

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

21 Jun 2026

### Clinical comparison of professional tooth brushing in dental microbial plaque removal using four common manual toothbrushes in Iran

#### Protocol summary

##### Summary

Background: plaque control has important role in the prevention of periodontal disease. Mechanical oral hygiene procedures are the most effective ways to remove plaque and using manual toothbrush is the most popular mechanical method of plaque control in the world. Objective: The aim of this study was to compare dental plaque removal efficacy of 4 manual toothbrushes under professional tooth brushing. Material & method: This study was a single blind, cross match clinical trial. Twelve patients aged between 22-26 participated in this study. Study toothbrushes were Butler 411, oral-B plus, oral-B cross action & oral-B pulsar. At first scaling, root planning & polishing was done for patients then they suspended tooth cleansing for 3 days and on day 4 plaque was scored before and after a 2 min professional tooth brushing by Turesky modified Quigley & Hein index

Iran (Islamic Republic of)

##### Phone

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##### Email address

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##### Recruitment status

**Recruitment complete**

##### Funding source

Dental school of Guilan University of medical sciences

##### Expected recruitment start date

2008-01-24, 1386/11/04

##### Expected recruitment end date

2009-02-18, 1387/11/30

##### Actual recruitment start date

empty

##### Actual recruitment end date

empty

##### Trial completion date

empty

#### General information

##### Acronym

##### IRCT registration information

IRCT registration number: **IRCT201105145570N5**

Registration date: **2011-12-15, 1390/09/24**

Registration timing: **retrospective**

Last update:

Update count: **0**

##### Registration date

2011-12-15, 1390/09/24

##### Registrant information

##### Name

Parichehr Behfarnia

##### Name of organization / entity

Isfahan University of Medical Sciences

##### Country

##### Scientific title

Clinical comparison of professional tooth brushing in dental microbial plaque removal using four common manual toothbrushes in Iran

##### Public title

Comparison of dental microbial plaque removal using four common manual toothbrushes in Iran

##### Purpose

Prevention

##### Inclusion/Exclusion criteria

Inclusion criteria: age 22-26 years; normal periodontium; absence of any systemic disease or drug consumption. Exclusion criteria: presence of systemic disease; presence of gingivitis, periodontitis or gingival enlargement; smoking; presence of dental prosthesis and orthodontic appliances; dental-skeletal abnormalities which affect application of toothbrushes.

##### Age

From **22 years** old to **26 years** old

**Gender**

Both

**Phase**

N/A

**Groups that have been masked***No information***Sample size**Target sample size: **12****Randomization (investigator's opinion)**

N/A

**Randomization description****Blinding (investigator's opinion)**

Single blinded

**Blinding description****Placebo**

Not used

**Assignment**

Other

**Other design features****Secondary Ids**

empty

**Ethics committees****1****Ethics committee****Name of ethics committee**

Dental school of Guilan University of medical sciences

**Street address**

Pardis

**City**

Rasht

**Postal code****Approval date**

2009-01-14, 1387/10/25

**Ethics committee reference number**

1251

**Health conditions studied****1****Description of health condition studied**

normal periodontium

**ICD-10 code**

K05.5

**ICD-10 code description**

other periodontal disease

**Primary outcomes****1****Description**

dental plaque

**Timepoint**

immediately after professional tooth brushing

**Method of measurement**

plaque index

**Secondary outcomes**

empty

**Intervention groups****1****Description**

professional tooth brushing using Butler 411 toothbrush (the patients were asked to refuse tooth brushing for 72 hours)

**Category**

Treatment - Other

**2****Description**

professional tooth brushing using Oral-B plus toothbrush (the patients were asked to refuse tooth brushing for 72 hours)

**Category**

Treatment - Other

**3****Description**

professional tooth brushing using Oral-B cross action toothbrush (the patients were asked to refuse tooth brushing for 72 hours)

**Category**

Treatment - Other

**4****Description**

professional tooth brushing using Oral-B pulsar toothbrush (the patients were asked to refuse tooth brushing for 72 hours)

**Category**

Treatment - Other

**Recruitment centers****1****Recruitment center****Name of recruitment center**

Dental school of Guilan University of medical sciences

**Full name of responsible person**

Dr Elham Fakhari

**Street address**

Pardis

**City**

Rasht

**Sponsors / Funding sources**

## 1

### Sponsor

**Name of organization / entity**

Dental school of Guilan University of medical sciences

**Full name of responsible person**

Dr Seied Javad Seied Kia

**Street address**

Pardis

**City**

Rasht

**Grant name****Grant code / Reference number****Is the source of funding the same sponsor organization/entity?**

Yes

**Title of funding source**

Dental school of Guilan University of medical sciences

**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**

Dental school of Isfahan University of medical sciences

**Full name of responsible person**

Dr Elham Fakhari

**Position**

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### 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*