized protocol as Corega
3. No-adhesive control condition: the complete dentures were used without denture adhesive

At each experimental session, participants performed 60 masticatory cycles using a standardized 2.5-g irreversible-hydrocolloid disc. The chewed material was recovered and passed through 2.4-mm and 1.2-mm laboratory sieves, and the material reaching the final collecting pan was weighed. After each condition, participants rated satisfaction on a five-point Likert-type scale.

## **Randomisation process**

The treatment order was randomized using a computer-generated allocation sequence. The allocation sequences were kept in sealed envelopes by an independent researcher. Each participant received all three study conditions in a randomized order, with a one-week washout period between sessions.

**Intervention Type**

Other

**Primary outcome(s)**

1. Fine-particle production (PPCF) measured using weight in grams of particles passing through both the 2.4-mm and 1.2-mm sieves and reaching the final collecting pan (PPCF), measured using an electronic scale at after 60 standardized masticatory cycles at each of the three experimental sessions

**Key secondary outcome(s)****Completion date**

20/07/2020

**Eligibility****Key inclusion criteria**

1. Complete edentulism
2. Wearing complete maxillary and mandibular dentures
3. Use of complete dentures for at least one month before testing
4. Absence of active oral pathology
5. Ability to understand the study procedures and provide written informed consent

**Healthy volunteers allowed**

No

**Age group**

Mixed

**Lower age limit**

18 Years

**Upper age limit**

100 Years

**Sex**

All

**Total final enrolment**

25

**Key exclusion criteria**

1. Partial edentulism
2. History of maxillectomy or hemimandibulectomy
3. Known allergy to denture adhesive materials
4. Severe cognitive impairment
5. Systemic or neuromuscular conditions affecting mastication

**Date of first enrolment**

01/09/2019

**Date of final enrolment**

30/05/2020

## Locations

**Countries of recruitment**

Spain

## Sponsor information

**Organisation**

Universitat de Barcelona

**ROR**

<https://ror.org/021018s57>

## Funder(s)

**Funder type**

**Funder Name**

Investigator initiated and funded

**Alternative Name(s)**

University of Barcelona, Universidad de Barcelona, UB

**Funding Body Type**

Government organisation

**Funding Body Subtype**

Local government

**Location**

Spain

## Results and Publications

**Individual participant data (IPD) sharing plan**

Deidentified participant-level data underlying the reported results and the statistical analysis code will be shared as supplementary material and/or through a public research-data repository. No directly identifiable participant information will be shared.

## **IPD sharing plan summary**

Published as a supplement to the results publication, Stored in publicly available repository