

INTERVIEW

"Preventing and treating periodontitis prevents complications from COVID-19"

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gums ²⁰

Outreach magazine of the **SEPA** Foundation for Periodontology and Dental Implants

Period II, Year XI. No 20
1st semester 2020.
Editor:
Regina Izquierdo



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Until now there was no evidence that people with periodontitis infected by SARS-CoV-2 and who developed COVID-19 could have a greater probability of developing worse; however, in recent months there has been solid evidence that clearly points in this direction.



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PRESENTATION
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Scientific editor of the magazine
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Much to celebrate

WE ARE CELEBRATING AT CUIDA TUS ENCÍAS. ¡And not for nothing! It is ten years since this innovative, ambitious, and adventurous project launched, with the aim of filling the information gap in the area of oral health.

Both the Foundation of the Spanish Society of Periodontology and Implants and all of us who have participated in this project since its start firmly believe in the relevance of prevention and health promotion in global terms. For this, we are committed to rigorous, practical, and useful information, with the aim of making the population understand that oral health is of vital importance and that it is often unjustly neglected.

It was already a milestone for all of those who believe in the proposition of this magazine when we reached the "first barrier" of 10 issues after much work and enthusiasm.

We now celebrate this 10th anniversary and the 20th edition of the magazine with a "special" edition, which both incorporates the satisfaction of looking back and admiring the work carried out and takes into account the current health situation in which we find ourselves. We want to share how we have lived this pandemic in dental clinics, how we have adapted to it, and how we have confronted COVID-19 as committed frontline healthcare workers – COVID-19.

Thanks must be given to the great team that makes it possible that this project continues to be a reality: thanks for their dedication, enthusiasm, commitment, and involvement. In this way, we face the challenge of adopting a new focus for the coming years and with the eagerness to continue transmitting the message that oral health is also important, and in fact it is very important.

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LISTERINE

Take care of your mouth's health, fight COVID-19

Good oral health, and especially good gum health, could be fundamental both to reducing the risk of the infection that causes COVID-19 and to reducing its adverse prognostic impact

SECTION COORDINATED BY:

M^a Cristina Serrano
Master in Periodontology
and Implants, Complutense
University, Madrid.

AVOIDING OR TREATING a disease such as periodontitis and following basic oral-health measures could help to significantly minimize the presence of COVID-19 and its severity. Until recently, there had been no evidence that people with periodontitis infected by SARS-CoV-2 who also developed COVID-19 could have a greater probability of a worse evolution; however, in recent months, solid evidence has built up which points clearly in this direction.

This is the finding of an international study that included significant Spanish involvement. Published in the "Journal of Clinical Periodontology", the highest-impact magazine for the dental community, this research shows that periodontitis is significantly associated with a greater risk of complications from COVID-19, including admission to intensive care units (ICU), the need for assisted ventilation, or even the most



One reality, various hypotheses

EXPLAINING THE ASSOCIATION between periodontitis and the worsening of the infection that causes COVID-19 is not easy and various hypotheses have been put forward. However, in all cases the inflammation that characterizes this disease plays a crucial role.

There is strong scientific evidence that confirms that untreated periodontitis is a chronic source of systemic inflammation and a gateway for pathogenic bacteria to enter the bloodstream. It has also been shown that periodontitis increases the risk of the incidence and

severity of diseases such as diabetes, cardiovascular diseases, and rheumatoid arthritis, among others.

This association is explained by two mechanisms, which can act simultaneously: by the direct route, through the passage of bacteria that reside in the periodontal pockets to other parts of the body via the blood or via aspiration (in the case of the airways); or by an indirect route, through the systemic inflammation produced by the release of inflammatory products that are generated in the periodontal tissues and which are discharged into the bloodstream.

The existence of periodontitis increases by 4.5 times the probability of needing assisted ventilation and by approximately 3.5 times the need for admission to an ICU if you have COVID-19

severe consequence of death. The study is the fruit of the collaboration between Prof Mariano Sanz of the Complutense University of Madrid and researchers at McGill University in Montreal (Canada) and the University of Qatar led by Prof Faleh Tamimi, with the collaboration of experts from the Oral Health Institute of the Hamad Medical Corporation in Doha.

Periodontitis, a crucial risk factor

This study was carried out between March and July 2020 with data from the national electronic medical records of the state of Qatar, including 568 patients with COVID-19, who were measured for radiographic bone loss around teeth. "The result of this research has shown that periodontitis is significantly associated with the severity of COVID-19 and with the development of its complications; because of this, patients with periodontal disease should consult their dentist to receive the →

Take care of your mouth's health, fight COVID-19

Now more than ever PRE-VENTION

THE DEMONSTRATED ASSOCIATION between periodontitis and the worsening of COVID-19 infection, as well as the fact that periodontally healthy patients have less probability of developing a serious condition if infected, underline still further the role of prevention in the dental practice. Prevention of periodontitis and its early treatment are important factors in the prevention of complications from infections caused by the SARS-CoV-2 virus.

Thus, the preventive message is clear in terms of maintaining good oral health. In the same way that we exercise, lose weight, and have a healthy diet, having good oral hygiene can help us to have a healthier life and better confront diseases such as COVID-19.

Early detection...

In their mildest forms, periodontal diseases manifest as gingivitis, an inflammation of the gums that does not destroy the tooth-supporting system in the jaws. Gingivitis manifests through bleeding when brushing and is treated simply by effective oral hygiene, which sometimes requires the use of mouthwashes as well as regular toothbrushing at home. In this case, professional treatment is very simple, involving what is commonly known as "mouth cleaning", which the experts call "professional plaque removal".

When the tooth-anchoring system is destroyed and we lose bone and ligament around the teeth, so-called periodontitis appears. Depending on its severity, the treatment will be more or less complex, and it will always require professional intervention as well as the continued application of basic preventive measures of oral hygiene. The degree of severity of periodontitis is evaluated through x-rays and measurements (probing) of the space that the disease creates between the tooth and the gum (periodontal pockets).

...and early and effective treatment

In their initial phases, when little periodontal support has been destroyed, it is easy to remove bacterial plaque adhering to the tooth roots below the gum margin without any need for surgical intervention. This procedure, known as scaling and root planing (or colloquially as "deep cleaning") is very effective, simple, and requires little technology. However, when the degree of damage is deep, surgical treatments are needed to reach and remove the infection along the roots at the bottom of the periodontal pockets and, sometimes, to reconstruct the tissues using more sophisticated and complex regenerative procedures.

In general, they are very effective treatments and in nearly all cases (including in very advanced periodontitis) they are effective in restoring periodontal health. However, early detection is fundamental to be able to resolve most forms of periodontitis through simple procedures.

Periodontitis and severe COVID-19: 3 factors to consider

- 1** PERIODONTITIS and systemic inflammation: the systemic increase (in the whole organism) of proinflammatory factors (the so-called cytokines) which are produced by the presence of periodontal disease increases the risk of diabetes, cardiovascular disease, adverse pregnancy outcomes, neurovascular diseases, and even death... and this increase of interleukins is present in the most severe cases of COVID-19.
- 2** THERE IS a series of comorbidities (advanced age, diabetes, hypertension, obesity, smoking...) that increase the risk of developing a more severe COVID-19, and all these factors are also very much related to periodontitis.
- 3** PULMONARY aspiration of pathogens such as proinflammatory cytokines is related to respiratory diseases and can provoke bacterial superinfection in COVID-19, above all in intubated patients; poor oral hygiene increases the possibilities for oral bacteria to enter through the respiratory tract.

Patients with periodontal disease should consult their dentist to reduce the risk of complications if they are infected with the coronavirus

→ *appropriate diagnosis and treatment, and thus reduce the risks of suffering complications if they are infected with the SARS-CoV-2 virus,"* said Prof Mariano Sanz, codirector of the ETEP (Aetiology and Therapy of Periodontal Diseases) research group at the Complutense University of Madrid.

For the professor of periodontology in the Complutense University of Madrid's Faculty of Dentistry, who is also an honorary trustee of the Fundación de la Sociedad Española de Periodoncia (SEPA) [SEPA Foundation], "*periodontal diseases, and mainly periodontitis, act as a complementary factor in increasing the infectivity and severity of COVID-19 disease, which highlights once again the need to implement preventive and therapeutic measures to reduce the global burden of periodontitis.*"

Although there had been earlier data about the possible association between periodontitis and the severity of

COVID-19 infection, the findings of this observational study are particularly striking. The study indicates that "*patients with periodontitis are almost nine times more likely to die, four times more likely to need assisted ventilation, and about 3.5 times more likely to be admitted to an ICU if they are infected with COVID-19.*"

Similarly, it highlights that people with periodontitis show a significantly higher level of markers in their blood related to a worse result of COVID-19, such as D-dimer, levels of white blood cells, and C Reactive Protein. This, concluded the researchers, indicates that patients with periodontitis have a greater likelihood of developing an aberrant immune and inflammatory response, the so-called "cytokine storm" that is responsible for the rapid deterioration of many patients with COVID-19.

Greater hospitalization and need for ventilation

As well as the relevance of these results, Miguel Carasol, the scientific coordinator of the SEPA Foundation, highlights that "*periodontitis has been closely related to pneumonia in hospitalized patients and those*

It is essential to pay great attention to oral hygiene and to administer oral antiseptics in hospital environments to reduce possible oropharyngeal colonization

who need assisted ventilation." This association may result mainly from the aspiration of bacterial pathogens that reside in the oral cavity (mainly within periodontal pockets) in patients with periodontitis; once these pathogens are aspirated, and with the lack of adequate defences in the host, the colonization of these pathogens in the lungs is promoted, which rapidly worsens the patient's state of health.

More virus transmission and more pathogenic?

The results of several trials have recently been published which seek to cast light on the role of the oral cavity in the transmission and pathogenicity of SARS-CoV-2. It is now known that the infectivity of SARS-CoV-2 depends on its capacity to penetrate cells, using the angiotensin-converting enzyme-2 (ACE-2) as the main receptor and entry point to the cell. As the epithelial cells →

Take care of your mouth's health, fight COVID-19



Preventive and therapeutic measures to reduce the global burden of periodontitis are essential and could have positive repercussions on the current coronavirus pandemic

→ in various mucosa of the oral cavity show a high expression of ACE-2, and the oral cavity is one of the main interfaces between the exterior and the body, it is thought that there is a high potential for this pathway of colonization and viral infection to be a determinant for the appearance of COVID-19.

According to the professor and researcher of the Complutense University David Herrera, "this fact has clear implications in the implementation of measures to prevent the viral colonization of the oral

cavity, not only in terms of physical barriers (masks, screens, etc.) but also in the identification of effective oral antiseptics that may have an impact on the transmission and pathogenicity of this virus."

All this evidence, in the words of SEPA president Antonio Bujaldón, "is particularly important if we take into account the high number of people in our country who have periodontitis, in many cases undiagnosed." The latest Oral Health in Spain Survey (from 2020) indicates that between 25% and 34% of adults have periodontal pockets, and these are severe in 8% of young adults and 12% of older adults.

The diagnosis and treatment of people with periodontitis at the general population level should be strengthened, with the aim of reducing possible additional risks of a hospital admission because of coronavirus infection. It is recommended to include

People with periodontitis register blood levels with very high levels of inflammatory markers related to poorer COVID-19 outcomes

in the medical history of patients with COVID-19 whether they have a history of periodontitis, as this could serve to identify another risk factor for complications in these cases. ■

Systemic inflammation, a key factor

IN RECENT YEARS, multiple studies have been carried out that have clearly indicated the significant impact of oral health on general health.

Periodontitis provokes a rupture of the epithelial barrier of the gum and, as a result, produces ulceration which can encourage:

- The entry of bacteria and bacterial products from the oral cavity into the bloodstream (periodontal pathogens have been identified, for instance, in atheromatous plaques).
- The entry of proinflammatory cytokines from periodontal tissues into the systemic circulation (IL-1, IL-6, IL-17, TNF alpha...)

This penetration, of both bacteria and proinflammatory cytokines, provokes an inflammatory response at the systemic level, with an increase of proinflammatory cytokines, which encourages the development of other diseases such as diabetes, cardiovascular diseases, Alzheimer's disease, cerebrovascular disease, etc. In fact, patients with periodontitis have a 25% greater risk of suffering cardiovascular diseases, a three times greater risk of diabetes, and a 20% greater risk of high blood pressure.

Furthermore, this high bacterial load coming from periodontitis and poor oral hygiene can complicate other systemic diseases, such as cancer, neurodegenerative disease, and autoimmune disease. This gives us an idea of the important connection between the mouth and the rest of the body.

On the other hand, we know that appropriate periodontal treatment can produce a decrease in the levels of these proinflammatory cytokines, both in periodontal tissues and at a systemic level, which is associated with, for example, an improvement in the percentage of glycosylated haemoglobin both in patients with diabetes and in those without the disease.

COVID-19

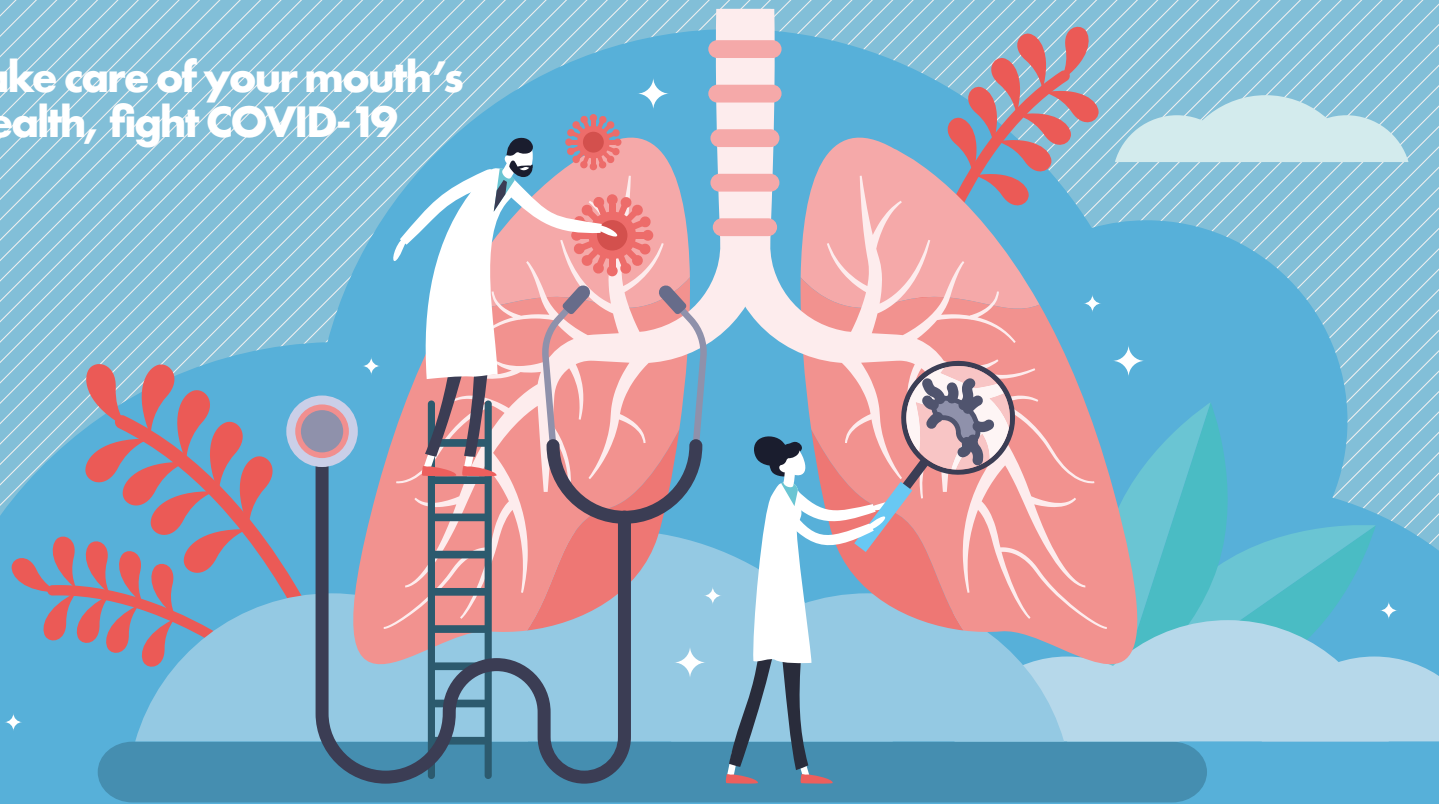
RECENT STUDIES have shown high levels of a proinflammatory factor (IL-6) that can predict an increase in the risk of respiratory insufficiency and the need for ventilation in patients hospitalized with COVID-19. In this regard, it has been demonstrated that periodontitis also frequently provokes the increase of this inflammatory factor in the bloodstream. It can thus be deduced that periodontitis may increase the risk of COVID-19 complications. Furthermore, we know that the treatment of periodontitis can improve levels of IL-6, which can potentially reduce the probability that complications will occur.

All you want to know about oral health and COVID-19

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Pneumonia caused by periodontal pathogens?

ALTHOUGH STILL in an early stage of investigation, there are increasing observations that point to the possibility that COVID-19 patients with pneumonia and who need intubation owe a large part of their deteriorated lung condition to the aspiration of periodontal bacteria, which pass into the pulmonary parenchyma and, in this way, aggravate the general state of these COVID-19 patients.

Independently of COVID-19, periodontitis is often associated with pneumonia in hospitalized patients or those who need assisted ventilation, mainly because of the aspiration of bacterial pathogens that reside in the oral cavity, principally in the periodontal pockets of patients with periodontitis. The problem is that this becomes even more serious in hospitalized people with severe COVID-19, as their defences tend to be very weakened. The bacteria thus colonize the lungs, which can rapidly lead to bilateral pneumonia, which significantly weakens the patient's general health.

These oral bacteria are those that habitually reside in periodontal pockets and, in normal circumstances, they never pass into the lower airways because of the strong defences of our bronchial system. However, when the patient lacks effective defences (through viral infection or general deterioration in their health), the bacteria can overcome these defence systems and colonize the pulmonary parenchyma, giving rise to so-called nosocomial or aspiration pneumonias. The need for assisted ventilation further complicates the capacity of the defences and thus facilitates these sources of infection.

Given that the presence of bilateral pneumonia and the need for assisted ventilation are key indications of the deterioration of COVID-19 disease and a major risk of death, it is essential to pay great attention to oral hygiene and to administer oral antiseptics in hospital environments to reduce this possible oropharyngeal colonization.



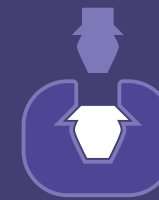
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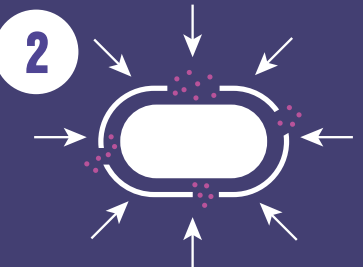
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3



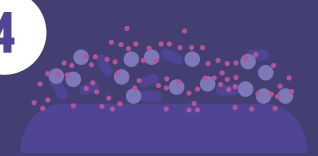
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“The prevention of periodontitis and its early treatment are crucial to avoid COVID-19 complications”

MARIANO SANZ
FALEH TAMIMI

SECTION COORDINATED BY:

Assumpta Carrasquer
Professor of Master in
Periodontology and Implants,
Faculty of Dentistry of
Valencia.

International co-operation and the fruitful personal relationship between professors Mariano Sanz* and Faleh Tamimi have resulted in a study that has been a global benchmark for the important role that periodontal health plays in COVID-19. In a joint interview, they speak about this research and other important lines of work.**

What key messages can be drawn from this study?

This study, fruit of the collaboration between researchers at McGill University in Montreal (Canada), the University of Qatar, the Institute of Oral Health of the Hamad Medical Corporation in Doha, and the Complutense University of Madrid, demonstrates that there is a clear and significant association between suffering periodontitis and having a more severe progression of the viral infection that gives rise to COVID-19, above all in terms of the frequency of serious complications, such as the need for intubation, the need for admission to the ICU, and death from COVID-19.

The state of chronic inflammation created by periodontitis could make the body react in a worse way to COVID-19

To what extent does this have a relationship to what is described as a "cytokine storm"?

Periodontitis is a chronic inflammatory disease of infectious origin, which can maintain a state of chronic systemic inflammation in untreated patients over long periods of time. This systemic inflammation is manifested by high levels of inflammation markers in the blood – such as C-reactive protein, inflammatory cytokines, lymphocytosis – which are precisely the markers that have been associated with an increase in the severity of COVID-19 disease, the so-called cytokine storm.

Why was this study carried out in Qatar?

The state of Qatar has some characteristics that made it the perfect place to carry out this study. To start with, it has a public-health system which covers dental treatment and all records – medical, dental, and about COVID-19 – are digitalized in a central system, which allows easy access to the dental and medical data of nearly the entire population. Together with this, we should remember that at the start of the pandemic, Qatar had the highest concentration of COVID cases in the world as a percentage of population, which means that a very high number of the dental records correspond to patients who have suffered this disease.

All these factors allowed us to be able to identify patients with COVID with the medical and dental records necessary to carry out this study. We calculate that some 400 patients would have been enough to have been able to do the study, but we were pleasantly surprised to find that in the end we could identify as many of

From a friendship to a study with a global impact

ON MANY OCCASIONS, little coincidences can lead to great results. In biomedical research these small details are those which almost always make the difference. In this case, a professional relationship, with the start of a friendship separated by thousands of kilometres, has generated an extraordinary scientific, clinical, and social performance.

Since the start of the SARS-CoV-2 coronavirus pandemic, the ETEP (Aetiology and Therapy of Periodontal Diseases) research group at the Complutense University of Madrid has been interested in studying the association between periodontal diseases and the progression of COVID-19 diseases. It has

done so via two lines of research: on the one hand, studying the role of the oral cavity in the transmissibility of the virus, and on the other hand, analysing whether periodontal diseases – fundamentally periodontitis – are a risk factor in the aggravation of COVID-19 disease.

To deepen this second line of research, Prof Mariano Sanz got in touch with Prof Faleh Tamimi, who did his doctoral thesis at the Complutense University of Madrid and is currently vice-dean of research at McGill University in Montreal (Canada) and acting dean of the Faculty of Dentistry of the University of Qatar in Doha. This allowed an important international connection, facilitated

by the joint collaboration of both experts in earlier scientific projects; as they themselves recognise, *"it was easy to reach agreement on a research protocol and a methodological strategy."*

Together, they drew up a research protocol, taking advantage of the fact that the state of Qatar has some characteristics that made it the perfect place to carry out this type of study, as it has a system of health that includes centralized and digitalized data for all medical, dental, and COVID-19 records.



Mariano Sanz

Catedrático de la Universidad Complutense (UCM), expresidente de la Sociedad Española de Periodoncia (SEPA) y codirector del Grupo de Investigación ETEP (Etiología y Terapéutica de las Enfermedades Periodontales) de la UCM.



Faleh Tamimi

Decano de la Universidad de Qatar en Doha y vicedecano de investigación de la Universidad de McGill en Montreal (Canadá).

All hospitalized patients in Qatar receive by default treatments with chlorhexidine mouthwashes, and they have one of the lowest COVID mortalities in the world

568, which allowed us to make a more sophisticated analysis of the data.

From the results of your study, how do you explain the link found between the presence of periodontitis and the worsening of patients with COVID-19?

Our hypothesis is that periodontitis creates a state of chronic inflammation that could make the body react in a worse way to COVID-19. The main reason why COVID-19 kills is not the virus per se, but the inflammatory reaction of the body to the virus. In the most serious cases of COVID-19, the immune system produces a disproportionate inflammatory reaction; this destructive inflammation of COVID-19 has traits in common with periodontitis. In fact, in our study we saw that patients with periodontitis

had high blood levels of inflammation markers associated with COVID complications, among which were high concentrations of leucocytes, CRP, and D-dimer.

However, the relationship between periodontitis and an increase in low-level inflammation in the whole organism is already well known...

Indeed. The mechanisms through which untreated periodontitis can affect other organs at a distance and increase the risk of incidence and the severity of diseases such as diabetes, cardiovascular diseases, and rheumatoid arthritis – among others – are well known. These mechanisms act in a direct way, through the passage of bacteria that reside in periodontal pockets to other parts of the body via the blood or via aspiration, or in an indirect way, through a process of systemic inflammation. This systemic inflammation is produced through the release of products of chronic inflammation that occur in the periodontal tissues.





“Periodontitis is a chronic inflammatory disease of infectious origin, which can maintain a state of chronic systemic inflammation in untreated patients”

MARIANO SANZ

→ In the research conducted, we believe that the results obtained could be the result of both routes. On the one hand, systemic inflammation, as a significant increase in concentrations of inflammation markers in COVID patients with periodontitis has been shown; on the other hand, and given the existence of a significant association between patients with periodontitis and COVID-19 patients intubated and in ICUs, the processes of pneumonias through aspiration are frequent in this type of patient.

Particularly significant in your study is the finding that COVID patients with periodontitis are nine times more likely to die. How do you explain that?

It is most likely that periodontitis can worsen the inflammatory process of COVID and this would provoke a cascade of complications, unfortunately leading to death in some cases.

In our study, nearly all the patients with COVID-19 and periodontitis who died were in UCIs and needed ventilation before their deaths and they also had high levels of inflammation in their blood during the

Having good oral hygiene can help us have a healthier life and to better confront diseases such as COVID

course of the disease. In addition, we should consider that these patients in UCIs who need assisted ventilation through intubation can suffer a worsening of their lung disease through the aspiration of bacteria that reside in periodontal pockets or through respiratory bacteria that take up residence in the periodontal pockets of patients with periodontitis. All this can be contributing to increasing the risk of death.

In your study, the risk of death from COVID in people with periodontitis is even higher than the risk of needing assisted ventilation or admission to an ICU. How do you explain this?

The numbers in our study should be viewed with caution. The association with death is high and significant, but the size of the sample is still very limited in terms of this connection. In contrast, our analysis of admissions

to UCIs is much more precise than our analysis of deaths. Thus, it would not be a surprise if future studies, with larger sample sizes than ours, showed that the risks of death were closer to the risks of ICU admission.

And the presence of other comorbidities in patients with periodontitis can also be an additional risk factor for worse COVID-19 outcomes?

Yes, the patients with periodontitis presented a higher incidence of diabetes and smoking, among other risk factors than can also aggravate and worsen the prognosis of COVID. To avoid the possible biases that this could entail for our study, we statistically adjusted our analysis for these risk factors, to ensure that the relationship between the COVID complications is not because periodontitis is also associated typically with patients who are obese, diabetic, smokers, or elderly, which are those who fare worst in the face of this infectious disease. Furthermore, we made a separate analysis of non-smoking and non-diabetic patients, and in these two subgroups we →

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“The main reason why COVID-19 kills is not the virus per se, but the inflammatory reaction of the body against the virus”

FALEH TAMIMI

→ could also confirm the association between periodontitis and COVID-19 complications.

And what oral care should be given to patients hospitalized with COVID-19?

This is something that should be investigated seriously. In Qatar, all the hospitalized patients received by default treatments with chlorhexidine mouthwashes, and they have one of the lowest rates of COVID mortality in the world. There is no doubt that the mortality of hospitalized COVID patients involves multiple causes, it is multifactorial; but it would be interesting to see if certain mouthwashes can be beneficial in the management of these patients.

Undoubtedly, the use of antimicrobial agents (antiseptics and antibiotics) should form part of the management protocols of patients who are intubated or in UCIs, and

It is probable that periodontitis can worsen the inflammatory process of COVID

There is a clear and significant association between suffering periodontitis and having a more severe progression of the infection that causes COVID-19

probably this is the norm in most hospitals. Nonetheless, we do not know precisely which are the most effective antimicrobial agents for the managements of COVID+ patients. There are various investigations that have shown the virucidal power of mouthwashes, above all if their composition includes Cetylpyridinium chloride (CPC) or povidone iodine.

And should patients who have survived this disease have a special oral care?

There is still a lot for us to learn about the consequences that COVID can have for the immune system and health in general. Nonetheless, with all the scientific evidence that is appearing regarding the effect of periodontal disease on all kinds of dangerous diseases, we should all take good care of the oral cavity;

and specifically, people who get over COVID-19 should seek dental treatment if they have any untreated periodontal pathology.

There is no doubt that prevention is the best remedy. What message should dentists give their patients to avoid the risks with COVID?

Our study shows that periodontally healthy patients have less probability of developing a serious condition if they are infected with SARS-CoV-2. Because of this, the prevention of periodontitis and its early treatment are crucial to preventing COVID-19 complications.

Now more than ever, the professionals of the dental team should stress the importance of maintaining good oral health. Having good oral hygiene can help us to have a healthier life, and to better confront major diseases such as COVID. ■

*can*ker, thrush, sore, chafing, ulcer

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Mouthwashes, a barrier to contain the pandemic



The use of oral antiseptic mouthwashes could reduce the viral load in the mouths of people infected

SECTION CO-ORDINATED BY:

Gloria Calsina
 Certified in periodontology
 University of Southern
 California, USA.

The mouth is a gateway for the virus to enter the organism and it can also be a focus of transmission, reservoir, and infection. Protecting the oral cavity well can be fundamental in avoiding infection, and certain mouthwashes can help to do this

THE THREE MAIN ways that the SARS-CoV-2 virus, the cause of COVID-19, enters the body are through the mucosa of the nose, the mouth, and the eyes. During the first 10 days after transmission and with the patient asymptomatic (but very contagious), the virus accumulates mostly at the nasal, oral, and pharyngeal level, and only later does it concentrate in the lungs.

It is in the mouth where SARS-CoV-2 finds a high density of its specific binding receptors. The maintenance of the virus in the mouth as a reservoir facilitates its transmission from person to person, through the droplets of saliva that can be emitted by an infected person when speaking, coughing, sneezing, exhaling...

Good oral hygiene is very important in the framework of the current pandemic and could help to reduce the transmission of the virus between people

Importance of oral hygiene

It is crucial to maintain good daily oral hygiene in the context of the pandemic, with the aim of reducing transmission of the virus between people. Some antiseptics present in certain mouthwashes can degrade the lipid envelope of viruses such as coronaviruses, enabling the reduction of the viral load in the mouths of infected patients. As a result, this

Actions at mouth level could be useful to control the transmission and severity of COVID-19

would help to reduce the transmission of the virus from infected people and in the aerosols that are generated during dental treatment. In fact, since the beginning of the pandemic, the use of certain preoperative mouthwashes in dental clinics has been recommended to reduce the risk of transmission of SARS-CoV-2 in this environment.

Close contact with a patient during dental treatment, the high generation of aerosols, and the identification of SARS-CoV-2 in saliva suggests that

the oral cavity is a potential reservoir for the transmission of COVID-19. A high viral load of SARS-CoV-2 has been detected in saliva and its presence in periodontal pockets has also been suggested.

Known and possible benefits

Antiseptic mouthwashes, because of their capacity to reduce the number of microorganisms in the oral cavity, have been widely used as a standard measure before dental treatment.

Preoperative antimicrobial mouthwashes with chlorhexidine digluconate, Cetylpyridinium chloride (CPC) at 0.05%-0.1%, povidone iodine (PVP-I) at 0.2%, and hydrogen peroxide (H₂O₂) at 1% are those that are classically recommended to

reduce the number of microorganisms in aerosols and droplets during oral procedures. However, specific evidence is needed on the efficacy of using antiseptic mouthwashes in patients who are positive for COVID-19, although the preclinical results are very hopeful for some of these components. ■

The main oral antiseptics vs viral infections

Chlorhexidine (CHX)

CHX IS A wide-spectrum antiseptic that acts against Gram-positive and Gram-negative bacteria, aerobes, anaerobes, and fungi, increasing the permeability of the bacterial cellular wall and provoking their dissolution. Laboratory studies (in vitro) have demonstrated an effect against lipid-enveloped viruses. Although COVID-19 is an enveloped virus, it is considered that CHX gluconate at 0.12% 15ml has little or no effect against the coronaviruses compared with other mouthwashes.

Hydrogen peroxide (H₂O₂)

AN *IN VITRO* STUDY found that coronaviruses are sensitive to H₂O₂ at 3%. As SARS-CoV2 is vulnerable to oxidation, it has been suggested that the use of mouthwashes that contain oxidant agents – such as H₂O₂ at 1% – before dental treatment could reduce the viral load in saliva.

Cetylpyridinium chloride (CPC)

CPC (CETYLPIRIDINIUM CHLORIDE) is a compound of quaternary ammonium 0.05% which is used to reduce dental plaque and gingivitis. The hypothesis about its possible action against SARS-CoV-2 is based on its lysosomotropic action and its capacity to destroy viral capsids. These findings indicate that CPC could be effective against enveloped viruses such as the coronaviruses. Generally, in the dental clinic it is recommended to rinse with a mouthwash with CPC 0.05%-0.1% for 30-60 seconds, and at home 30 seconds of rinsing and 30 seconds of gargling to reach the most distant areas of the oral cavity, twice a day, after brushing.

Povidone Iodine

POVIDONE IODINE (PVP-I) is a water-soluble iodine compound that has been widely used as a presurgical cutaneous antiseptic and as a mouthwash. Its use can have some risks, such as allergic reactions and thyroid alterations. Its efficacy has been demonstrated in in vitro studies against multiple viruses, including SARS-CoV-2. Recent research has found that a mouthwash with PVP-I at 0.23%-0.5% for at least 15-30 seconds before dental procedures can reduce the saliva viral load.

10 YEARS 20 NUMBERS

SPECIAL ISSUE 20 CUIDA TUS ENCÍAS



Nº1 - Year 2011



Nº2 - Year 2012



Nº3 - Year 2012



Nº4 - Year 2013



Nº5 - Year 2013



Nº6 - Year 2014



Nº7 - Year 2014



Nº8 - Year 2015



Nº9 - Year 2015



Nº10 - Year 2016



Nº11 - Year 2016



Nº12 - Year 2017



Nº13 - Year 2017



Nº14 - Year 2018



Nº15 - Year 2018



Nº16 - Year 2019



Nº17 - Year 2019



Nº18 - Year 2020



Nº19 - Year 2020



Nº20 - Year 2021

Special issue 20: 10 years of Cuida Tus Encías

A decade has passed since the birth of an innovative project, long pondered and developed by SEPA and the fruit of multidisciplinary work by communications professionals and experts in dentistry. After 20 issues, "Cuida tus Encías" maintains its essence but has also adapted to changing times and tackles new challenges

IT WAS IN MAY 2011 when the first issue of the magazine "Cuida Tus Encías" was published, a unique publication at that time, a revolutionary and pioneering magazine that placed rigorous, high-quality, and verified information at the service of oral-health professionals and the general population, with an attractive visual appearance and with a tone of voice that was agile, journalistic, modern, approachable, and educational.

Since then, twenty issues of this publication have seen the light, which have approached in depth a range of topics including the association between oral health and cardiovascular health; the pernicious 'friendship' between diabetes (and metabolic syndrome) and periodontitis; gum care for women, children, and people of advanced age; the impact of oral health on the respiratory system; the 'silent' threat of smoking; halitosis; the link between the health of the mouth and sports performance; oral health and pregnancy; the Alliance for Periodontal and General Health; the keys to success in implant treatment; and the close association between oral health and obesity...not to mention this monographic issue on COVID-19.

But "Cuida Tus Encías" has been much more than the extensive reports

that have dominated the front page.

These are only the showcase of an extensive and varied offer of news content aimed at responding to questions from dental professionals and their patients, as well as exposing hoaxes, underlining preventive messages and habits, and promoting optimal oral health and healthy lifestyles. World-renowned experts have appeared in these pages, such as the cardiologist Valentín Fuster and the researcher Bernat Soria, leading health journalists such as Alipio Gutiérrez, Emilio de Benito, and Bartolomé Beltrán, and some of the most outstanding periodontists of the international panorama, including Nuria Vallcorba, David Herrera, Phoebus Madianos, Mariano Sanz, Juan Blanco, Adrián Guerrero, Antonio Bujaldón, and Filippo Graziani.

There have also been in-depth interviews with medical professionals, leaders of scientific societies close to SEPA. All this without neglecting the invaluable and successful participation of many experts who have provided brief – but also precise and necessary – opinions on some of the topics tackled.

International benchmark

OVER THESE TEN YEARS OF EXISTENCE, we cannot forget the important milestones in this publication's trajectory, like collaborating with leading magazines such as *Saber Vivir*, the most popular publication in Spain devoted to informing the public about health. But while there has been a wide dissemination at the national level, with a notable presence in dental clinics across the country (and also with an edition in Catalan), even more notable is its international reception and expansion.

Today, "Cuida Tus Encías" has editions in Spanish, English, and Portuguese and there is also interest in translating this material into German, Italian, Arabic, and Turkish. The publication is of particular interest in Spanish-speaking countries, with an edition adapted to South and Central American countries that are part of the IberoPanamerican Federation of Periodontology (FIPP).

Reality has shown us the need to maintain and extend our mission to disseminate scientific and clinical knowledge in dentistry, bringing periodontology and oral health to everyone, now also via www.cuidatusencias.es and SEPA's social networks.

"Cuida Tus Encías" is published in Spanish, English, and Portuguese



Over its 20 issues, the insertion of Cuida Tus Encías as a supplement of the magazine Saber Vivir stands out



The Ibero-Panamerican Federation of Periodontology (FIPP) is going to integrate Cuida Tus Encías as a magazine of reference for patients



The edition in Catalan is the fruit of collaboration with COEC



The edition in Portuguese is edited by the Portuguese Society of Periodontology and Implants (SPPI) and soon by the Brazilian Society of Periodontology (SOBRAPE)



Take care of your gums

Since issue 13, there has been an edition of the magazine in English



20 issues 1 team

WHEN YOU READ Cuida Tus Encías, you know that behind each issue there is some hard, meticulous, and invisible work.

After 20 editions, hundreds of photographs, thousands of words, and countless hours in front of the computer, we would like to thank the commendable work of the team behind the pages.



Editor-in-chief:
Paco Romero



Web coordinator:
Ángel Ramírez



Editorial design:
Juan Aís



Design:
Eila Blasi



Director of operations and innovation:
Jaume Pros



Communication coordinator:
Miguel López



Coordination of projects:
Eugenia Huerta



Design and layout:
El Estudio

The vision of the decision-makers

10 YEARS 20 NUMBERS

Throughout its history, the promoters and editors of the magazine Cuida tus Encías have been professionals of recognised prestige in the field of periodontology and dentistry, with a particular sensitivity for dissemination and social communication. Their qualifications, enthusiasm, and effort have provided a transcendental added and differential value



Jorgina Estany
Member of the Executive Board of Sepa and promoter of the magazine Cuida Tus Encías. 2010 – 2013

The 10th anniversary of "Cuida tus Encías" is a good moment to recall the birth and initial aims of this magazine. The SEPA board led by Dr Nuria Vallcorba, and of which I was a member, thought that it would be useful to create an informative magazine on topics related to oral health which, while never ceasing to be rigorous, could be sufficiently entertaining to be read by all patients in the waiting rooms of our clinics as well as by other health professionals. Very quickly our proposal became a reality thanks to the excellent work of Javier García in the design and Dr Jaime Alcaraz in the editing. Both were successful in surrounding themselves with a great team of collaborators. The great work has continued until our time, with the editorship of Dr Regina Izquierdo. Whenever I receive the magazine, I like to spend some time reading it, and I can safely say that the initial objective of correctly educating and informing our patients about current topics in oral health has been widely achieved over these ten years, whether in its central topic or in any of its fixed sections. From my point of view, an important feature has been its "stubbornness" in highlighting something that is often forgotten by the health sector: the importance of the mouth – and periodontology in particular – within general health and the prevention of systemic diseases.

Congratulations on this anniversary and many thanks to all the magazine's contributors.



Olalla Argibay
Outreach member of the board of the SEPA Foundation of periodontology and dental implants. 2019-present

We want informed patients. This is the great objective of SEPA's project Cuida tus Encías. To have received such a significant legacy from the hands of Regina Izquierdo and, earlier, Jorgina Estany has been a guarantee of success.

And most important of all, it represents a future marked by the scientific and informative rigour characteristic of SEPA made available to the public through various channels.

The magazine published its 20th issue in May, exactly 10 years after Nuria Vallcorba presented it in Oviedo in 2011. Now, we also have a website that patients and the public can access, as well as social networks and audiovisual material. To be part of this brilliant team is an honour and at the same time a great responsibility.

Investing in prevention is the best treatment that we can offer our patients and the importance of transmitting this message to the public at large is crucial. Coordinating this area of public consciousness raising within the executive committee of the SEPA Foundation is a great challenge and an exciting one. After a decade of life, Cuida tus Encías can only grow and develop together with all oral-health professionals, opening out to the population with the clear objective of improving gum health and reducing the consequences of periodontal diseases. By looking after our gums, we look after our general health.



Jaime Alcaraz Sintes
Scientific editor of the magazine Cuida tus Encías. 2011-2016

As we commemorate the tenth anniversary of the magazine "Cuida tus Encías", I remember an afternoon in March 2011 when Dr Nuria Vallcorba (at that time the SEPA president) told me of the executive board's wish for me to lead this ambitious project. It was an initiative that had been studied for some time, based on the outreach campaign "Cuida tus encías" [Look after your gums] which was carried out for SEPA's 50th anniversary in 2009.

This campaign tried to raise public awareness of the importance of improving oral health in Spain and of preventing gum and dental-implant diseases. This innovative project tried to create an informative magazine for our patients (those who at that time would receive it in print format in our clinics) and for non-dental health professionals. And so it was that, starting from the slogan of the "Cuida tus Encías" campaign, a name was given to this new magazine. An editorial committee was created (some of whose members continue to contribute to the publication) to carry out this project which, in time, would also include the digital format. This type of magazine already existed in other branches of medicine, such as cardiology and diabetes. But the magazine "Cuida tus Encías" was a pioneering and innovative project in the world of dentistry, with SEPA the first scientific dental society to fill this gap. Over the years, this important outreach work has been recognised, both in the national dental field and in the European and international ones, even coming to publish a version in English and also carry out a successful distribution in numerous Latin American countries. I worked in the management of the magazine over six years, taking part in the production of 11 issues. I did so with great enthusiasm and counting on the effective support of an excellent editorial board, project management, and communications team, all fully committed to fulfilling the mission entrusted to us by SEPA.



Héctor Juan Rodríguez Casanovas
Scientific editor of the magazine Cuida tus Encías. 2016-2017

According to J.C. March Cerdà, former director of the ESCUELA ANDALUZA DE SALUD PÚBLICA (Andalusian School of Public Health), evidence suggests that empowering the patient will play a fundamental role in an effective reform of the management of chronic diseases, as it will help to maximise efficiency and value in health systems.

An active and empowered patient is a patient with the capacity to decide, to satisfy needs, and to resolve problems, with critical thinking and control over their life and their health. And all this is achieved, in the first place, through knowledge. This is one of the objectives that a magazine such as "Cuida tus Encías" must have. Oral diseases and periodontal diseases in particular require as wide a dissemination as possible to civil society. This would enable the improvement of our society's health. Looking after our gums is one of those tools for empowering the patient.



Regina Izquierdo
Outreach member of the SEPA Foundation board 2013-2019 and scientific editor of the magazine Cuida tus Encías 2018 – present

This anniversary shows the success of an innovative and audacious project, which was born 10 years ago to fill a gap in the field of oral health. The success achieved reaffirms the need to continue educating and informing the population about the importance of taking care of their mouths because, now more than ever, we know that prevention is at the heart of health.

As a member of the SEPA Board of Directors, and later as scientific editor of the magazine, I would like to thank this great team for their work, commitment, and dedication. They have made all this possible.

Our main wish for the future is to reach even more people with the message that oral health also matters – and that it matters a great deal.

TAKE CARE OF YOUR
gums

The section coordinators take stock

10 YEARS 20 NUMBERS

Over its 10 years of life, the magazine has counted on the disinterested and indispensable collaboration of more than a dozen experts (with a clear predominance of women) responsible for coordinating the various sections, some of whom have been with us since the start. Their work has been key to the success and progress of the project. Here are some of their reflections:



Blas Noguero

"The magazine 'Cuida tus Encías' was created to help the population become protagonists in the prevention of their oral-health problems. As a witness to the birth of this project, I am proud to have been able to contribute to it during its first stage. Happy birthday!"



Assumpta Carrasquer

"Over these ten years of collaboration, I have learned that communication is fundamental. Nobody will look after their oral health, and their gums in particular, if they don't know how important it is, why it must be done, and how it should be done."



Joana Roselló

"The magazine 'Cuida tus Encías' has managed to provide both non-periodontist dentists and the general public with information that is both entertaining and highly professional."



Rosa Puigmal

"In 2011, an exciting project started, the launch of an outreach publication, close to people, to transmit to the public, from scientific rigour, the relationship of general health to periodontal disease. An innovative and enthusiastic goal, for which I am enormously grateful to have been able to have played a part over these ten years. Congratulations SEPA for having made it a reality!"



Mónica Muñoz

"This is an excellent dissemination tool for SEPA and for concerned patients who want to inform themselves about their oral health in a simple and reliable way, with the backing and endorsement of a large scientific society. Personally, it is very satisfying, and it is a pleasure to be able to act as a kind of bridge or link between patients and oral-health professionals."



Cristina Serrano

"In these ten years, the magazine has become a benchmark not only for patients but also for all dentists when promoting oral health, to the point of having crossed borders. It has been very satisfying to coordinate the 'Al Día' [Update] section, with news and recent research."



Gloria Calsina

"As a stomatologist, prevention in oral and general health strikes me as being primordial. There is no doubt that the approachable, yet at the same time scientific, dissemination of our knowledge, reaching as many people as possible, is the best tool to achieve this: Coordinating the 'Prevention' section in the magazine over these 10 years has given me the gratifying possibility of achieving this."



Nerea Sánchez

"It has been very satisfying to be part of the editorial board of this magazine, being able to share experiences and information with great professionals. The pleasure has been even greater when seeing how a publication that has proved fundamental was created and developed, because in a simple way it brings the latest research and knowledge in periodontology and implant dentistry – and, in short, in oral health – to the general public."



TAKE CARE OF YOUR
gums

Thanks to Sepa's strategic partners

Thanks for these 10 years of trust, for these 20 issues of dissemination, and for a future of well-informed patients.

STRATEGIC PREMIUM PARTNERS



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GOLD CONTRIBUTORS



BRONZE CONTRIBUTORS

Alliance with health institutions for oral health

The heads of the health departments of the various Spanish autonomous communities have wanted to join the celebration of our anniversary and, at the same time, thank both the outreach work performed and the fundamental health work performed by all members of the dental team



Oral health has always been present in the health agenda of the Basque Country and therefore, as the health minister of the Basque government, it is an honour to be able to participate in the magazine “Cuida tus Encías” on its 10th anniversary. Dental-periodontal conditions have been accepted as an inevitable consequence of life and ageing; however, there is clear evidence that they are not inevitable and that they can be reduced and prevented through simple and effective methods at all stages of life. In this regard, for the last three decades the Basque Country has developed policies of prevention, such as carrying out epidemiological studies of dental health in the school population and the Programme of Childhood Dental Care (PADI), focused on ensuring that new generations grow up free of caries. The commitment to following these policies is solid and forms part of the Department of Health’s strategic plan for the current legislature. The continued effort has allowed the oral health of Basque schoolchildren over the last decade to consolidate itself as the best in the country and at the head of the European Union alongside countries such as Denmark. This model has shown itself to be highly effective, not only in its contribution to reducing oral diseases in children and young people but also in establishing in families the habit of regularly visiting the dentist. In this way, a “family dentist” model is being implemented which commits a large part of the professional sector to collaborating with public oral-health policies. Today, many of those children are over 35 and continue to visit the dentist, this time with their own children to continue ensuring their oral health. Nonetheless, it is also known that environmental and social factors have a notable influence on health results at the population level, which should prevent the temptation of assigning the entire responsibility for the population’s oral-health results only to PADI or to other institutional programmes. Each one of us must make a commitment to his or her own health. We should be aware that we ourselves play an active role in taking care of our health. I would like to end this tribute by recognizing the role of scientific societies such as SEPA in the rigorous education on prevention in periodontal health aimed at health professionals, and at dentists in particular, as well as this magazine.

Oral health is a continuing commitment of the government of the Principality of Asturias. As a result, oral-health units have been created which provide acute procedures and minor surgery for adults as well as drive programmes to improve oral health in pregnant women and in people with intellectual disabilities. Furthermore, since 1992, there have also been children’s oral-health units in all the health areas, a preventive initiative aimed at children of up to 14 years of age, which is carried out in primary-care centres. Wide-ranging and free services are provided, and these are completed with the programme “La Conquista de la Boca Sana” [The Conquest of the Healthy Mouth], which also involves the department of education. The horizon we are setting for the coming years is to extend provision up to 18-year-olds, which at the moment is not recognized by the national health system. At the Principality, we are working on gradual implementation to progressively provide care to the new age cohorts. Thus, during 2021 and the following year, care will be expanded to the population of 15- and 16-year-olds, and we have created the necessary staffing to expand eight full teams, each one made up of one dentist and one dental hygienist. And in 2023, we will extend the provision of dental services to the cohorts of 17- and 18-year-olds. I would like to take this opportunity to thank you for your outreach work on oral health and encourage you to continue in this direction.

As the World Health Organization (WHO) states, oral health is fundamental for enjoying good health and a good quality of life. When we stop to think about oral health, we think that it all ends there, in the mouth, and we tend not to think of the consequences that periodontal diseases can have on the rest of the organism. For this reason, in Cantabria – always concerned to offer the best services to our citizens and to support oral health – we have a series of activities within our portfolio of services. Considering that prevention is the best tool in our hands, these services start with information, education, and training of the population in matters of hygiene and oral health. However, when prevention has not been sufficient and a greater complication appears, we also offer treatments that can include minor surgery, exodontia, biopsies of mucosal lesions, or care of acute pathologies in the temporomandibular joint. In addition, we also provide special services to specific groups, such as pregnant women and minors, who have their own services within the complementary portfolio. All this to preserve one of the most precious things we have: the smile. As Charlie Chaplin said: “The day when you don’t smile is a day lost.”

The Autonomous Community of Aragon is highly aware of the prevention of oral diseases and specifically of caries and periodontal disease. Primary care treats not only acute processes but also plays a fundamental role in the dissemination of instructions on oral hygiene and hygiene and dietary norms for the whole population as well as specifically for pregnant women for the prevention of periodontal diseases during pregnancy. In addition, Aragon has a programme of oral care for children and young people (PABIJ) aimed at children between six and 13 years, which includes not only preventive measures aimed at obtaining good oral health but also a series of conservative treatments for permanent teeth. For boys and girls younger than 16 with a recognised incapacity, the age is raised to 16 years and the coverage is also extended, including oral care with sedation by general anaesthetic in hospital centres. We have a strong commitment to oral health, both from the perspective of health care and, even more, from that of public health and disease prevention. We are convinced of the potential of good oral hygiene to ensure the health of citizens and avoid future complications. We would like to congratulate the magazine “Cuida tus Encías” on its 10th anniversary and thank you for this opportunity to share a few lines with all your readers.

Usually anniversaries are always a welcome event and an object of celebration, and even more so in this case as concerns the health-dissemination project that is the magazine Cuida tus Encías. We should recognise and congratulate its promoters at the Spanish Society of Periodontology (SEPA) and the many professionals involved in a decade of this work.

Since now more than a year ago, the declaration of the COVID-19 pandemic had an unprecedented impact on our way of understanding health, showing its relationship with other aspects of our daily life – principally social, economic, and cultural activity. As a generation, we have shared an unprecedented experience, facing a crisis caused by a pathogen, thus eminently health-related, but with consequences in all other areas of our lives which we cannot yet assess with any degree of certainty. We have improved our knowledge of the coronavirus and at the same time we have progressively adapted our way of life to contain risks, but opportunities to overcome this situation, in its most serious forms, are now opening with the arrival of vaccines and possibly in the near future pharmacological treatments. Over these months, we have been aware of the value of the response found in work shared between public decision-makers, health managers, professionals, specialist scientists, and above all where the work of scientific societies has provided an essential value, through their networking capacity and their ability to share knowledge and together with professionals transmit timely messages to the general public. We have been obliged to take rapid public-health actions to prevent the transmission of the infection as a priority and to coordinate the health-sector response to COVID-19, trying to minimise the impact on other healthcare needs, but we still face attending to the chronic health effects of this context, about which we are progressively learning more. The population’s oral health is an expression of health

in general, as it is on the one hand an alert about diseases that are difficult to detect early, but on the other hand it implies a protection against many conditions as it is a fundamental line of defence against pathogens, as can also be seen in respect to SARS-CoV-2, and for its relevance to strengthening the immune system and thus to the latter’s response to the disease.

Undoubtedly, on top of the challenges that we have faced for years in the health system, we now have the impact that this epidemiological crisis can have on our health services and on the health of the population, which means that the response should be more strategic and holistic, if possible, than that which we were announcing as essential in public policies until a year ago. In this context – as pointed out in the diagnosis of the situation and the design of the framework of strategic responses in health matters of Castilla-La Mancha Horizon 2025 Health Plan – it is essential to have the collaboration of all social actors with the capacity to influence and have an impact on the population’s health, strengthening work in prevention, chronic care, the promotion of education for health and self-care, as well as integrating actions as a whole to make the entire health system sustainable by providing value to patients. Congratulations of maintaining over ten years your scientific and editorial project as a channel of disseminating evidence-based information to the population and placing value on the importance of oral health, building trust between patients and professionals – an essential alliance for prevention and correct health monitoring.

The order of the texts according to the Protocol of Order of the Autonomous Communities



BASQUE COUNTRY

Excma. Sra.
D.ª Gotzone Sagardui
Consejera de Salud



ASTURIAS

Excmo. Sr.
D. Pablo I. Fernández Muñiz
Consejero de Salud



CANTABRIA

Excmo. Sr.
D. Miguel Javier
Rodríguez Gómez
Consejero de Sanidad



ARAGON

Excma. Sra.
D.ª Sira Repollés
Lasheras
Consejera de Sanidad



CASTILLA-LA MANCHA

Excmo. Sr.
D. Jesús Fernández Sanz
Consejero de Sanidad



The Regional Ministry of Health and Consumer Affairs has invested energy and economic resources in dental services for the prevention of oral diseases among citizens. Our roadmap contemplates collaboration with licensed private dentists through the Childhood Dental Care Programme (PADI), which benefits children between six and 15 years of age. Among our lines of action are care for patients with disabilities, care for patients with congenital craniofacial disorders, the treatment of acute dental processes, and targeted oral-health education focused especially on nutritional information and oral-hygiene measures. This year we will make a firm commitment to introduce tartrectomies for pregnant women in the whole community – at the moment, this is only done in the health area of Ibiza and Formentera. We will also support oral rehabilitations for patients in face and neck oncological processes. Specialist information in oral health is necessary to contribute to citizens' knowledge, skills, and decision-making. In this respect, the Spanish Society of Periodontology and Osteointegration has been able to reach people through the publication 'Cuida tus Encías'. Dentists are performing an important work of care, diagnosis, and treatment of oral pathologies and disorders, and equally important is the role that you play in the field of prevention. The Regional Ministry of Health and Consumer Affairs trusts your work and you can count on our collaboration to prevent the consequences that poor oral health can have on people's general health.



BALEARES
Excma. Sra.
D^a. Patricia Gómez Picard
Consejera de Salud
y Consumo



Comunidad de Madrid
CONSEJERÍA DE SANIDAD

Warmest greetings to readers and my congratulations to the Spanish Society of Periodontology and Osteointegration and especially to the team that makes possible the magazine "Cuida tus Encías" on the 10th anniversary of this publication, recognizing its important work in the social dissemination of oral health among the population. The Community of Madrid is strongly committed to the promotion of oral health, which has been shown in recent years through various preventive, healthcare, and educational activities for health. The publication of the Law 7/2018 of 26 December on Oral Healthcare is a response to this, as is the creation of the "Programme of Childhood Dental Care", which includes an active policy of prevention, promotion, and care of the population's oral health within the Community of Madrid. In this respect, we want to strengthen the mechanisms of the Madrid Health Service to respond more effectively to the needs of citizens and to encourage their access both to the services envisaged in this Law and to the portfolio of services common to the National System of Health, notably the "Programme of Childhood Dental Care" (PADI) which will progressively guarantee basic dental care to all children resident in our Community, from 7 to 16 years of age, strengthening and expanding the existing basic provisions. Allow me to take the opportunity to insist on the importance of maintaining good hygienic care and healthy nutrition as a basic premise for good oral health. And I would like to express my recognition of the great work of periodontists and all dental professionals.



MADRID
Excmo. Sr.
D. Enrique Ruiz Escudero
Consejero de Sanidad



Junta de Castilla y León
Consejería de Sanidad

Initially one must highlight the important work that is being carried out by professionals dedicated to oral care. A good example of this is this regular publication of the Spanish Society of Periodontology and Osteointegration which, combining health communication and scientific rigour, approaches professionals and the population with the common aim of the promotion and care of oral health. The Regional Ministry of Health and the Regional Management of Health of Castilla and Leon support the promotion of oral health in the population through our portfolio of primary-care services, which integrates health care in the child population involving nurses, paediatricians, and oral-health units made up of dentists, dental hygienists, and auxiliary nursing technicians. Hygiene and diet advice, clinical evaluation, follow-up, detection of oral disease, as well as caries prophylaxis in our children – we must all be committed to these if we really want to contribute to current and future health from an integral perspective. I would like to congratulate all the creators of this magazine, which with twenty issues is now celebrating its tenth anniversary. I hope this celebration provides renewed motivation for its scientific and outreach progress.



CASTILLA Y LEÓN
Excma. Sra.
D^a. Verónica Casado Vicente
Consejera de Sanidad

The road ahead



Antonio Bujaldón
President of the SEPA Foundation of Periodontology and Dental Implants.

Ex-Presidents of Sepa under whose mandate the magazine Cuida Tus Encías has been developed



Adrián Guerrero
2016-2019



David Herrera
2013-2016



Nuria Vallcorba
2010-2013

Thanks to the vision and drive of Nuria Vallcorba, Cuida tus Encías celebrates 10 years in 2021. Thanks to David Herrera and Adrian Guerrero, it was possible to continue this innovative project which has been led by Jaime Alcaraz, Héctor Juan Rodríguez, and today by Regina Izquierdo, who have counted on the guidance of Jorgina Estany and Olalla Argibay, as members of different boards of directors, together with the many members of the respective scientific committees of this magazine which today has its own website, YouTube channel, and Instagram account. In short, Cuida tus Encías responds to the same initial vision and intention: to provide patients and the public with rigorous and simple information to improve their knowledge of oral and periodontal health, thereby stimulating self-care of their gums, their mouths, and their bodies. It is an honour to be passed this baton and to be able to celebrate the 20th issue of this leading publication for the Spanish dental community and international periodontology. In fact, over these years some issues of Cuida tus Encías have been translated and published in Catalan, Portuguese, and English, whose edition is permanent. The changes experienced over the last decade have been accelerated as a result of a pandemic that, as well as its fatal consequences, has also brought us a greater awareness of the value of health, where oral-health professionals have to recognise ourselves as a key part of the system in preventive and healthcare terms. The example of unity in health and the opening of dental clinics has strengthened the role that dentistry and oral health should play in our society. The coming years will demand placing people at the centre of dental care, identifying the opportunity for transforming the dental clinical into a digitalized and interdisciplinary space where the human character and the commitment to the promotion of general



health are paramount. Health and Well-being are the third of the 17 Sustainable Development Goals promoted by the United Nations since 2015 with the horizon of 2030. With this perspective, SEPA is committed to developing an ambitious initiative that serves as an amalgam of all oral-health professionals, developing the slogan 'Periodontology for everyone' and the Alliance for Oral and General Health towards the aspiration of a more universal access to oral health. The Clinical Practice Guide for Periodontitis Stages I-III developed by the European Federation of Periodontology, and adapted in Spain by SEPA together with leading stakeholder groups, represents a major milestone in excellence and quality of care, which strengthens the role of periodontology and dentistry in the health sciences in Spain. Nonetheless, the certainties and high therapeutic standards will not be perceived as they should be if patients and society lack rigorous and accessible information. And this continues to be the great contribution of Cuida tus Encías and its rigorous deployment of information, together with other outreach initiatives with citizens and institutions involved in care intervention with programmes of early detection of periodontal and peri-implant diseases, early detection of diabetes in the dental clinic, promotion of cardiovascular health and smoking cessation, as well as improving women's health and promoting the general health of the whole population together with other healthcare professionals and health institutions. Cuida tus Encías celebrates its 20th issue and the Casa de las Encías will celebrate five years this coming October, reflecting SEPA's clear commitment to the promotion of periodontal, oral, and general health as the road ahead.

The dental clinic adapts to the age of COVID-19

Dental clinics have traditionally had a priority mission, that of caring for the oral health of their patients, as well as guaranteeing their maximum safety and comfort. In the era marked by the COVID-19 pandemic, this commitment has been strengthened still further



The 5 pillars of agile and successful transformation

THE ADDITIONAL SAFETY measures that have been adopted by dental clinics have mostly followed the recommendations made by the Consejo General de los Dentistas de España [General Council of Dentists in Spain] and can be divided into five categories or sections.

Thanks to these measures, and the good will and understanding of patients, we have managed to return to working in an optimal environment and following safety parameters appropriate to the current health situation.

1 Organization of areas

- Planning appointments with the aim of avoiding the waiting room.
- Maintaining the safety distance in the waiting room and reception, using appropriate signage.
- Removing decorations, magazines, plants, water dispensers, and other objects from the waiting room.
- Placement of partition screens in the reception.
- During the visit, the consulting room remains closed, and after treatment has been completed it is ventilated in a natural way or air filtration or purification systems are used.

2 Patients

- Before attending the appointment, patients are asked if they have any symptoms compatible with COVID-19 and they are asked to be punctual and come on their own (whenever possible, except in cases of children, the elderly, or dependent people).
- Patients are asked to disinfect their hands with hydroalcoholic gel, their temperature is taken, and they are asked to leave their personal objects outside the consulting room or put them inside a disposable plastic bag within the room.
- Before entering the waiting room or the clinical area, footwear is disinfected or covered with a protective covering.
- The patient is provided with protective goggles.

3 Clinical and non-clinical staff

- They will use the appropriate PPE for their jobs (goggles, protective headwear, screens...).
- Clinical staff will wear two masks, one FFP2 and a surgical one on top of that.
- Non-clinical staff will use at least a surgical mask, will comply with interpersonal distance, and will wear work uniforms.

4 Cleaning and disinfection

- It is recommended that patients rinse their mouths with an antiseptic or a solution of H2O2 before starting treatment to reduce as far as possible the viral load that an asymptomatic patient might have.
- Use of high-powered suction systems.
- All the surfaces of the clinical area are decontaminated once work has been completed (worktops, dental equipment, lamp, floor...).
- Keyboards and computer equipment are covered in plastic film, which is also regularly disinfected and replaced.
- Wherever possible, the consulting room is ventilated for 15 minutes between patients or air-filtration systems are used.
- Suction filters are cleaned and disinfected.
- Toilets are disinfected after their use by each patient, as well as handles and other frequently used elements.

5 Biosecurity and waste treatment

- At the end of each working day, as between one patient and another, the processes of biosecurity are respected.
- All prosthetic work is disinfected.
- Gloves are always used when handling waste.
- Appropriate bins are used for each type of waste or disposable material which could be contaminated; in fact, dental clinics have the obligation to have a company contracted for the removal of potentially hazardous waste material.

FOR MORE THAN a year we have been living consciously and globally with COVID-19. Little by little, it has become known – sometimes in a very abrupt and painful way – how this disease originates, manifests, and evolves. And knowledge has advanced on how to minimize the risk of infection in the various areas of life and daily activity.

Regular visits to the dental clinic are established habits of citizens and integrated into healthcare.

Because of this, it is first necessary to give sincere and heartfelt thanks to patients for the confidence placed in their dental clinics and in the professionals who work in them and who form part of the dental team, as in most cases people have returned to their routine visits to the dental clinic. And it is also necessary to value the professionalism and commitment of the various components of this dental team which, even in periods of lockdown, have provided emergency

The additional safety measures adopted by dental clinics have mostly followed the recommendations of the General Council of Dentists in Spain

services and attended to the demands of professional dental care in the most difficult days of the pandemic.

Well prepared

This has been made possible, to a large extent, by the perfect integration of basic safety and protection measures in the dental clinic over decades. Since the 1980s, with the emergence of AIDS and Hepatitis B (of a different form yet at the same time comparable to the emergence of COVID-19), protocols of disinfection and sterilization of the various spaces and instruments were established.

This has meant that there has been no need to substantially change the routine of the dental clinic for the prevention of transmission of infections such as, in this case, the SARS-CoV-2 coronavirus.

In any dental clinic, once work has been completed or when a patient has been seen in a consulting room, all surfaces that cannot be sterilized are disinfected (the dental chair, the worktops, the chair light...) and all instruments used are taken to the sterilization room. Once disinfected, they are packed and sterilized in an autoclave, verifying that each cycle performed by the apparatus is effective.

In addition, the professional who works in the dental clinic always uses protective barriers, such as masks, gloves, screens, and protective glasses, and of course specific work clothes, which are either discarded or disinfected between visits.

Other basic hygiene measures are applied on a routine basis. For example, floors are cleaned correctly and regularly with disinfectant products such as a solution of sodium hypochlorite or other verified disinfectant products that deactivate SARS-CoV-2.

This practice is widespread and has been in place for decades in dental clinics in Spain. However, following the declaration of the global coronavirus pandemic, for more than a year additional measures have been adopted to ensure that the transmission of COVID-19 in dental clinics is practically non-existent or anecdotal (far below the risk of transmission in any other point of health care). ■



What you need to know about oral care in the age of COVID

SECTION CO-ORDINATED BY:
Mónica Muñoz
Master's degree in
periodontology, Complutense
University of Madrid. Certified
in implantology, University of
the Basque Country.

IMPROVING ORAL hygiene is fundamental at this time. The accumulation of oral bacteria because of inefficient hygiene leads to inflammation at the gingival level which can increase the risk of complications in patients with COVID-19, especially in people with diabetes, with cardiovascular disease, or who are immune-compromised.

Diseased mouth, worse prognosis

Poor oral health can lead to complications in other parts of our body and worsen the prognosis in the case of suffering COVID-19. Numerous studies show the relationship between inadequate oral health and other systemic diseases. The bacteria responsible for oral diseases, together with their toxic products, pass into the bloodstream through the small arteries. These bacteria reach organs such as the heart, the lungs, the kidneys, the pancreas, or cross the placenta in the case of pregnancy.

Because of this, it is necessary to prevent these pathogenic oral bacteria from developing in order to avoid possible general diseases that are more serious, such as cardiovascular

Oral pathogenic bacteria should be prevented from developing to prevent possible general diseases that are more serious

problems, respiratory diseases, kidney diseases, worsening of diabetes, or pregnancy complications.

Pneumonia and oral health

Although the close relationship between oral diseases such as periodontitis and certain respiratory infections is known, COVID-19 has highlighted this link still further, especially in people who need to be admitted to intensive-care units and need intubation.

All patients who require mechanical ventilation experience a risk of developing aspiration pneumonia, which is particularly increased in those who present a diseased mouth.

Intensive-care professionals are well aware of this relationship and therefore try to keep the mouth clean (through antiseptics) and moist during intubation.

The COVID-19 pandemic is giving us some important lessons about oral health: that it is also crucial to help reduce risks or complications from the infection and should thus be performed with the utmost care. Furthermore, this pandemic has highlighted the efficacy of safety controls in dental clinics

The importance of saliva

Human saliva is a great ally of health in the mouth as it contains numerous antibacterial and antiviral substances.

This complex fluid plays a crucial role in the prevention of viral infections and protection against them, as it contains many proteins, immunoglobulins, and peptides with antiviral effects. The saliva of a healthy mouth acts as a protective shield... even against the virus that causes COVID-19.

Oral mucosa, the key for new vaccines?

Various potential vaccines against the coronavirus are now being studied.

One of the lines of research includes the possible use of vaccines that are administered via the oral mucosa, which could be even more effective than those administered by the parenteral route. This effect could result from the fact that the oral and nasal mucosa are the main gateways into the human organism for the SARS-CoV-2 virus. ■

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Your dental clinic, the safest health centre

DENTAL CLINICS ARE SAFE places against the risk of COVID-19, thanks to the strict protocols that have been put in place and their rigorous fulfilment. As various surveys carried out by the General Council of Dentists in Spain has confirmed, the estimated rate of infection by COVID-19 among Spanish dentists is particularly low, well below that registered in the overall Spanish population.

The rate of infection among this group (whether at work or in a private context) varies between 0.8%-1.6% in the successive surveys, and with an overall total of 0.9% for the period analysed (March-November), a figure much lower than that published for other health personnel. As Dr Antonion Bujaldón, president of the Spanish Society of Periodontology

(SEPA), highlights, "the dental clinic can be – and is – one of the safest health centres in preventing infection by different diseases. Dental clinics have always been a safe place for their professionals and their users, and they will continue to be so."

Particularly important are the measures adopted to avoid or minimize the generation of aerosols in daily clinical activity. Among the many measures are those to reduce the viral load (such as the use of antiseptic mouthwashes before any intraoral handling), to minimize the generation of aerosols (through the use of alternative instruments and techniques), and to disperse/eliminate aerosols (with high-power suction, appropriate ventilation of the clinical area...).

5 essential measures

GIVEN THE NEED to achieve and maintain an appropriate oral health during the pandemic and in the post-COVID period, the General Council of Dentists gives 5 basic pieces of advice:

- 1 BRUSH TEETH for two minutes, at least twice a day, using a manual or electric brush and a fluoride toothpaste. Do not forget interdental hygiene and the benefit that can be given by certain mouthwashes in indicated cases.
- 2 HAVE A HEALTHY and balanced diet, avoiding carbonated drinks and sugar.
- 3 LIMIT the consumption of tobacco and alcohol as much as possible.
- 4 EXAMINE yourself from time to time to detect the appearance of lumps, stains, or ulcers in the mouth.
- 5 VISIT THE DENTIST at least once a year and as soon as possible if you notice any anomaly.

Looking after your toothbrush in 6 steps



WASH YOUR HANDS
Wash your hands well with soap and water before touching the toothbrush. The virus can be passed from the hand to the oral mucosa.



BRUSH YOUR TEETH
Proceed to brushing your teeth as normal with a fluoride toothpaste for two minutes at least twice a day.



RINSE THE BRUSH WELL After each use, to remove remains of toothpaste and food. It is recommended to disinfect the head of the brush with an antiseptic mouthwash for 1 minute.



DRY THE BRUSH WELL
Turning it from right to left to remove the excess of water and moisture.



STORAGE
Toothbrushes should be stored with the head upwards, at least 1 metre from the toilet to avoid possible contamination, as the coronavirus is also present in urine and faeces which can be released into the air when the flush is pulled if the seat has not been previously lowered. Ideally the brush should not be in sight but stored. It is not good to keep various brushes together in the same container because of the risk of contamination between them.



WASH YOUR HANDS
Finally, wash your hands again with soap and water for at least 40 seconds



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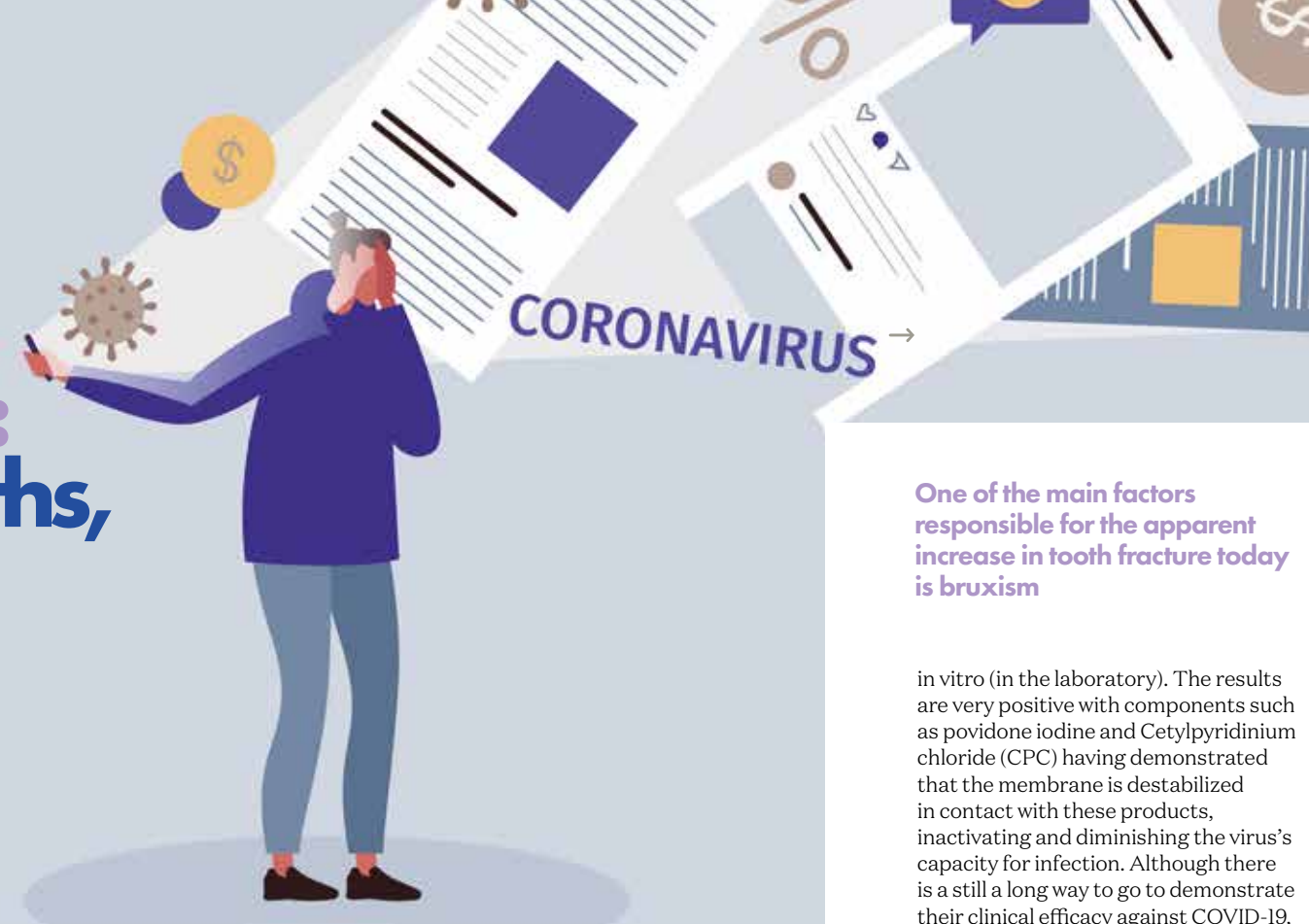
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Oral health and COVID-19: truths, half-truths, and lies

Among the many victims of the information tsunami that COVID-19 has provoked and continues to provoke is the truth. There are many unverified reports in many places that have no scientific or clinical base to support them. Some of them affect oral health



One of the main factors responsible for the apparent increase in tooth fracture today is bruxism

in vitro (in the laboratory). The results are very positive with components such as povidone iodine and Cetylpyridinium chloride (CPC) having demonstrated that the membrane is destabilized in contact with these products, inactivating and diminishing the virus's capacity for infection. Although there is still a long way to go to demonstrate their clinical efficacy against COVID-19, trials in humans are already being carried out and the results are promising in showing a reduction in the viral load in saliva.

In any case, oral hygiene is fundamental to combat COVID-19.

Increase in tooth fractures during the pandemic

One of the main factors responsible for the apparent increase in cases of tooth fracture at this time is bruxism, a persistent jaw parafunction that is commonly known as "grinding the teeth" and which makes us grit our teeth unconsciously. Generally, this condition coincides with psychic overload, emotional tension, and/or distress, associated with occlusal interference which goes beyond the individual's physiological capacity to adapt. Tooth fractures are caused mostly by clenching and grinding, with teeth with fillings and those that have had the nerve removed the ones that have less resistance and elasticity compared with healthy teeth.

At the moment, we cannot say that wearing a facemask causes any disorder in oral health

demonstrated. What happens with the use of masks is that the air which is exhaled is easily detected by the person affected, which would justify an increase in the number of people who are conscious that they have halitosis.

The deterioration of masks, their unhygienic use, their use for longer than the recommended time, or their excessive reuse could also encourage this perception, as well as reducing the masks' efficacy as a barrier.

Although at the moment we do not go around "flashing" our teeth, we should neither neglect nor abandon oral hygiene (brushing and cleaning between teeth), and we should clean the tongue and maintain an optimal hydration, as basic measures to prevent halitosis.

Mouthwashes, focus of attention

It has been shown that the virus that causes COVID-19 could be present in relevant amounts in different mucosa of the mouth and in saliva glands, above all in the first days, as a result of the heightened expression of ACE-2 receptors (the most relevant for SARS-CoV-2); this could favour transmission by infected individuals.

It has also been observed that people with a greater viral load in the mouth present greater severity of COVID-19.

All this has motivated interest in the use of mouthwashes that can reduce the viral load in the mouth, in a way that would reduce the risk of transmission by infected individuals, as well as the risk of developing COVID-19 with more severe manifestations.

The external layer or membrane of viruses is important because it allows them to infect cells, hence the search for products that can modify or alter this layer. So far there have been few studies and most of these are carried out

Facemasks, at least the surgical and self-filtering ones, do not produce either hypoxia or hypercapnia

Stress, insomnia, and anxiety are often triggering factors for this oral health problem. New habits, such as teleworking or the safety measures that keep the body on alert, have led to poor postures or uncomfortable positions that not only damage the back and the spine but can also encourage tooth-grinding. Thus, poor posture can provoke an increase in bruxism which in turn is generating the appearance of intra-oral sequelae.

A recent study in Brazil indicates that worry about infection, fear of death, the increase in hygiene and avoidance behaviours, lack of information, and disinformation feed an excessive fear and create an environment of anxiety and depression that alters basic daily activities including the quality of sleep. All this could explain the increase in tooth fractures, along with delays in receiving treatment in people who already have advanced caries.

The hoax about facemasks and lack of oxygenation

Facemasks, at least surgical and self-filtering ones, do not produce hypoxia (lack of oxygen) or hypercapnia (retention of carbon dioxide) because their function is to retain particles not to impede the passage of air; self-filtering masks, because of their characteristics, let gases pass through them both towards the exterior and the interior. Many people complain that the prolonged use of the mask gives them headaches and dizziness.

In general, this is not because of hypoxia, but it could result from other factors:

- we are not used to the continuous usage of this protector.
- if they are used beyond the recommendations of the manufacturer, they lose their properties.
- facemasks that do not meet specific legal and technical specifications.

The sense of breathing through a barrier, the heat produced by the air exhaled, and the moisture can cause in certain people discomfort, headaches, tiredness, a slight sense of choking... but always with light symptoms and not attributable to lack of oxygen.

Masks should meet certain norms for filtration and breathability (UNE-EN 14683:2019+AC:2019), and the majority have a filtration >90 and a breathability < 60Pa/cm². Hygienic masks are more comfortable because they have less resistance to the passage of air, and they are less tight-fitting than the surgical ones.

Beware of hyposalivation and xerostomia

The mouth is a risk area for infection and transmission of the virus that causes COVID-19. The presence of little saliva (hyposalivation) and dry mouth (xerostomia) have been reported in people infected with SARS-CoV-2.

Some studies indicate that patients with reduction in saliva secretion have a greater risk of developing a severe lung infection because it is possible that it impairs the barrier function of the airway mucosa, favouring the adhesion and colonization of the virus.

In turn, hyposalivation is related to a reduction in saliva enzymes (mucins, lysozyme, cathelicidin, lactoferrin...), which could potentially impede the replication of the virus, especially of SARS-CoV-2. Because of this, lack of salivation is considered a risk factor for developing respiratory infections such as COVID-19.

Furthermore, the use of the mask during prolonged periods of time, or when carrying out any physical activity, the sense of "lack of air" in having the nose covered, makes many people breathe through the mouth, which contributes to worsening the sense of a dry mouth. Because of this, we should not change our breathing pattern and we should drink water frequently to maintain good hydration.

Spontaneous tooth loss – a result of COVID-19?

In isolated cases of patients with COVID-19, tooth loss without the presence of bleeding, gum sensitivity, →

SECTION CO-ORDINATED BY:

Rosa Puigmal
Master in Periodontology,
University of Barcelona.

Facemasks do not harm oral health

The belief that the continued use of facemasks is harmful for oral health is widespread on social networks. There is no scientific evidence to support this claim but, on the contrary, the positive effect of this resource in preventing and reducing the risk of contracting COVID-19 has been proven sufficiently, in combination with other measures such as social distancing and handwashing. Health professionals should base their protocols, decisions, and recommendations on clinical studies and well-designed trials that demonstrate the benefit or harm or the cause-effect relationships. At this point, we cannot say that wearing a mask causes any condition in oral health.

Various harmful effects – such as halitosis or bad breath, a common condition that is not always perceived by the person who suffers from it – that have been attributed to masks have been neither studied nor



Hyposalivation and dry mouth are common conditions in people infected with SARS-CoV-2

→ and/or teeth that splinter or turn grey have been detected. According to an article published in The New York Times, various patients with COVID-19, both those with previous oral problems and those with no history of them, have suffered various incidents in their teeth after recovering from the disease.

However, precise evidence does not yet exist that having suffered this disease can lead to the spontaneous loss of previously healthy teeth.

For now, there are few documented cases, so a cause-effect relationship cannot be inferred. The loss of healthy teeth spontaneously and without apparent reason is, however, common in patients with diseases such as periodontitis that are not diagnosed promptly or not treated. It is speculated that the changes in defences provoked by COVID-19 could explain certain oral changes, although it is difficult to see this in the case of the spontaneous loss of teeth without pain or bleeding; regarding the latter sign, it has been suggested infection by the virus could alter the gums' blood vessels, reducing the irrigation of the tooth and provoking its falling out.

'COVID tongue' and other oral manifestations

It has been demonstrated that SARS-CoV-2 is a neurotropic and mucotropic virus, which is to say, with a predilection for nervous tissues and mucosa, which could affect the functioning of the saliva glands, the sense of taste, smell, and the integrity of the oral mucosa. Recent studies suggest that this coronavirus has the capacity to alter the balance of the oral microbiota which, combined with a suppressed immune system, could allow colonization by opportunistic infections.

The most common manifestations in the orofacial area of COVID-19 infection are ulcerative lesions, vesiculobullous disease, a fissured tongue or without papillae (depapillation), and inflammation of the saliva glands. The area most often affected is the tongue, followed by the labial and the palatine mucosa (22%). Older patients and those with more severe forms of COVID-19 are those who seem to present these lesions most often, and it has been observed that deficiency in oral hygiene, stress, and opportunistic infections are the main predisposing factors. In general, it is considered that these lesions could be produced by the virus itself or as a secondary effect resulting from the deterioration of general health or treatment with drugs.

The symptom known as "COVID tongue" consists of an increase in the size of the tongue and other lingual lesions, such as depapillation in patches, with smoother areas of the tongue, and which is often associated with loss of taste. This symptom can be a sign of COVID-19, together with fever or cough, and can facilitate the early diagnosis of the infection.

A Spanish study led by the La Paz University Hospital and the Primary Care of the Madrid Health Service (SERMAS) of the Community of Madrid, and which was carried out with patients admitted to the Community of Madrid field hospital at the IFEMA centre, concluded that 25% of people ill with COVID-19 presented alterations in the tongue and mouth, and up to 40% in the palms of the hands and soles of the feet. ■

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Oral health has emerged as an essential ally in the fight against COVID-19. This became clear during the course of the 2nd Covid-19 National Multidisciplinary Congress of Spain's scientific societies, held from April 12 to 16 where SEPA was the only dental society invited to participate in the event.

Oral health, the protagonist of the 2nd COVID-19 Multidisciplinary National Congress

THE CONGRESS, IN WHICH more than 70 scientific societies and leading health institutions participated, was held in an online format and included scientific and dissemination roundtables organized by the various participating societies, sessions organised by the congress's scientific committee, symposia of the pharmaceutical industry... All these activities were carried out in virtual rooms that functioned simultaneously, with an additional virtual room to present scientific communications in the form of posters or oral communications.

The presence of SEPA was particularly notable in a monographic roundtable, moderated by the doctors Miguel Carasol and Paula Matesanz, which evaluated the impact of oral health on COVID-19. This double session was organised by SEPA together with the Spanish Society of Pneumology and Thoracic Surgery (SEPAR) and the Spanish Society of Microbiology (SEM), with the Spanish Society of Diabetes (SED), the Spanish Society of Obesity (SEEDO), and

The 78 participating scientific societies bring together more than 200,000 health professionals with direct involvement in handling the pandemic

the Ibero-Panamerican Federation of Periodontology (FIPP) as guests, and with the support of Dentaaid and the Consejo de Dentistas [Council of Dentists].

At this meeting, the role of oral hygiene and/or the use mouthwashes with virucidal activity to reduce the transmission and severity of COVID was discussed in depth. Prof David Herrera, former SEPA president, provided some basic notions about the oral cavity and the transmission of SARS-CoV-2. Doctors Víctor Jiménez Cid and Rosario Garcillán Izquierdo emphasized crucial aspects of the control of infection in dentistry, as well as highlighting the protection and safety measures applied in the dental clinic. On the possible role of certain mouthwashes to reduce the viral

load, Nuria Izquierdo highlighted the evidence on the role of Cetylpyridinium chloride on the viral load and Pedro Diz reviewed the impact of povidone iodine on the viral load.

In the other roundtable that involved SEPA, the discussion focused on whether periodontitis and/or a worse state of oral health could favour the worsening of COVID-19. Prof Mariano Sanz showed various hypotheses that could justify the association between both diseases through epidemiological studies. In relation to the role that could be played by systemic inflammation in this area, Dr Francisco Tinahones and Prof Sanz spoke about the nexus that is established between periodontitis, obesity, and COVID-19. For their part, doctors Juan Gírbés and Eduardo Montero highlighted the connection between periodontitis and diabetes mellitus. Finally, doctors Jordi Almirall and Blanca Paniagua gave details on known and controversial aspects of the relationship between periodontitis and lung infection.

It was said...

The speakers of the session Oral Health and its impact on COVID-19 detail their most outstanding contribution.



"The oral cavity is one of the gateways for SARS-CoV-2"

Miguel Carasol Campillo
Scientific coordinator of SEPA Working Groups and of the Alliance for Oral and General Health.



"The participation of a dental scientific society in a congress that unites the various medical specialities is an important development for the profession"

Paula Matesanz Pérez
Periodontist and spokesperson for the SEPA management board.



"The mouth seems to be a place that is well suited both to receive SARS-CoV-2 and to maintain it and transmit it to other people"

David Herrera González
Trustee of the SEPA Foundation and co-director of the ETEP (Aetiology and Therapy of Periodontal and Peri-implant Diseases) research group at the Complutense University of Madrid.



"Given their biomedical specialization, periodontists can contribute a great deal to controlling the pandemic"

Víctor Jiménez Cid
Professor in the Department of Microbiology and Parasitology of the Faculty of Pharmacy of the Complutense University of Madrid.



"Against the coronavirus we have adopted important prevention measures in our clinics which have proven to be effective"

M^a del Rosario Garcillán Izquierdo
Senior Lecturer in Preventive and Community Dentistry, Faculty of Dentistry of the Complutense University of Madrid.



"People with good periodontal health sufferer fewer complications when they are infected by the SARS-CoV-2 virus"

Mariano Sanz Alonso
Professor of Periodontology at the Complutense University of Madrid and trustee of the SEPA Foundation.



"Hyperglycaemia is accompanied by an alteration of innate and adaptive immunity, which contributes to the severity of infection with SARS-CoV-2"

Juan Gírbés Borrás
Specialist in Endocrinology and Nutrition and coordinator of the SEPA-SED Working Group.



"Presenting a chronic infection such as periodontitis makes glycaemic control in patients with diabetes difficult"

Eduardo Montero Solís
Associate professor of dentistry at the Complutense University of Madrid and codirector of the DiabetRisk study.



"Some mouthwashes are able in vitro to reduce the infectivity of SARS-CoV-2 in a very effective way"

Nuria Izquierdo-Useros
Principal researcher of the PISTA (Pathogen Immunity, Signalling & Therapeutic Applications) group of IrsiCaixa, Badalona.



"It is crucial to claim the relevance of the stomatognathic system in the general framework of infection"

Pedro Diz Dios
Professor of stomatology at the University of Santiago de Compostela.



"The link between periodontitis and respiratory disease is more evident in frail elderly people"

Blanca Paniagua Cotonat
Associate professor of dentistry and of the master's degree in periodontology and implants (IUC).



"The relationship and the influence of periodontitis on the appearance of bacterial pneumonia has been demonstrated"

Jordi Almirall Pujol
Intensive care physician, member of SEPA and of the Spanish Society of Pneumology and Thoracic Surgery (SEPAR).

The session was sponsored by:

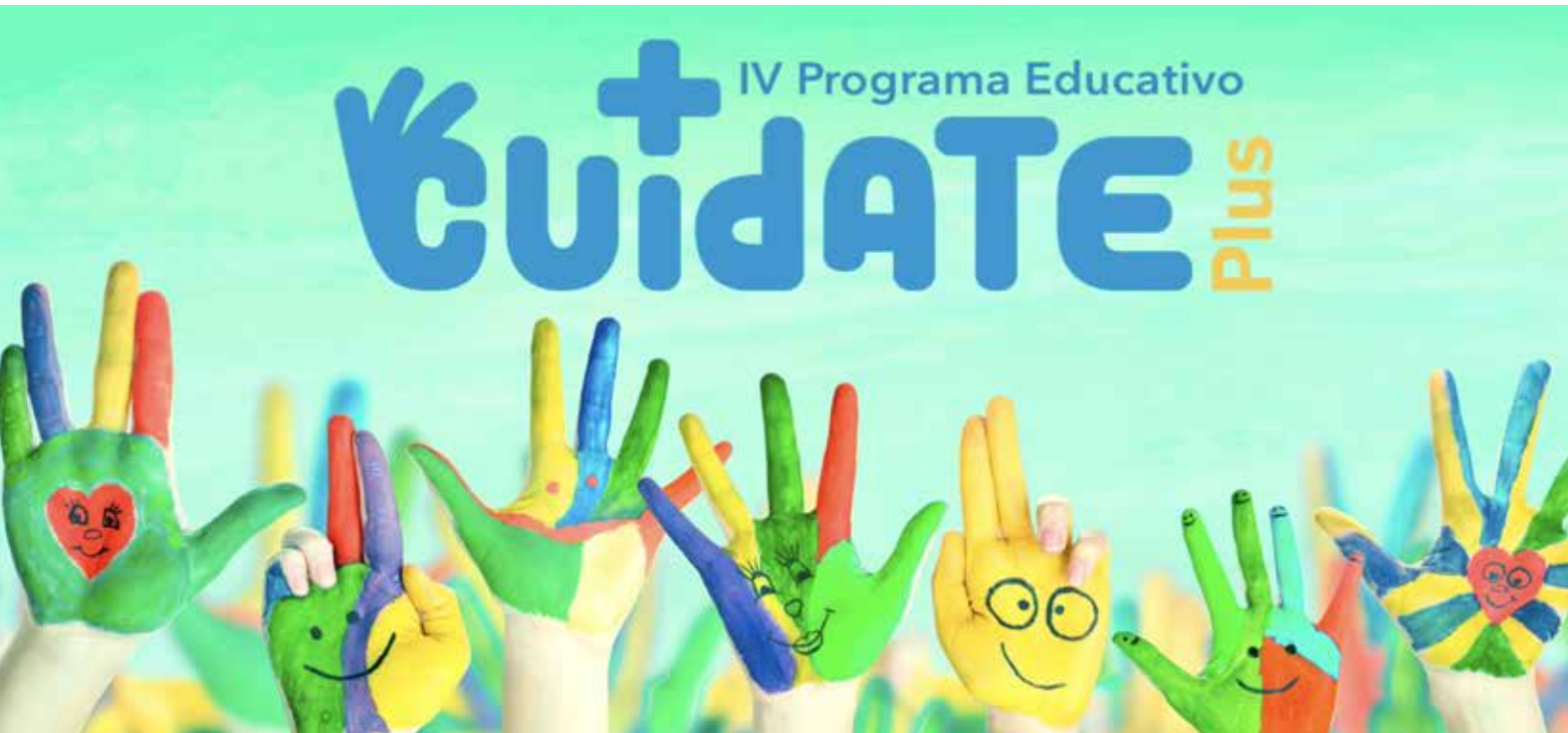
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Aiming for an A+ in oral health



Maintaining its commitment to the dissemination of basic knowledge about oral health and hygiene, within a more global context of disease prevention and the promotion of oral and general health, SEPA participated in the fourth edition of the CuidatePlus [Look after yourself more] educational programme

THE PROGRAMME IS BACKED by the Directorate General for Bilingualism and Quality of Education of the Community of Madrid's Department of Education and Youth and is part of this department's commitment with the portal CuidatePlus to produce an educational plan aimed at students of the 5th and 6th grade of primary education in public and private schools of the Community of Madrid. The aim is to improve their training in prevention and self-care and in the responsible use of technologies.

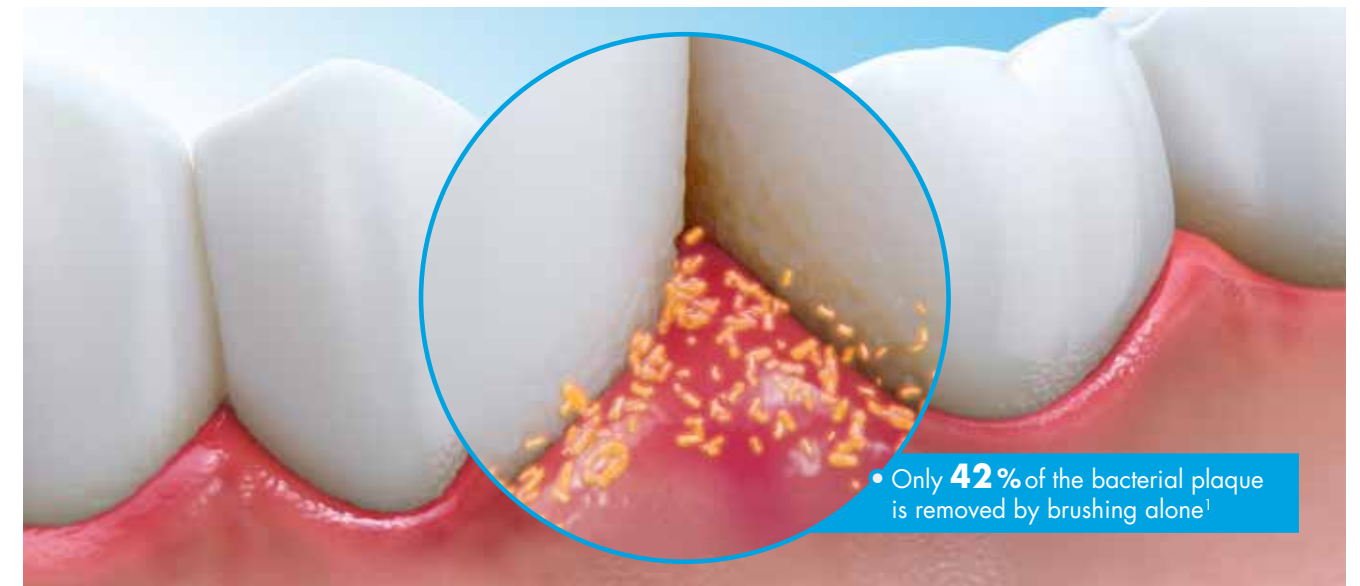
The educational programme, which already forms part of the annual school programme of this community, teaches students basic concepts in nutrition, oral health, hygiene and safety, physical activity, and new technologies.

And it does so through workshops given by frontline health professionals and thanks to the collaboration of scientific societies such as SEPA.

In this new edition, marked by the pandemic, the plan has been redesigned and adapted to the changes, relying on digital tools. Within the workshops that have taken place, SEPA has been given the responsibility of training children in oral-health habits.

Audiovisual sessions have been carried out in which students have learnt how to keep the mouth healthy and how to check their dental health. You can now access the content of these presentations by Nagore Ambrosio, both the video on care of the gums and the video on toothbrushing.

Effective plaque control requires more than just brushing

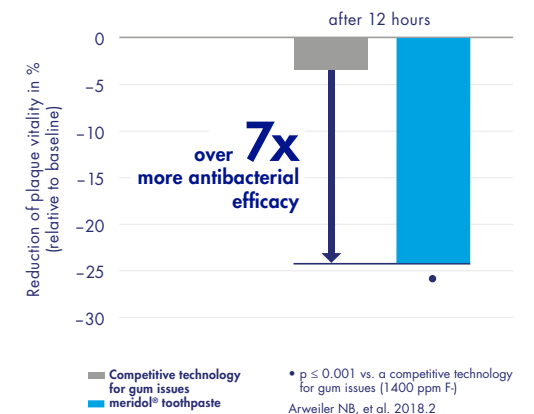


meridol® delivers antibacterial efficacy for patients with gum problems

- Unique technology with amine fluoride and stannous ions
- 7x stronger antibacterial efficacy vs. a competitive technology^{2,*}
- 68% less plaque regrowth[#] vs. patients who only brushed³



For effective protection from gum inflammations



* meridol® toothpaste after 12 hours vs. a sodium bicarbonate containing technology
incremental benefit of meridol® mouthrinse

References: 1 Chapple I, et al. Clin Periodontol 2015;42 (Spec Iss): S71-S76. Brushing with regular fluoride toothpaste. 2 Arweiler NB, et al. Oral Health Prev Dent 2018;16:175-181. 3 Hamad CA, et al. Poster presented at EuroPerio 2015.

SECTION SPONSORED BY:



New appointments with rigorous and live dissemination

Every Thursday at 19.00, SEPA promotes – via the website cuidatusencias.es – a special online audiovisual session with professionals from within and outside dentistry to offer real, verified, rigorous, and live information about oral and general health, for society. A digital and interactive format in which spectators can participate actively, asking the speakers questions and in which no doubt is left unresolved. Halitosis, dry-mouth syndrome, dental hypersensitivity, and bruxism are among the monographic sessions that will be carried out over the coming quarter as part of Sepa's commitment to construct an up-to-date and rigorous message about the health of our mouths.

Upcoming dates live through our YouTube channel



Forthcoming live sessions

MAY 2021

06 may
Bruxism
Conchita Currul
Fernando Luengo

13 may
Periodontology Day. Celebration of Gum Health Day
José Nart
Paula Matesanz

20 may
Oral health from childhood
Patricia Solano
Estefanía Laguna

MAY 2021

27 may
Special care for the elderly
Lorenzo de Arriba
Bettina Alonso

JUNE 2021

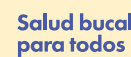
03 june
Oral health and ictus
Yago Leira
Olalla Argibay

10 june
Oral health in the mouth of sport. End of season
Pedro Buitrago
Reyes Jaramillo

17 june
Also look after your implants
Nerea Sánchez
Antonio Liñares

23 june
Invisible aligners, yes or no, when, and why?
María Rioboo
Marià Santamaría

Organize:



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Protect yourself with products containing CPC*

*Cetylpyridinium Chloride

PROTECT YOUR MOUTH NOW MORE THAN EVER



Good oral health, for good general health



Take care of your gums

It is important to **keep your gums healthy** to be able to enjoy life to the full. To do this, **brush your teeth twice a day** and use **dental floss** and a **mouthwash**.

Two times a day



Brush your gums and teeth with toothpaste.



Use dental floss or interdental brush.



Reinforce your hygiene with mouthwash.

Every 3 months



Change your tooth brush.



Visit your trusted dentist or periodontist every six months to check your oral health.

WHAT ARE GUM DISEASES?

GINGIVITIS

Superficial inflammation of the gum. Bleeding is the main warning sign. If not treated appropriately, it can lead to periodontitis.

PERIODONTITIS

Profound infection of the gum and the other tissues that support the tooth. It can provoke the loss of teeth and has an impact on general health: it increases the risk of cardiovascular disease, diabetes, and premature birth.

WARNING SIGNS

- Bleeding or reddening of the gums
- Bad breath
- Hypersensitivity to cold
- Mobility-separation of teeth
- Longer teeth
- Loss of teeth

RISK FACTORS

- Tobacco
- Stress
- General diseases: diabetes, osteoporosis, HIV, herpes, transplants, etc....
- Hormonal changes
- Hormonal antecedents