Simple exercise found to improve oral function in the elderly

By DTI

Researchers have developed a 2-minute-long simple oral exercise that improved mastication, salivation and swallowing function in the elderly people in their study. (Photograph: Photographee.eu/Shutterstock)

A new Australian study has found that environmental factors, such as lack of fluoride in water, seem to be the prime cause of cavities not genetic make-up.

Sydney, Australia: Nanoparticles of the common food additive titanium dioxide (E171), which is found in more than 900 food products, including chewing gum, may have a negative impact on human health, according to a recent study. The results of the study prompted experts to call for better regulations and more discussion around the topic of food additives.

Conducted by researchers from the University of Sydney, the study showed that E171 has an impact on gut microbiota and impairs some of its functions. This could cause inflammatory bowel diseases or colorectal cancer. Co-lead author Dr Wojciech Chorzanski, an associate professor at the University of Sydney Nano Institute, said: “There is increasing evidence that continuous exposure to nanoparticles has an impact on gut microbiota composition, and since gut microbiota is a gatekeeper of our health, any changes to its function have an influence on overall health.”

In 2017, French environmental association Agir pour l’ Environnement studied the composition of 408 toothpastes and found E171 in 271 dental pastes, 25 bio-toothpastes and 29 toothpastes for children. Now after ANSES, the French agency for food, environmental and occupational health and safety, released an analysis of 25 new studies on E171’s toxicity, concluding there was a lack of scientific data on its harmfulness but recommending the use of known alternatives, the French government plans to ban the use of the additive altogether by 2020.

According to the authors of the Australian study, increasing rates of dementia, autoimmune diseases, cancer metastasis, eczema, asthma and autism are among a growing list of diseases that have been linked to soaring exposure to E171 nanoparticles. Speaking about the results and what it means for the Australian government, the researchers said that E171 consumption should be better regulated by food authorities.

The study, titled “Impact of the food additive titanium dioxide (E171) on gut microbiota-host interaction”, was published on 14 May 2019 in Frontiers in Nutrition.

A new Australian study has found that nanoparticles of the food additive titanium dioxide, which is found in products such as toothpaste and chewing gum, may have a negative impact on human health. (Photograph: DUSHAN ZIDAR/Shutterstock)

Food additive used in toothpaste and chewing gum may have negative impact on health

By DTI

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Review links protruding teeth to long-term oral health risks

By DTI

ADELAIDE, Australia: A new systematic review has reported that children with protruding primary or early permanent teeth have an increased chance of damaging them. However, the researchers affirmed that the oral health risks linked to protruding teeth can be significantly reduced without entailing prohibitive costs.

The review, undertaken at the University of Adelaide, included 41 studies and more than 50,000 children aged under 19 years and confirmed a direct link between the degree to which a young patient’s teeth protrude and the probability of damaging them. "Traumatic dental injuries have been identified as the fifth most prevalent disease or injury globally and their subsequent management is costly," said Dr Esma Dogramaci, lecturer in orthodontics in the Faculty of Health and Medical Sciences at the University of Adelaide Dental School. "While the number of traumatic dental injuries have fallen over recent decades, they have significant physical, psychological and economic consequences," she added. "Young children up to the age of 6 years with teeth that stick out more than 3 mm have over three times higher chance of trauma than children without protruding teeth. Children over 6 years with teeth that protrude more than 5 mm have over double the chance of trauma."

According to Dogramaci, corrective orthodontic treatment of children's teeth is not usually undertaken until all permanent teeth have erupted, usually after the age of 12 years. However, an expensive visit to an orthodontist is not essential to protect protruding teeth, she said. "A dentist can easily measure how far a child’s teeth stick out and recommend whether they should be fitted with a brace. They can apply simple braces which can reduce the prominence of protruding teeth and significantly reduce the chance of them being damaged," explained Dogramaci.

In order to protect protruding teeth from damage, Dogramaci recommends discouraging children from sucking their thumb and suggests they wear a mouth guard. "Early identification and protection of protruding teeth through regular dental check-ups reduces the chance of early problems becoming long-term dental issues," she commented. "If young teeth are broken or knocked out, long-term issues may occur, like the need for root canal treatment or even tooth loss, requiring a lifetime commitment for general dental treatment."

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Researchers have recently established in a systematic review that children with teeth that protrude more than 3 mm have more than double the chance of dental trauma. (Photograph: Evgeniy Kalinovskiy/Shutterstock)

"The results of this study confirm that regular check-ups, particularly for children, are a must for good long-term dental health."

The study, titled “The association of overjet size and traumatic dental injuries—A systematic review and meta-analysis”, was published online on 6 May 2019 in Dental Traumatology, ahead of inclusion in an issue.
Study finds genetic make-up has little impact on oral health

By DTI

MELBOURNE, Australia: The idea that oral health comes down to genetics can be a damaging one. According to authors of a recent study, which followed the oral health of twins from birth to age 6, there is no link, and the idea that there is can prevent people from changing their damaging oral health habits.

Led by Dr Mihiri Silva from the Murdoch Children’s Research Institute, the study followed 173 sets of twins, identical and non-identical. “How genetics impacts on dental health has not often been studied. This is the first twin study that looks at both genetics and early life risk factors, such as illness and lifestyle.”

According to Silva, the study’s results found that identical twins—with identical genomes—had varying degrees of dental caries. “This means that environmental factors, like a lack of fluoride in water, seem to be the prime cause of cavities not genetic make-up,” she explained.

Despite genetics not playing a role in oral health, the study did reveal a link between the mother’s health and lifestyle during pregnancy and the child’s future dental health, with obesity in pregnancy a definite marker for increased risk of childhood caries. “Perhaps the mother’s weight has a biological influence on the developing foetus or perhaps the risk of decay rises because of increased sugar consumption in that household,” hypothesised Silva.

Another concerning result to come out of the study was the estimation that one in three Australian children have cavities by the time they start school. With the 2011 Victorian Department of Health and Human Services statistics showing that more than 26,000 Australians under the age of 15 are admitted to hospital to treat cavities every year, the estimation may not be too far off.

“Our findings also reinforce how important it is for paediatricians and other health professionals to educate children to start preventive measures early in life, prior to the onset of damage to dental tissues,” concluded Silva.

The study, titled “Genetic and early-life environmental influences on dental caries risk: A twin study”, was published in the May 2019 issue of Pediatrics.

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Fluoride reduces dental risk from minimal and extended breastfeeding, study says

By DTI

ADELAIDE, Australia: A recent study has examined the interaction between fluoridated water consumption and breastfeeding duration in relation to dental caries experience. The findings suggest that exposing children to fluoridated water may reduce the risk of dental caries.

According to a report published in the Oral health and dental care in Australia: key facts and figures, in 2010, 55 per cent of 6-year-olds had experienced dental caries in their primary teeth. The new research looked at dental caries in 5- and 6-year-olds in Australia and examined whether they had been exposed to fluoridated water or breastfed as infants and for what duration. The study used data collected in one of the largest and most comprehensive population-based studies of child oral health in Australia, the National Child Oral Health Study 2012–14.

The findings indicated that breastfeeding for over a month and up to 24 months was associated with good oral health. Minimal breastfeeding, which includes no breastfeeding or breastfeeding for less than one month, however, and extended breastfeeding beyond 24 months were both linked to increased dental cavities. However, these effects were lessened if children were exposed to fluoridated water.

"Breastfeeding is important not only for general health but also for the dental health of young children," said senior author Dr Loc Giang Do, a professor in the Faculty of Health and Medical Science at the University of Adelaide’s Australian Research Centre for Population Oral Health. "Minimal breastfeeding can increase risk for having dental decay in children. But can sustain breastfeeding beyond 24 months," he added. "However, potential risk can be reduced by drinking fluoridated water in formula or ensuring that breastfed children are given fluoridated water to drink after the age of 6 months."

According to Do, in fluoridated areas, breastfeeding can be recommended beyond the age of 24 months, while in non-fluoridated areas, breastfeeding for up to 24 months is recommended not only for child general health and development but also for child dental health. "The use of fluoridated tap water should be recommended for young children," he commented and added that the dental profession should support and even encourage mothers of infants to breastfeed.
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AUCKLAND, New Zealand: Early childhood dental caries is the most common chronic disease seen in children and a leading cause of hospital admissions for New Zealand children. The Child Poverty Action Group (CPAG) is attempting to tackle the issue by calling for free universal healthcare, including dentistry, prescriptions and specialist hearing and vision care, for all children and adolescents younger than 18 years of age.

In the group’s submission to the New Zealand Health and Disability System Review, CPAG stated that universal healthcare for children should begin before they are born and should include free general practitioner (GP) visits and pregnancy-related dental care for expectant mothers. The group is also asking for more school-based initiatives and has urged the government to expand health and mental health services, to appoint more school social workers, to provide school lunches and to tax sugar-sweetened beverages.

“Research shows that adolescence is one of two periods that are critically important for social and physical development, the other being preconception to 3 years of age,” said paediatrician and CPAG children’s health spokesperson Prof. Innes Asher. “It is vital that all our teenagers can easily access appropriate and timely primary healthcare. Their health and futures should not have to rely on their families’ ability to afford healthcare, as is currently the case.”

According to the group, children living in poverty are at a higher risk of falling ill and dying compared with other children. That is why CPAG’s recommendations are designed to help achieve not only healthcare access equity but also health equity for all young people. “Primary care and public health is where our focus needs to start. Significant long-standing underfunding in these areas is one reason that too many of our children are ending up hospitalised unnecessarily,” said CPAG public health spokesperson Dr Nikki Turner, an associate professor and Director of the Immunisation Advisory Centre at the University of Auckland.

Currently, free GP visits in New Zealand are available to children aged 13 and under. Pregnant women are entitled to free maternity services but not to free GP visits or pregnancy-related dental care.

In a recent submission, the Child Poverty Action Group has recommended taking immediate steps to achieve free dental care and healthcare for all young people under 18 years. (Photograph: pixshark/Shutterstock)
Eating disorders—Oral health professionals have role in early identification

By DTI

SYDNEY, Australia: Eating disorders and disordered eating together are estimated to affect over 16 per cent of the Australian population, according to the National Eating Disorders Collaboration (NEDC). The Australian Dental Association (ADA) and the NEDC have collaborated in order to spread awareness about eating disorders and their identification and assessment and to encourage referral among oral health professionals.

Early intervention is critical for a patient with an eating disorder. The sooner treatment occurs, the better chance the individual has of recovery. Consequently, the oral health practitioner is uniquely positioned as one of the first healthcare providers consulted by an individual demonstrating disordered eating behaviour.

According to the National Practice Standards for Eating Disorders, a document drawn up by the NEDC, dental professionals fall into the group of early identifiers and initial responders. They are defined as follows: “Early identifiers have a duty of care for the well-being of people in high-risk groups for eating disorders and who are most likely to act as the first point of contact for people with eating disorders and their families. The role of early identifiers is to proactively engage people at risk to promote prevention and early help seeking.”

Intra-oral manifestations of nutritional deficiency present early in the clinical course of an eating disorder, and general tooth erosion can take approximately two years to appear. Swelling around the cheeks or jaw or bad breath can be physical warning signs of frequent vomiting. The ability of the oral health practitioner to recognise the subtle changes in the mouth of a patient is central to identifying early indicators of an eating disorder as early as possible.

The NEDC first partnered with the ADA New South Wales (NSW), as part of a combined project, where ADA NSW undertook a focus group of some of their members to understand their perspective on eating disorders, including how to approach a patient living with an eating disorder.

The feedback of this focus group resulted in the development of e-learning resources and provided significant progress in identifying the gaps that exist in the knowledge and identification of eating disorders and practices for a standard approach to care for patients with an eating disorder.

When contacted by Dental Tribune International, the NEDC explained that working with the ADA in some way to create awareness of the oral health practitioner’s position in the identification, treatment and management of an eating disorder was important and was the perfect partner to promote this cause.

The NEDC believes that as an organisation the ADA shares similar values to that of the NEDC. With a focus on collaboration, professionalism, integrity and respect, the NEDC felt that these values aligned with their own.

It is the goal of the NEDC to work collaboratively across the sector to provide better outcomes for all Australians living with an eating disorder, through the sharing and development of evidence-based, nationally consistent information and standards.

Researchers recruit Pasifika adolescents for oral health study

By DTI

DUNEDIN, New Zealand: The multicultural element of New Zealand society is something that brings with it many positives, but it can also create certain barriers for some groups. Among these many cultures, the Pacific Islanders make up a large proportion of the society, and in a new study, researchers from the University of Otago in Dunedin recruited Pasifika adolescents to interview groups of their peers about their understanding and experiences of oral healthcare and their attitudes towards it.

Despite dental care being free for all New Zealanders under 18, research shows that Pasifika adolescents living in New Zealand are less likely than their peers of other ethnicities to access it. In the first study of its kind, the researchers decided to source information directly from the group of interest in order to understand more accurately why this might be and what some of the most significant issues are.

According to the study, 17 Pasifika adolescents from four cities in various parts of New Zealand facilitated focus groups with 59 of their Pasifika peers. From the data collected, the researchers then conducted an inductive thematic analysis, and the paper focused on one central theme that emerged: the participants’ suggestions for increasing access to oral healthcare. Suggestions included reducing the cost of oral healthcare and oral health products, making access to clinics easier, including having transport arranged or having dentists visit schools, making the clinical environment more welcoming and youth-friendly, and having more approachable, younger and Pasifika or Maori oral health professionals working in the dental profession.

“Policymakers should look at implementing at least some of these suggestions for change, or at least treating them as a conversation starter on how to address the inequities in Pasifika adolescents’ oral health care access,” said lead author Dr Lee Smith, a research fellow in the Faculty of Dentistry at the University of Otago.

Other recommendations dealt with increasing the emphasis placed on oral health in Pasifika families and communities through education, for example, by means of pamphlet drops in churches and advertising on visual and social media. It was suggested that this may be more effective in Pasifika languages.

The study, titled “Pasifika adolescents’ recommendations for increasing access to oral health care”, was published in the March 2019 issue of the New Zealand Dental Journal.
Mandible helps to uncover history of civilisations in Tibet

By DTI

LANZHOU, China: The journey that Homo sapiens has embarked on is something that has enthralled modern scientists for many centuries. Now, as technology continually improves, more understanding is being gained and new discoveries are coming to the surface. Recently, researchers revealed that a sister group of Neanderthals, the Denisovans, occupied the Tibetan Plateau long before Homo sapiens arrived in the region. This discovery was made through the analysis of a 160,000-year-old hominin mandible.

“Traces of Denisovan DNA are found in present-day Asian, Australian, and Melanesian populations, suggesting that these ancient hominins may have once been widespread,” said Prof Jean-Jacques Hublin, Director of the Department of Human Evolution at the Max Planck Institute for Evolutionary Anthropology (MPI-EVA) in Leipzig in Germany and one of the paper’s co-authors. “Yet, so far, the only fossils representing this ancient hominin group were identified at Denisova Cave.”

In their study, the researchers examined a mandible that was found on the Tibetan Plateau in Raishiya Karst Cave in Xiahe County in China.

The fossil, originally discovered in 1980 by a local monk, was eventually passed on to Lanzhou University, and in 2010, researchers Prof. Fahu Chen and Dr Dongju Zhang began studying the cave site where the fossil had been found.

In 2016, Lanzhou University initiated a collaboration with the Department of Human Evolution at the MPI-EVA and since then they have been jointly analysing the fossil. According to the researchers, DNA was not able to be recovered from the mandible itself but rather from one of the molars, which they examined by means of ancient protein analysis. From that analysis, the team found that the mandible came from a member of a Denisovan group from Siberia—something that confirms Denisovans had already been living in the high-altitude setting significantly prior to the appearance of Homo sapiens.

With continued research and analysis planned for the future, the team now hope that the lower jaw can aid in piecing together the puzzle of what Denisovans looked like.

The study, titled “A late Middle Pleistocene Denisovan mandible from the Tibetan Plateau”, was published on 1 May 2019 in Nature.

ADA will continue its push for affordable dental care after Australian election

By DTI

SYDNEY, Australia: A few days after the Australian elections, the Australian Dental Association (ADA) has reaffirmed its commitment to collaborating with the re-elected coalition government to improve Australia’s dental health and to implement the ADA’s Australian Dental Health Plan (ADHP).

Despite Labor’s loss, the emphasis on fulfilling the ADHP will continue with a coalition government, noted ADA President Dr Carmelo Bonanno. “During the election, the ADA was overwhelmed by feedback from both ADA branches around Australia and the public about the desperate need to provide oral healthcare to disadvantaged groups.”

“This is a critical area for the coalition government to address the needs of the disadvantaged for whom public waiting lists mean their oral health declines while they wait to be treated,” he explained. “Everyone in Australia, regardless of their ability to pay, should be able to receive dental care. Our goal is a robust model of a mix of affordable public and private dentistry which accommodates the dental needs of the whole community.”

The ADA has long lobbied successive federal governments to address the urgent and growing need for additional, targeted and sustainable funding to meet the requirements of disadvantaged Australians, and it will continue its push for affordable oral healthcare with the re-elected coalition government.

“We look forward to continue working with Minister [Gregory Andrew] Hunt to improve the dental health of the Australian public and will be lobbying for implementation of the ADA’s Australian Dental Health Plan,” Bonanno said. “As a non-partisan organisation, the ADA has long-standing relationships with both sides of the political divide. We will work productively with both the coalition government and the Labor opposition to bring about good policy for dentists and the Australians they treat.”
Study disproves need for antibiotic prophylaxis for prevention of dental implant infections

By DTI

NEW YORK, U.S.: The question of whether antibiotics positively influence the survival of dental implants in overall healthy patients is still highly discussed. Thus, in a recent study, researchers from the New York University College of Dentistry sought to determine the efficacy of antibiotic prophylaxis and specific antibiotic regimens for the prevention of postoperative infection (POI) in dental implant placement.

Randomized controlled trials (RCTs) comparing antibiotics with no antibiotics or placebo for dental implant placement were considered. The primary outcome was early, late or total POI, and wound dehiscence, pain and adverse events of antibiotic treatment were secondary outcomes.

The researchers screened 1,022 abstracts and ten RCTs, involving a total of 1,934 patients. All ten individual studies reported no statistically significant difference for POI. Meta-analysis found no statistically significant differences in early, late or total POI, wound dehiscence or adverse effects between antibiotic and no-antibiotic groups.

The researchers concluded: “The results of this systematic review suggest that antibiotic prophylaxis may not be indicated for prevention of dental implant infections in healthy patients. These findings and in light of antibiotic-associated risks for individual and public health demand revaluation of routine prescription of antibiotic prophylaxis in dental implant placement procedures.” The study, titled “Antibiotic prophylaxis may not be indicated for prevention of dental implant infections in healthy patients. A systematic review and meta-analysis,” was published in the April 2019 issue of Clinical Oral Investigations.
**Project for improved root canal therapy launched**

By DTI

**ROSTOCK, Germany:** In Germany, about 7.5 million root canal therapies are carried out annually. With the help of an innovative system, it may soon be possible to carry out ultrasonic preparation of the root canal and to monitor the condition of the file during treatment.

In addition, protection against thermomechanical overloading will prevent the instrument from breaking.

Research teams from Rostock, Dresden, Leipzig and Lemgo in Germany have begun a new project aimed at improving root canal therapy. Sponsored by the German Federal Ministry of Education and Research’s (BMBF’s) funding programme Twenty20—Partnership for Innovation, and the smart3 consortium, members of the medical faculty at the University of Rostock and the Fraunhofer Institute for Ceramic Technologies and Systems are working together on the project.

“We are pleased to have strong partners at our side in this project and are working very closely and in an interdisciplinary way with them. We are counting on great benefits for our patients,” emphasised Prof. Emil Reisinger, dean and scientific director of the medical faculty at the University of Rostock.

“In Germany, about 7.5 million root canal therapies are carried out annually. (Photograph: LEDOMSTOCK/Shutterstock)

The aim of this IPUCLEAN joint research project is the development of a piezoelectric ultrasonic cleaning system to support root canal therapy with rotating super-elastic files made of shape memory alloys.

“The joint project is intended to improve the treatment process and patient safety during root canal therapy in the medium term—at the same time ensuring and increasing the quality of the treatment results achieved,” said Prof. Rainer Bader, head of the FORBIOMIT research laboratory for biomechanics and implant technology at Rostock University Medical Center.

The project is being funded by a BMBF grant of more than €1 million. The research is being supported by Komet Dental, Werner Industrielle Elektronik and Zahntechnik Leipzig.

In Germany, about 7.5 million root canal therapies are carried out annually. (Photograph: LEDOMSTOCK/Shutterstock)

**US dentists prescribe 37 times more opioids than English dentists do, study finds**

By DTI

**CHICAGO, U.S.** With the overprescription of opioids causing many severe health and addiction problems in the U.S., it is imperative that dental professionals remain aware of the issue and carefully consider their prescription practices.

In a recent study, researchers compared the opioid prescribing practices of dentists in England and the U.S., and uncovered a significant difference. (Photograph: David Smart/Shutterstock)

In order to obtain the data needed, the researchers analyzed nationally representative databases of prescriptions from both countries. These prescriptions were dispensed from retail pharmacies, including community and mail service pharmacies, and outpatient clinic pharmacies in 2016, which is considered to be a peak point in the U.S. opioid crisis. According to the results, U.S. dentists wrote 1.4 million prescriptions, compared to just 28,000 in England. The stark difference remained when the researchers adjusted for differences in population size and number of dentists.

In addition to prescribing more, U.S. dentists were prescribing a larger variety of opioids. The most common prescriptions were hydrocodone-based, followed by codeine, oxycodone and tramadol, whereas in England, dentists only prescribed one, hydrocodone.

“This data should be a wake-up call to individual dental practices and collaborative organizations of dental care providers to push the envelope towards greater efforts to reduce opioid prescribing or patients’ potential for abuse,” said co-author Dr. Susan Rowan from the UIC College of Dentistry.

In a recent study, researchers compared the opioid prescribing practices of dentists in England and the U.S., and uncovered a significant difference. (Photograph: David Smart/Shutterstock)

Co-author Dr. Martin Thornhill, Professor of Translational Research in Dentistry at the University of Sheffield, said: “I was shocked to discover the high level of opioid prescribing of my U.S. dental colleagues. Particularly, when there is good evidence that NSAIDs and acetaminophen are as good or better than opioids for treating dental pain and don’t cause the unpleasant side effects, addiction and misuse problems associated with opioids.”

The study, titled “Comparison of opioid prescribing by dentists in the United States and England,” was published in the May 2019 issue of JAMA Network Open.
Dental Tribune International sat down at IDS 2019 with Hans Geiselhöringer, President of Nobel Biocare Systems, to discuss the company’s latest innovations, its upcoming Global Symposium in Madrid, and what he sees as its future focus.

Mr Geiselhöringer, a point of emphasis for Nobel Biocare at IDS 2019 is implant surfaces, with the company taking the opportunity to launch the Xeal abutment surface and the TiUltra implant surface. How does the TiUltra build upon the success of the TiUnite implant surface?

Well there are several aspects to take into account when discussing implant surfaces. Over the decades-long history of implantology, there have been many different implant surfaces presented: machined, anodized, and so on. As we had both machined implants and implants with the moderately rough TiUnite surface, which now has a wealth of science behind it, but also demonstrated the importance that research plays at Nobel Biocare.

Along those lines, a key indicator of implant success has been osseointegration. However, Nobel Biocare is promising to go beyond this with the "MucoIntegration" era. How do Xeal and TiUltra allow for this era to commence?

Given that we have more than 100 000 TiUnite implants documented in clinical studies, we know that implant success is influenced by various factors such as implant placement, the maintenance protocol, and the prosthetic design. We have seen that failures occur more frequently as soon as copyscats and non-validated prosthetic solutions are integrated into the implant treatment.

With Xeal and TiUltra, we are now able to offer a pair of surfaces with the surface chemistry and scientific backing necessary to promote not just early osseointegration and long-term implant stability, but also soft-tissue attachment to the abutment. Together, these new surfaces can optimize tissue integration at all levels to help improve implant treatment outcomes for all patients.

The patient is in the centre of everything we are doing at Nobel Biocare and these surfaces are another leap forward to address their needs for immediate function and long-term maintenance and esthetics.

The Nobel Biocare Global Symposium, where the new Nobel Biocare N1 implant concept will be presented, seems to be just around the corner. What can dental professionals look forward to by joining you in Madrid?

Based on the extensive clinical experience our key experts have generated with the Nobel Biocare N1 implant concept, I am convinced that what we will be showing in Madrid is the next chapter in dental implant care. We have designed this system working with an international network of researchers and clinicians and have consistently surpassed our own very high expectations during its development. I believe that the Nobel Biocare N1 system’s biologically driven design presents a breakthrough for our understanding of how implant placement and prosthetic procedures can be achieved with a streamlined digital workflow.

Though there are many things to be excited about ahead of the Global Symposium, I am particularly looking forward to the many hands-on sessions that our clinical experts will be running to provide dental professionals with the education and skills necessary to working with the Nobel Biocare N1 system. We welcome those interested in a pre-launch experience to register and join us in Madrid on June.

You have been President of Nobel Biocare for a bit more than three years at this point, and have been with the company for more than a decade. How has the company changed in this time, and what do you see as its future focus?

Going forward, our focus remains the same: to improve procedures and the dental workflow as much as possible, in order to provide clinicians with the development of innovations which address customer needs and are backed by science. A clear aim for us is to improve procedures and the dental workflow as much as possible, in order to provide clinicians with forward-thinking solutions that allow for immediate function and shorter time-to-teeth, while at the same time supporting long-term maintenance and esthetics. Going beyond just the improvement of existing solutions, N1 is really a ground-breaking innovation that will set new standards in the industry.

We have many more innovations to come in the future and I look forward to presenting these in due time with the assistance of our excellent team here at Nobel Biocare.
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