Studies made with IONIC(KISS) toothbrushes

1. **Clinical comparison of an electric-powered ionic toothbrush to a manual toothbrush in a plaque reduction: randomized clinical trial**

   Read more at the LINK.

   Clinical study from **Oct 2020,** published by **International Journal of Dental Hygiene.**

   Thanks to:

   - **Takahiro Ikawa** *(Department of Periodontology, Graduate School of Medical and Dental Sciences, Tokyo Medical and Dental University, Tokyo, Japan and Department of Periodontology, Faculty of Odontology, Malmö University, Malmö, Sweden)*
   - **Koji Mizutani** (*Department of Periodontology, Graduate School of Medical and Dental Sciences, Tokyo Medical and Dental University, Tokyo, Japan)*
   - **Takeaki Sudo** (*Department of Periodontology, Graduate School of Medical and Dental Sciences, Tokyo Medical and Dental University, Tokyo, Japan)*
   - **Chihiro Kano** (*Department of Periodontology, Graduate School of Medical and Dental Sciences, Tokyo Medical and Dental University, Tokyo, Japan)*
   - **Yuichi Ikeda** (*Department of Periodontology, Graduate School of Medical and Dental Sciences, Tokyo Medical and Dental University, Tokyo, Japan)*
   - **Tatsuya Akizuki** (*Department of Periodontology, Graduate School of Medical and Dental Sciences, Tokyo Medical and Dental University, Tokyo, Japan)*
   - **Hiroaki Kobayashi** (*Department of Periodontology, Graduate School of Medical and Dental Sciences, Tokyo Medical and Dental University, Tokyo, Japan)*
   - **Yuichi Izumi** (*Department of Periodontology, Graduate School of Medical and Dental Sciences, Tokyo Medical and Dental University, Tokyo, Japan and Oral Care Perio Center, Southern TOHOKU General Hospital, Southern TOHOKU Research Institute for Neuroscience, Fukushima, Japan)*
   - **Takanori Iwata** (*Department of Periodontology, Graduate School of Medical and Dental Sciences, Tokyo Medical and Dental University, Tokyo, Japan)*

   Included in the study:

   30 healthy volunteers.

   Conclusion: *Assessment of plaque removal rate between electric powered ionic toothbrush and a manual toothbrush was performed. Owing to both electric-powered and anion activation, the plaque removal efficiency was improved in the molar area that showed low accessibility of brush. Practical implications: Electric-powered ionic toothbrush is useful devices for removing plaque and help prevent dental problems caused by plaque.*

2. The effectiveness of an ionic toothbrush in the removal of dental plaque and reduction on gingivitis in orthodontic patients

Read more at the LINK.

Clinical study from **1999,** published by **The Journal of the Western Society of Periodontology.**

Thanks to:

- **J J Pucher** (*Department of Veterans Affairs, Veterans Administration, Greater Los Angeles Healthcare System, Los Angeles, California, USA.)*
- **K Lamendola-Sitenga**
- **D Ferguson**
- **R Van Swoll**

Included in the study:

Fifty-two orthodontic patients were randomly assigned to one of two groups and completed a six-week double-blind study.

Conclusion: *It was observed that the ionic toothbrush effectively reduced plaque and gingivitis regardless of the presence or absence of an active battery. The clinical findings demonstrated that an active ionic toothbrush was no more effective in removing plaque and reducing gingivitis in patients with orthodontic appliances than an inactive ionic toothbrush.*

3. The Effectiveness of an ionic toothbrush in maintaining oral hygiene

Read more at the LINK.

Clinical study from **2020**, published by **Acta Stomatologica Croatica.**

Thanks to:

- **Peručić Jasna** *(School of Dental Medicine University of Zagreb)*
- **Karlović Zoran** *(Full Professor, Department of Endodontics and Restorative Dentistry, School of Dental Medicine University of Zagreb)*
- **Simeo Paris** *(School of Dental Medicine University of Zagreb/University Clinical Hospital Centre Zagreb)*
- **Jurić-Kaćunić Danijela** *(School of Dental Medicine University of Zagreb)*
- **Matijević Jurica** *(School of Dental Medicine University of Zagreb)*

Included in the study:

Participated 13 subjects.

***Conclusion**: Based on the results obtained, it can be concluded that the ionic brush, along with mechanical cleaning, has an additional effect that helps maintain oral hygiene. By changing the charge of the tooth, the plaque adheres less to it. Although the results showed improvements in both measured components, further research is for proven clinical effectiveness.*

4. Clinical evaluation of an ionic toothbrush on oral hygiene status, gingival status, and microbial parameter

Read more at the LINK.

Clinical study from **2006**, published by **Indian journal of dental research.**

Thanks to:

- **J. Deshmukh** *(Department of Periodontics, College of Dental Sciences, Davangere 577004, Karnataka, India.)*
- **K. L. Vandana**
- **K. T. Chandrashekar**
- **B. Savitha**

Included in the study:

For this study, 20 dental students in the age group of 18-20 years were included.

***Conclusion:** Results shown a significant reduction in all the parameters and the reduction was more significant in active and inactive ionic toothbrush users. It was concluded that both active and inactive ionic toothbrushes reduced the plaque index and gingival bleeding index scores significantly and active ionic tooth brushes were more effective as compared to inactive ionic toothbrushes. There was no soft tissue trauma following the use of both type of toothbrushes, which showed that ionic toothbrushes were equally safe for regular long-term use.*

5. Comparison of sonic and ionic toothbrush in reduction in plaque and gingivitis

Read more at the LINK.

Clinical study from **Jul-Sep 2011**, published by **International Journal of Indian Society Periodontology**.

Thanks to:

- **Guljot Singh** *(Department of Periodontics, Institute of Dental Studies and Technologies, Modinagar, Uttar Pradesh, India)*
- **D. S. Mehta** *(Bapuji Dental College and Hospital, Davangere, Karnataka, India)*
- **Shruti Chopra** *(Department of Periodontics, Institute of Dental Studies and Technologies, Modinagar, Uttar Pradesh, India)*

- **Manish Khatri** *(Department of Periodontics, Institute of Dental Studies and Technologies, Modinagar, Uttar Pradesh, India)*

Included in the study:

A total of 22 (11 males and 11 females) student volunteers.

Conclusion: *Both the toothbrushes showed significant reduction in all three parameters. However, the sonic toothbrush proved to be more effective than the ionic toothbrush on the percentage basis, the difference in parameters was statistically nonsignificant.*
It may be concluded from the present study that though the sonic toothbrush was insignificantly superior to the ionic toothbrush, both the toothbrushes are clinically effective in removing plaque and improving the gingival conditions.

OTHERS

6. Impact of fluoride on neurological development in children

Read more at the LINK.

Clinical study from **July 2012**, published by Journal Environmental Health Perspectives.

Thanks to:

- **Anna Choi** (*research scientist in the Department of Environmental Health at HSPH*).
- **Philippe Grandjean** (*adjunct professor of environmental health at Harvard School of Public Health (HSPH)).*

Included in the study:

The children studied were up to 14 years of age.

Conclusion**:** *Thus, children in high-fluoride areas had significantly lower IQ scores than those who lived in low-fluoride areas. The children studied were up to 14 years of age, but the investigators speculate that any toxic effect on brain development may have happened earlier, and that the brain may not be fully capable of compensating for the toxicity.*

7. Parent's and children's behavior and knowledge about oral health

More at the LINK.

Clinical study from **2016**, published by **Acta medica Croatica.**

Thanks to:

- **M. Beljan**
- **Z. Puharić**
- **M. Žulec**
- **D. Borić**
- **K. Radičanin Neumuller**

Included in the study:

The study included 101 parent-child pairs (age 11-15 years).

Conclusion: *Results of this study showed the close relationship between family attitudes about oral hygiene, as children follow their parents' habits and behavior. In conclusion, by educating parents, we influence their children's behavior and knowledge about oral health, and this is the way that health workers should plan interventions to prevent oral diseases.*

8. A comparison of the efficacy and safety of an electric and a manual children's toothbrush

More at the LINK.

Clinical study from **1997**, published by **American Dental Association.**

Thanks to:

- **E. Grossman** *(New Institutional Service Company Inc., Northfield, N.J. USA)*
- **H. Proskin**

Conclusion: *Results showed that in a pediatric population aged between 8 and 12 years, the electric brush achieved significantly greater plaque removal from both primary and permanent dentition.*

9. Children's toothbrushing frequency: the influence of parents' rationale for brushing, habits and family routines

More at the LINK.

Clinical study from **2015**, published by **European Organization for Caries Research.**

Thanks to:

- **Rob J. Trubey (***Violence and Society Research Group, Cardiff University School of Dentistry, Cardiff, UK.)*
- **Simon C. Moore**

- **Ivor G. Chestnutt**

Included in the study:

A cross-sectional questionnaire survey of predominantly low-socio-economic status parents of children aged 3-6 years (n = 296) in South Wales, UK.

Conclusion: *Parents' rationale for brushing their children's teeth can vary at both an individual level and at different times of day. Understanding these variations is important in designing interventions to improve brushing frequency for at-risk children. The results also demonstrate habituation as being an important factor in understanding toothbrushing frequency. Further research is required to understand the mechanisms involved in habit formation and maintenance with children's oral hygiene behavior.*