

Various Latest Toothbrush Design

Amrita Das, Monika Goswamy¹, Monica Mahajani², Vivek Choukse³, Kuldeep Sudhir Patil⁴, Sneha Shankar Chavhan⁵

Senior Lecturer, ²PHD Examiner, Staff Selection Committee, Department of Periodontology and Implantology, Dr. HSRM Dental College and Hospital, ³Principal and Professor and HOD, Department of Prosthodontics, Dr. HSRM Dental College and Hospital, ⁴Senior Lecturer, Department of Periodontology and Implantology, Dr. HSRM Dental College and Hospital, ⁵2nd Year Postgraduate, Department of Periodontology and Oral Implantology, Dr. HSRM Dental College and Hospital, Hingoli, Maharashtra, ¹Professor, Department of Periodontology and Implantology, SDM College of Dental Science and Hospital, Dharwad, Karnataka, India

Abstract

Toothbrush has been a vital part of day-to-day routine across many cultures worldwide from the times of the distant past and ancientness to the recent 21st century. Over the years, numerous types of toothbrushes have been devised and designed till now. Some of the toothbrushes proposed the purpose of solving physically and mentally handicapped patients. It has been used in the reduction of dental plaque after various acceptability and tolerance of each device. We probably did not think of inventions along with the latest technology when we think of a toothbrush. Nonetheless, you should do so, despite the fact that the toothbrush has been around since 3500 BC. Electric toothbrushes were first introduced in 1969, and the modern toothbrush as we know it was invented in the late 1800s. Despite the addition of the latest technology, for example, Bluetooth to electric toothbrushes in latest years, supplementary technological advancements in these devices have been slow. Moreover, toothbrushes have not changed all that much in terms of design. Latest ways of thinking are emerging. Technology has progressed to the point where advances that we once only imagined are now becoming a reality. It is perfectly possible for creators who have somewhat that acquires the public's hearts in addition desires to finance their project with amounts of money they could only have imagined. The next 10 years or so appear to have the potential to bring about significant changes. This review examines all of the latest technology as well as innovation affecting toothbrushes.

Keywords: Oral health, brush, technology

INTRODUCTION

Dental health-care professionals are concerned about their patients' oral health. Regular oral hygiene promotion can help to maintain a functional dentition throughout one's life. The various methods for preventing the formation of bacterial plaques can be classified in this way.^[1] As a result, an innovative hybrid toothbrush was created, and a great deal of effort was put into improving toothbrush design, head, and bristles. Numerous modes of action, such as oscillation – rotation, side to side, sonic action, counter oscillation, circular, ultrasonic, and ionic, can be found to improve market conception and adoption. As a result, the latest generation of toothbrushes has been developed that require minimal hand movements and apply light pressure while moving the brush slowly.^[2,3]

The latest toothbrush technology has been classified as:

Each company or brand that develops the latest products as well as services for the dental health market has its own terminology for technological advancements.

The majority of advancements fall into one of several categories.

- Sustainability – Toothbrushes along with dental products that are less harmful to the environment – this includes biodegradable brushes and other biodegradable products
- Effectiveness – Brushes that clean your teeth in less time or to a higher standard of cleanliness
- Connectivity – Smart dental products that commune with one another or with other devices such as a smartphone to help with oral hygiene.

Address for correspondence: Dr. Amrita Das,
Department of Periodontology and Implantology, Dr. HSRM Dental College
and Hospital, Hingoli, Maharashtra, India.
E-mail: das.amrita94@gmail.com

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SymplBrush

Category: Efficiency

A toothbrush with a mouthpiece that cleans all of the teeth in one arch at once. Brushing each arch takes 15 s, for a total of 30 s. The product and its development were led by a practicing dental professional and were privately sponsored instead of crowdfunded. The majority of the development has been kept under wraps until August 2021, when it will be released. It is the American company's first product, and the results are extremely promising. It is currently only available in the United States.^[4]

Sonicare Prestige 9900

Category: Connectedness

The Prestige 9900 is an evolution of the DiamondClean Smart, and it aims to make things easier for the user. By providing only one cleaning mode out of the box, simplicity is achieved. Supplementary cleaning modes, for example, will have to be aided thru an app, which is a minor but potentially useful feature.

Instafloss

Category: Efficiency

This is a water flosser that cleans between your teeth as well as along the gumline of both your top and bottom teeth at the same time.

CleanTeeth (previously CleanFreak)

Category: Efficiency

A toothbrush with a mouthpiece designed to clean teeth by applying the right amount of pressure along with angling the bristles at 45° to the gumline. The brush head cleans one arch of teeth at a time, taking only 30 s to complete the entire brushing routine.

Reswirl

Category: Sustainability

Reswirl is a polyhydroxyalkanoate (PHA)-based biodegradable manual toothbrush PHA.

Another option for consumers is this manual toothbrush. The materials are biodegradable in and of themselves, but small details such as a hollow handle reduce the amount of material used in production, which helps to speed up biodegradation.

Oral-iO B

Category: Connectivity

Oral-iO B's electric toothbrush features a refined design and the latest internal components for a quieter yet powerful electric toothbrush. It is a smarter, more comprehensive product that will assist us more effectively.

BruBruBrush

Category: Efficiency

The BruBruBrush toothbrush is designed to clean more of your teeth at once and to do so better than any other toothbrush on the market.

It cleans all three surfaces of the teeth at once. This means we can clean all of the teeth in the mouth in just 50 s while also achieving a higher level of cleanliness.^[5]

Tooth.Eco

Category: Sustainability

This is a toothbrush that you have to use by hand. This toothbrush is both fashionable and environmentally friendly. The handle in addition to the magnetic stand that comes with Tooth.Eco is made of recycled aluminum.

Oral-B Genius X

Category: Connectivity

The Genius X is an evolution of the company's smart in addition to Bluetooth-enabled electric toothbrushes.

The Genius X can track the position of the toothbrush in the mouth-utilizing sensors built into the toothbrush handle along with artificial intelligence built into the smartphone app.

A battery-free, powered toothbrush

Category: Sustainability

Be (short for Beyond Electric) is a compostable and biodegradable toothbrush from Goodwell Co. It is battery-free because it is powered by kinetic energy.^[6]

Bristl

Category: Efficiency

Bristl has three approaches of light (blue, red, and purple) to assist accomplish improved oral health using light therapy technology to kill bacteria on the teeth and gums. Blue light kills bacteria in the mouth that would or else cause gum disease and whitens teeth. Collagen secretion is stimulated by red light, which aids in gum tissue regeneration. Purple light is a combination of blue as well as a red light that kills germs while also strengthening gum tissue. Bacteria are the main reason we brush our teeth; if it is not removed, it can cause oral health issues. Using light technology reduces the risk by safeguarding that bacteria is killed.^[7]

ToothShower

Category: Sustainability

ToothShower is a water flosser and toothbrush combo that you install in our shower. It is powered by the water pressure from our shower – no electricity is required. ToothShower aims to deliver two of the most frustrating aspects of flossing: utilizing string floss can be fiddly, as well as utilizing a countertop water flosser can be messy.^[8]

BRUSHES AND REPLACEMENT HEADS MADE FROM BIODEGRADABLE MATERIALS

Biodegradable toothbrushes are not entirely new – Save Some Green's bamboo toothbrush, for example, has been around for a while – but the latest designs are beginning to arise. One such product is the Boie brush that has a sleek design besides it is also silver encrusted. Till now, a biodegradable brush is intended to be a manual brush, but then again, the Be brush will be 100% biodegradable along with compostable; in addition, it will be powered by kinetic energy.^[9]

TOOTHBRUSHES WITH INTELLIGENCE

A growing sum of brushes has a cohort app recording information about how well we brush. Because of artificial intelligence along with the increased amount of data collected by these toothbrushes, these apps are becoming more capable. Oral-B iO and DiamondClean Smart both provide real-time feedback on how well we brush.^[10-12]

CONCLUSION

According to this review, the toothbrush has evolved continuously throughout its long history, but the 21st century is poised to elevate the toothbrush to the latest heights through the integration of technology that will be advantageous to the end user. The capability to dynamically collect and analyze data can aid in knowledge of people's brushing habits, evolving focused brushing programs grounded on patient-specific needs, as well as ultimately assisting in the development of large-scale public health programs.

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Conflicts of interest

There are no conflicts of interest.

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