**Philips Sonicare latest clinical evidence**

**By Philips Sonicare**

At Philips Oral Healthcare, we take tremendous pride in the quality of our work. Refurb every Philips Sonicare product is a global team of dedicated and experienced people collaborating across a spectrum of disciplines that span the continuum of product development.

Our aim is to be an extension of the Dental Practitioner in patients’ homes, providing oral hygiene tools that meaningfully improve and sustain oral health, consistent with the goals that you set together with your patients. It is with this standard in mind that we critically evaluate the safety and efficacy of the products in our pipeline. You, and your patients, deserve a foundation of evidence from which decisions about home care oral care procedures and regimens can be made. Whether it’s that patient whose gingival tissue could benefit from more thorough plaque biofilm removal, or that patient who just can’t seem to sustain a daily interproximal cleaning habit, we take a patient-centered, evidence-based homecare as seriously as you do.

In a Special issue of the Journal of Clinical Dentistry, five full manuscripts provide this foundation of evidence by detailing the outcomes from four clinical trials, and one meta-analysis, in which the safety and efficacy profile of Sonicare innovations have been critically examined by Dr. Maha Yakob, the Director of Professional Relations and Scientific Affairs at Philips Oral Healthcare, noted “At Philips Sonicare, we strive to instill an evidence-based mindset in our product development process.”

We partner with Dental Professionals to provide oral health solutions to patients that are demonstrated as safe and effective, through rigorous examination in clinical trials and published in peer-reviewed journals.”

The five articles contained in the Special issue of the Journal of Clinical Dentistry underscore these important points, providing Dental Professionals a transparent look into the clinical data that forms the basis of a suite of safety and efficacy evidence.

**Study 1**

Comparison of Gingival Reduction and Plaque Removal by Philips Sonicare FlexCare Platinum and a Manual Toothbrush

<table>
<thead>
<tr>
<th>Products</th>
<th>Subjects</th>
<th>Design</th>
<th>Results: Percentage of Reduction at 4 Weeks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Philips Sonicare FlexCare Platinum</td>
<td>143</td>
<td>Single-blind</td>
<td>37.5%</td>
</tr>
<tr>
<td>Manual Toothbrush</td>
<td>141</td>
<td>Single-blind</td>
<td>13.8%</td>
</tr>
</tbody>
</table>

**Key facts**

We found that this high-intensity sonic-powered toothbrush was observed to be statistically significantly superior to the use of a manual toothbrush, within 2 weeks of use, persisting to study conclusion at 4 weeks, in reducing surface plaque, gingivitis and gingival bleeding. (Study 1)

Similar outcomes were also observed in a clinical trial comparison between the Philips Sonicare FlexCare Platinum with Premium Plaque Control brush head, and a manual toothbrush, following 2 and 6 weeks of use. For example, by the Week 2 visit following use of the assigned product, the mean percent reduction from baseline in the assessment of gingival bleeding was 47.4% for the Sonicare group, and 8.6% for the manual toothbrush group. (Study 2)

Taking a high-level view, the five articles focus on the effect of Philips products on surface plaque removal, gingival bleeding and inflammation. We have long known that the plaque-coating teeth surfaces is its own, dynamic microenvironment, where there exists a spectrum of bacterial species and their byproducts that are health or disease-associated. And we know that the character of these biofilms can affect whether the adjacent tissue, the gingiva, is healthy. As such, the clinical trials reported in the Special issue focus on these important clinical endpoints.

**Key conclusions**

Key facts in the first manuscript which reports a randomized, parallel-design clinical trial, the Philips Sonicare DiamondClean powered toothbrush was observed to be statistically significantly superior to the use of a manual toothbrush, within 2 weeks of use, persisting to study conclusion at 4 weeks, in reducing surface plaque, gingivitis and gingival bleeding. (Study 1)

Similar outcomes were also observed in a clinical trial comparison between the Philips Sonicare FlexCare Platinum with Premium Plaque Control brush head, and a manual toothbrush, following 2 and 6 weeks of use. For example, by the Week 2 visit following use of the assigned product, the mean percent reduction from baseline in the assessment of gingival bleeding was 47.4% for the Sonicare group, and 8.6% for the manual toothbrush group. (Study 2)

The third manuscript reports on a meta-analysis that was initiated to determine whether these discrete observations of differences in plaque and gingivitis reduction between ‘sonic’ powered and manual toothbrushes, were supported in a broad presentation of publicly available literature. The study authors queried multiple publicly accessible databases for clinical trial outcomes using a pre-defined set of keywords. Thereafter, they performed a comprehensive analysis of the results. The paper, which includes data from 18 studies, also concludes that use of a high-frequency, high-amplitude sonic-powered toothbrush is superior to manual toothbrush use for reducing plaque and gingivitis. (Study 3)

The fourth manuscript reports on a comparison between two powered toothbrushes, Philips Sonicare DiamondClean with Premium Plaque Control brush head, and the Oral-B Power CariControl brush head. The outcomes of this large clinical trial demonstrated that the sonic power toothbrush performed significantly better than that Oral-B power toothbrush in reducing surface plaque, gingivitis and gingival bleeding, following 2 and 6 weeks of use when used in respective deep clean mode. In addition, the study analysis also included an insightful proportion analysis, where the percentage of subjects who achieved at least a 20% reduction in gingivitis at

**Study 2**

Comparison of Plaque and Gingivitis Reduction by Philips Sonicare FlexCare Platinum with Premium Plaque Control

<table>
<thead>
<tr>
<th>Products</th>
<th>Subjects</th>
<th>Design</th>
<th>Results: Percentage of Reduction at 4 Weeks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Philips Sonicare FlexCare Platinum</td>
<td>286</td>
<td>Single-blind</td>
<td>58.3%</td>
</tr>
<tr>
<td>Manual Toothbrush</td>
<td>284</td>
<td>Single-blind</td>
<td>31.4%</td>
</tr>
</tbody>
</table>

**Key facts**

Taking a high-level view, the five articles focus on the effect of Philips products on surface plaque removal, gingival bleeding and inflammation. We have long known that the plaque-coating teeth surfaces is its own, dynamic microenvironment, where there exists a spectrum of bacterial species and their byproducts that are health or disease-associated. And we know that the character of these biofilms can affect whether the adjacent tissue, the gingiva, is healthy. As such, the clinical trials reported in the Special issue focus on these important clinical endpoints.

**Key conclusions**

Key facts in the first manuscript which reports a randomized, parallel-design clinical trial, the Philips Sonicare DiamondClean powered toothbrush was observed to be statistically significantly superior to the use of a manual toothbrush, within 2 weeks of use, persisting to study conclusion at 4 weeks, in reducing surface plaque, gingivitis and gingival bleeding. (Study 1)

Similar outcomes were also observed in a clinical trial comparison between the Philips Sonicare FlexCare Platinum with Premium Plaque Control brush head, and a manual toothbrush, following 2 and 6 weeks of use. For example, by the Week 2 visit following use of the assigned product, the mean percent reduction from baseline in the assessment of gingival bleeding was 47.4% for the Sonicare group, and 8.6% for the manual toothbrush group. (Study 2)

The third manuscript reports on a meta-analysis that was initiated to determine whether these discrete observations of differences in plaque and gingivitis reduction between ‘sonic’ powered and manual toothbrushes, were supported in a broad presentation of publicly available literature. The study authors queried multiple publicly accessible databases for clinical trial outcomes using a pre-defined set of keywords. Thereafter, they performed a comprehensive analysis of the results. The paper, which includes data from 18 studies, also concludes that use of a high-frequency, high-amplitude sonic-powered toothbrush is superior to manual toothbrush use for reducing plaque and gingivitis. (Study 3)

The fourth manuscript reports on a comparison between two powered toothbrushes, Philips Sonicare DiamondClean with Premium Plaque Control brush head, and the Oral-B Power CariControl brush head. The outcomes of this large clinical trial demonstrated that the sonic power toothbrush performed significantly better than that Oral-B power toothbrush in reducing surface plaque, gingivitis and gingival bleeding, following 2 and 6 weeks of use when used in respective deep clean mode. In addition, the study analysis also included an insightful proportion analysis, where the percentage of subjects who achieved at least a 20% reduction in gingivitis at Week 2 and Week 6, was significantly better in the Sonicare than the Oral-B group. (Study 4)

The final manuscript provides important clinical evidence demonstrating the efficacy of the SonicAirFloss Pro interproximal cleaning device. The device was developed with the ‘non-flosser in mind’, that patient who just can’t seem to adopt a flossing regime, but who really needs better interproximal oral hygiene. As such, the study was designed to show that manual toothbrushing, followed by once-daily interproximal cleaning with Sonicare AirFloss Pro used with antimicrobial rinse, at least as good as manual toothbrushing followed by once-daily string floss use, in reducing plaque and gingivitis. The study outcomes demonstrated that this is, indeed, the case at both the Week 2 and Week 4 timepoint. (Study 5)

With each innovation at Philips Oral Healthcare, our collective efforts have a single overriding goal to provide your patients the very best tools to optimize their oral health. Subjecting our products to rigorous evaluation in a clinical trial setting is the surest, and most unbiased way to establish that this is the case. Dr. Yakob comments, “We invite you to read the entire Special issue of the Journal of Clinical Dentistry so that you can critically examine this process for yourself. I am deeply committed to an innovation trajectory that starts with the rigorous evaluation of the Philips Professional, and ends with clinically validated, meaningful results experienced by patients. The five manuscripts in the Special Issue are excellent proof-points of this process.”

You can download the full issue here: https://www.usa.philips.com/en/pe/dentalprofessionals/resources_and_education/professional-education-clinical-studies

For more information visit philipsoralhealthcare.com