

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

01 Jul 2026

### Evaluation of the effect of applying air-particle abrasion on the retention of the upper complete denture

#### Protocol summary

##### Summary

1-Objectives: The aim of this study is to evaluate the effect of sandblasting the impression surface on the maxillary denture retention. 2-Design: Before and After Clinical trial (the patients are their control group as well), accidental sampling and uni-center trial. 15 patients are going to participate. 3-Setting and Conduct: Retention of the maxillary bases before and after air-abrasion for the same patients will be compared. 4-Participants including major eligibility criteria: Patients of the Department of Prosthodontics of the Shahed University for complete removable denture treatment that have no oral disease, mucosal undercuts and any history of allergy to dental materials. 5-Intervention: evaluating the effect of sandblasting the impression surface on the maxillary denture retention during complete denture fabrication. 6-Main outcome measure: increased retention of maxillary complete denture

#### General information

##### Acronym

-

##### IRCT registration information

IRCT registration number: **IRCT2015041921835N1**  
Registration date: **2015-12-30, 1394/10/09**  
Registration timing: **retrospective**

Last update:

Update count: **0**

##### Registration date

2015-12-30, 1394/10/09

##### Registrant information

###### Name

Farnoosh Taghavi

###### Name of organization / entity

Shahed Dental School of Shahed University

##### Country

Iran (Islamic Republic of)

##### Phone

+98 21 8895 9210

##### Email address

f.taghavi@shahed.ac.ir

##### Recruitment status

**Recruitment complete**

##### Funding source

Vice Chancellor for Research, Shahed Dental School of Shahed University

##### Expected recruitment start date

2015-09-10, 1394/06/19

##### Expected recruitment end date

2015-11-10, 1394/08/19

##### Actual recruitment start date

empty

##### Actual recruitment end date

empty

##### Trial completion date

empty

##### Scientific title

Evaluation of the effect of applying air-particle abrasion on the retention of the upper complete denture

##### Public title

Evaluation of the effect of applying air-particle abrasion on the retention of the upper complete denture

##### Purpose

Treatment

##### Inclusion/Exclusion criteria

Inclusion criteria: Patients of the Department of Prosthodontics of the Shahed University for complete removable denture treatment; No oral disease; No mucosal undercuts; No history of allergy to dental materials. Exclusion Criteria: Having Oral disease; Having mucosal undercuts in the upper jaw; History of allergy to dental materials

##### Age

From **30 years** old to **100 years** old

**Gender**  
Both

**Phase**  
2-3

**Groups that have been masked**  
*No information*

**Sample size**  
Target sample size: **15**

**Randomization (investigator's opinion)**  
N/A

**Randomization description**

**Blinding (investigator's opinion)**  
Not blinded

**Blinding description**

**Placebo**  
Not used

**Assignment**  
Other

**Other design features**  
-

## Secondary Ids

1

**Registry name**  
-

**Secondary trial Id**  
-

**Registration date**  
empty

## Ethics committees

1

**Ethics committee**

**Name of ethics committee**  
Ethics Committee of Shahed University

**Street address**  
No. 39, Italia Street, Vesal Street, Enghelab Street,  
Tehran, Iran

**City**  
Tehran

**Postal code**

**Approval date**  
2015-11-15, 1394/08/24

**Ethics committee reference number**  
Shahed.rec.1394.51

## Health conditions studied

1

**Description of health condition studied**  
The effect of sandblasting with airborne particles on the retention of complete maxillary denture

**ICD-10 code**  
-

**ICD-10 code description**

## Primary outcomes

1

**Description**  
retention of the maxillary complete denture

**Timepoint**  
before and immediately after the intervention(Sandblasting)

**Method of measurement**  
Determining the force needed to dislodge the base from the patients' palate with digital force transducer

## Secondary outcomes

1

**Description**  
-

**Timepoint**  
-

**Method of measurement**  
-

## Intervention groups

1

**Description**  
Intervention group: Sandblasting the tissue surface of maxillary complete base Intervention: The internal surface of the bases will be air abraded by 50 micron Alumina particles for 1 minute except for the borders which will be covered by Aluminum thin foils.

**Category**  
Other

## Recruitment centers

1

**Recruitment center**

**Name of recruitment center**  
Shahed Dental School

**Full name of responsible person**  
Dr Farnoosh Taghavi

**Street address**  
No. 39, Italia Street, Vesal Street, Enghelab Street,  
Tehran, Iran

**City**  
Tehran

## Sponsors / Funding sources

1

**Sponsor**

**Name of organization / entity**  
Vice Chancellor for Research of Shahed Dental School

of Shahed University

**Full name of responsible person**

Ms Gharajeh

**Street address**

No. 39, Italia Street, Vesal Street, Enghelab Street,  
Tehran, Iran

**City**

Tehran

**Grant name**

-

**Grant code / Reference number**

-

**Is the source of funding the same sponsor organization/entity?**

Yes

**Title of funding source**

Vice Chancellor for Research of Shahed Dental School of  
Shahed University

**Proportion provided by this source**

100

**Public or private sector**

*empty*

**Domestic or foreign origin**

*empty*

**Category of foreign source of funding**

*empty*

**Country of origin**

**Type of organization providing the funding**

*empty*

## Person responsible for general inquiries

**Contact**

**Name of organization / entity**

Shahed Dental School

**Full name of responsible person**

Farnoosh Taghavi

**Position**

Resident of Prosthodontics

**Other areas of specialty/work**

**Street address**

No. 39, Italia Street, Vesal Street, Enghelab Street,  
Tehran, Iran

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**Phone**

+98 21 8895 9210

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f.taghavi@shahed.ac.ir;

**Web page address**

## Person responsible for scientific inquiries

**Contact**

**Name of organization / entity**

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**Full name of responsible person**

Farnoosh Taghavi

**Position**

Resident of Prosthodontics

**Other areas of specialty/work**

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## Person responsible for updating data

**Contact**

**Name of organization / entity**

Shahed Dental School

**Full name of responsible person**

Farnoosh Taghavi

**Position**

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**Other areas of specialty/work**

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**Web page address**

## Sharing plan

**Deidentified Individual Participant Data Set (IPD)**

*empty*

**Study Protocol**

*empty*

**Statistical Analysis Plan**

*empty*

**Informed Consent Form**

*empty*

**Clinical Study Report**

*empty*

**Analytic Code**

*empty*

**Data Dictionary**

*empty*