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of the SEPA Foundation
of Periodontology
and Dental Implants

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gums ¹³



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IN DEPTH

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Sport is health if it is practised in an appropriate and responsible way. Within these good habits it is also essential to take care of oral health. Furthermore, it is known that a diseased mouth produces a situation of chronic infection that can cause muscular problems, tendonitis, arthritis... which will limit an athlete's performance.



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Dr. Adrián Guerrero, president of the Spanish Society of Periodontology (SEPA) 20

Take Care of Your Gums

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PRESENTATION

Héctor J. Rodríguez
Scientific editor of the magazine
Take Care of Your Gums

More oral hygiene, fewer sugary drinks

WE LIVE IN A SOCIETY MARKED by the increase in obesity, the growth in cases of diabetes, and a surge in cardiovascular diseases. In the face of this, it is ever more necessary to promote healthy lifestyle habits. There is a growing number of Apps that allow us to know if we are performing exercise correctly and doctors are working to recommend simple practices of physical exercise to their patients, accompanied by dietary advice. All this with the aim that the population enjoys a better quality of life.

We assume that practising sports allows us to enjoy better health, but people are unaware that there is a relationship between sports performance and oral health. A survey carried out by University College London, co-ordinated by Ian Needleman of the Centre for Oral Health and Performance (www.ucl.ac.uk/cohp) – and carried out within the framework of the 2012 Olympic Games in London – found that 18% of athletes recognised that their deficient oral health had a negative impact on their sports performance and that 46.5% said that they had not been to the dentist within the previous year.

Simple strategies to prevent problems of oral health can offer marginal performance gains that require little or no additional time or cost.

The intense dietary pressures and training of professional athletes increases their risk of suffering oral problems. Sportsmen and sportswomen need energy for training, which means that the consumptions of diets high in carbohydrates and the ingestion of many sugary drinks is common; however, the acids produced by these habits can contribute to dental decomposition and erosion.

But it is not only a problem for professional athletes: anyone of us can develop oral diseases if we do not follow certain minimal precautions and abuse sugary drinks.

Project Management

and Communications team:
Management: Javier García
Co-ordination: Laura Demaria
Writing: Francisco Romero
Editing: Emma Pérez
Technical co-ordination: Eva Castro
Editorial design: Juan Ais
Printing and layout: elEstudio.com

For more information:
Tel.: 913 142 715
www.cuidatusencias.es
www.sepa.es
sepa@sepa.es

Legal deposit:
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Trustees:

David Herrera, Antonio Liñares, Blas Noguero, Mariano Sanz, Mónica Vicario, Ion Zabalegui

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Editor: Héctor J. Rodríguez Casanovas
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Co-ordinator: Regina Izquierdo



Having a healthy mouth helps improve sports performance and the reverse is also true, as appropriate sports practice can have beneficial effects on oral health.

Get fit, take care of your gums

SECTION CO-ORDINATED BY:

Juan Puchades Rufino
Associate Professor
of Periodontology
at the University of Valencia

IN RECENT YEARS, and on the basis of the greater understanding of the systemic effects played by the health of the gums on general health, there has been growing interest in investigating and understanding better the links between sports performance and periodontal health.

Although much more is known about the relationship between key aspects of physical exercise and the inflammation that characterises gum diseases (and which spreads to other parts of the organism, a process known as systemic inflammation).

Sport is health ... including oral health

The Spanish Society of Periodontology (SEPA) and the Spanish Society of Sports Medicine (SEMED) have collaborated in the writing of a report entitled "Periodontal health, sports, and quality of life", where – among many other things – certain current and relevant aspects of periodontal health and sports practice are highlighted. Sport is healthy if it is practised in an appropriate and responsible way, forming part of a healthy lifestyle. And within these habits oral health is essential.

Oral care forms an essential part of the healthy habits that any sportsman or sportswoman should adopt

Carrying out sports implies an effort on the part of the organism, even more so when an elite sportsman or sportswoman is concerned. Because of this, the organism must be at an optimal level to develop properly. As a part of our body, the mouth must enjoy a good health to be able to allow the organism to cope with strong physical demands.

Bite into your sports performance

And it has been demonstrated that problems originating in the mouth can cause a reduction in sports performance.

It has been seen that the severity of the periodontal disease is related directly to the reduction of muscular strength in flexing the arms, in the abdomen, and in running, and that more advanced forms of periodontitis are associated with the reduction of cardio-respiratory capacity.

There is an important biological basis that determines this connection →



What happens when we train?

PHYSICAL EXERCISE generates an increase in our metabolism,¹ that is to say, it provokes an increase of changes and reactions in basic cells of the organism.

Specifically, it implies a greater expense in the aerobic metabolism² and a greater consumption of oxygen. This gives rise to the generation of a large quantity of oxygen free radicals, molecules that activate the antioxidant capacity of the cells and which are responsible for protecting the cellular structures that generate energy (the mitochondria), thereby enabling a good sports performance.

However, in the most intense and sustained efforts, this production of free radicals overcomes the antioxidant mechanisms, and can generate oxidative damage.

If the stress that is induced in the organism is maintained over time, it reduces the capacity to produce energy.

At the muscular level, the repetition of sports movements provokes micro-cracks, which generate a local inflammatory response which, when moderate, stimulates the development of the musculature.

However, if those actions are exaggerated, they combine with oxidative damage and are maintained over time, they produce a generalised inflammatory process that manifests with a reduction in sports performance. This is what is known as the over-training syndrome.

If the sportsman or sportswoman reaches this point, a series of generalised inflammatory processes are generated and there is a reduction in the organism's defences, which interferes with the production of energy and the body's capacity for recovery. These inflammatory processes that can be produced by overexertion can also derive from other sources of inflammation, such as infections of the mouth and, in particular, gum diseases.



Elite athletes: failure in oral health

CONTRARY TO THE PERCEPTION that sports players enjoy good general health, many studies carried out involving elite athletes show that a high percentage of them have oral health that could be improved.

A study carried out at the Eastman Dental Hospital in London evaluated the oral health of Olympic athletes and professional football and basketball players. Some 8% of them recognised that oral problems affected their training and 5% that it affected their sports performance. While 15% of the sportsmen and sportswomen presented irreversible gum disease, 76% had gingivitis. The most common mouth problems in these athletes were dental trauma, caries, gum diseases, dental erosion, and inflammation around wisdom teeth.

The same researchers had previously carried out an evaluation of the oral health of 278 athletes during the London Olympic Games in 2012, detecting that 55% had dental caries, 45% dental erosion, 76% gingivitis,

and 15% periodontitis. In addition, 40% were worried about their oral-health problems, 28% said that these problems would have repercussions on their quality of life and 18% that they would affect their sports performance.

There are also examples in Spain. A study carried out on Barcelona football club professional footballers showed that a higher degree of periodontal compromise and poorer levels of oral hygiene were most often correlated with muscular injuries.



THE
OPINION
OF THE
EXPERTS

“Athletes must be aware of the importance that oral health has in their sports performance”

Dr. Carlos de Teresa

Member of the governing board of SEMED
Institute of Nutrition and Technology of food products (INYTA)
University of Granada.



The Achilles heel of athletes' oral health

Among the causes of deficient oral health among elite sportsmen and sportswomen, the following stand out:



1 Nutritional problems: frequent consumption of carbohydrates and very acidic energy drinks



2 Alteration of immunological mechanisms through dehydration, dry mouth, and intensive training



3 Little knowledge about oral health and common harmful habits



4 Lack of adoption of effective prevention measures

→ between periodontal health and sports performance. One of the main causes of the reduction of sports performance in people with poor oral health results from the presence of systemic inflammation, "which affects the production of energy by muscles, resistance, muscular strength, and the neuromuscular co-ordination upon which the precision of sports motions depends," states Dr Carlos de Teresa, professor of the Department of Physiology at the University of Granada.

In a diseased mouth, a situation of chronic infection is produced that can lead to muscular problems, tendonitis, arthritis... which will limit an athlete's performance, above all when they are also associated with pain and functional limitation. Chronic infection is also linked with greater muscular fatigue and a slower recovery from muscular injuries.

Equally, specific oral problems tend to be associated with disorders that can minimize sports performance; thus, for example, a malocclusion³ can produce a defect in balance, tension in the jaw can

A good oral state decreases the risk of injuries and of certain diseases and, in this way, contributes to sports performance

be related to pains in the neck and back, and poor mastication can provoke the lessening of an athlete's energetic power. In the end, a correct oral status reduces the risk of suffering injuries and certain diseases and, in this way, aids sports performance.

Sport positively affects your oral health

Although gum problems can reduce sports performance, it has also been shown that correctly performed physical exercise has great benefits for our organism's general health, including the mouth.

In recent years an increasing number of studies have shown, for example, that poorer periodontal health is related to a reduction in aerobic capacity, in balance, and in the speed of the feet.

It has also been shown that people who carry out more sport in their free time present fewer inflammatory markers than those who do not, which allows us to think that sports activity could offer protection against an excessive inflammatory response in periodontitis.

The possible relationship between obesity, good physical health, and periodontitis has also been analysed, showing that people with lower body mass indices and higher consumption of oxygen during physical exercise have better periodontal health.

And obesity has been shown to be a risk factor for suffering periodontitis. It is therefore suggested that people who practise sport habitually and who present a correct body mass index could have less risk of suffering periodontitis. It is therefore suggested that people who practise sport habitually and who present a correct body mass index could have less risk of suffering periodontitis. →

"Periodontitis, like inflammatory disease, can reduce the contractibility of muscles and cause the sports player to have more muscular injuries"

Dr. Antonio Liñares
Periodontist and Trustee
of SEPA Foundation.



“Oral diseases are common in athletes and can prejudice their sports performance, but they can be prevented with simple and low-cost interventions”



Prof. Ian G. Needleman

Centre for Oral Health and Performance (COHP). London (United Kingdom).

“The health of your mouth is the mirror of your sports health”



Dra. Araceli Boraita

Head of the Cardiology Service. Centre for Sports Medicine. Department for Sport and Medicine. Spanish Agency for the Protection of Health in Sport.

Take note: practical



If you start physical activity

1 Before starting any regular physical activity, it is very important to have a proper medical check-up so that health professionals can detect any possible risk for your general and oral health, analysing absolute contraindications and those relative to sport. It is recommended to explore any cardiovascular or metabolic risk related to the metabolic syndrome.

2 Remember the importance of a balanced diet for improving the health of your mouth, and for adapting the body progressively to physical effort (muscular-skeletal, cardiovascular, and metabolic development).

3 It is very important to maintain good oral hygiene and, if there are missing teeth, it is necessary to evaluate if there is an adequate masticatory function that allows food to be chewed properly. Pay special attention to the evaluation of gingival health,⁴ carrying out the necessary actions and functional rehabilitation if necessary.

4 It is also advisable to detect the presence of caries and resolve them.



If you practise sport regularly

1 Sport must be adapted to the level of physical condition. Sports carried out at high intensity and in a prolonged form can increase inflammation and the risk of suffering oral disease and sports lesions if not correctly regulated. In these cases, specialist advice in relation to the type of sports activity and its intensity is recommended.

2 In the oral cavity, sportsmen and sportswomen present a higher risk of:

- Dryness of the mouth, in exercises of greater intensity and duration, which modifies the saliva (becoming more acidic), increasing the risk of infections such as caries.
- The intake of sugary drinks and compounds during sport, in the form of gels, sugary drinks.... and which, in conditions of dryness in the oral mucosa, can provoke dental damage.
- Hyposalivation in high-intensity sports.

3 All this contributes to a potential risk of greater oral problems. Because of this, a greater and stricter oral control of habitual sports participants is recommended, and it is advisable to balance the diet (carbohydrates, proteins, and vitamins) and hydration according to the needs of the sport.

“When a dentist looks after the periodontal health of a sportsman or sportswoman, he or she is also contributing to improving their sports performance”

Dr. Blas Noguero

Periodontist and ex-president of the Spanish Society of Periodontology (SEPA).



advice



If you have had or have problems with your gums

- 1 A balanced diet rich in anti-oxidants, polyunsaturated fats, and Omega-3 protects against periodontitis.
- 2 The correct intake of carbohydrates and proteins facilitates the assimilation of exercise, reducing the risk related to periodontitis.
- 3 Regular aerobic⁵ exercise improves the response and adaption to stress and inflammation, protecting against periodontitis.
- 4 Recuperative sleep is very important to assimilate physical stress and reduce the negative effects that increase the risk of presenting oral and physical disorders.

If you are a senior sportsman or sportswoman

- 1 Regular exercise, balanced diet, and rest slow the ageing process.
- 2 Treatment of edentulism⁶ (absence of teeth) is key to maintaining general health and quality of life at this age.
- 3 Improving strength and resistance, through the practice of exercises such as rapid walking, reduces the risk of death and can reduce the risk of heart diseases.

“Good oral healthcare is essential for high sports performance”

Before carrying out amateur or professional sport, it is important to know the state of your oral health

→ Expert recommendations

Despite all this, people do not generally consider that a person who practises sport professionally can suffer from a health problem. “It is paradoxical to verify how in most elite sports a high degree of professionalisation has been installed and an exhaustive planning of the smallest detail that can affect performance, but care of the oral health of sportsmen and sportswomen continues to be underrated and ignored,” says Dr Regina Izquierdo, a periodontist and SEPA spokesperson. She adds that “if athletes were subjected to routine dental check-ups they would be able to avoid and control in a simple and effective way some of the injuries produced in practising sports”.

According to Dr Pedro Manonelles, president of SEMED, “Providing regular check-ups and correct education in oral hygiene is basic for sportsmen and sportswomen”.

Dr Blas Noguero, specialist in periodontology and implantology, stresses that among the most important pieces of advice that can be offered to athletes, “before considering the amateur or professional performance of any sports, it is necessary to know the state of your oral health.” Such care, he points out, “must be carried out in a team: between the dentists, the sports doctor, and the general practitioner”.

In this area the dentist, as Dr Izquierdo recognises, “plays an essential role in promoting physical exercise and improved nutrition, as the basis for preventing periodontitis and optimising oral care”.

In the words of Dr Noguero, this professional is required “not to be satisfied with strict oral care but also to be involved in the vision of the patient as a whole, in which it is not possible to separate oral care as a self-contained area”. ■

GLOSSARY

1. **Metabolism:** set of physical and chemical processes and reactions to which a cell is subjected.
2. **Aerobic metabolism:** cellular process through which the body uses oxygen with the aim of producing energy.
3. **Malocclusion:** incorrect alignment of the teeth.
4. **Gingival health:** health of the gums.
5. **Aerobic exercise:** the development of activities with lower intensity than those carried out in **anaerobic exercise**, but during longer periods of time (walking, running, swimming, and cycling), with the aim of achieving greater resistance.
6. **Edentulism:** total or partial absence or loss of teeth.

Dr. Pedro Manonelles

President of the Spanish Society for Sports Medicine (SEMED-FEMEDE).
Extraordinary professor of Sports Medicine at the San Antonio Catholic University, Murcia (UCAM).



SECTION SPONSORED BY:

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Mouth washes: questions and answers

Mouth washes have become a widely used resource in oral hygiene, but they are not always used correctly. For this reason, it is important to know why and when to use them, and which ones to use.

SECTION CO-ORDINATED BY:

Gloria Calsina
Certified in periodontology
University of Southern
California, USA

Why should we use mouth washes?

TO PERFORM PROPER oral hygiene, able to efficiently remove dental plaque,¹ mechanical methods² are not always sufficient. Problems of compliance and the difficulties involved in some oral-hygiene techniques – above all at the interdental level – lie behind this deficit.

As a result, the help of other resources is needed such as the use of anti-plaque/anti-gingivitis mouth washes, easy to use by patients. Mouth washes should be used correctly, and following the indications on the product (number of rinses, time, and dosage) and of the dentist who prescribes them, in order to achieve the beneficial effect and avoid side-effects.

Mouth washes should never be used as a substitute for dental and interdental brushing, but as an auxiliary aid, above all in the areas that are difficult to reach (rear zones, the tongue, and in patients who lack dexterity).

One can now choose between many types of mouth rinse that are available in the market, depending on the needs of each person and the recommendation of their dentist.

The wide range of mouth washes encourages patients to ask advice in the dental clinic to choose the most suitable one, as they do not require a medical prescription.

When should antiseptic mouth washes be used?

Mouth washes are not always indicated for all types of people. Generally, they are recommended when patients are not able to brush their teeth or to reinforce tooth-brushing:

1) They can serve as substitutes for brushing or interdental cleaning when these methods cannot be carried out in a temporary or permanent way:

- After oral, periodontal, or orthognathic³ surgery of the jaw (during cicatrisation)
- In acute oral gingival infections,⁴ when pain prevents correct oral hygiene
- In patients with physical or mental

disabilities that prevent them from performing correct oral hygiene

2) As support for mechanical oral hygiene:

- In periodontal patients: after root scaling,⁵ in people with aggressive periodontitis together with the use of antibiotics and during periodontal maintenance, if good oral hygiene is not achieved
- In patients who are medically compromised and immunosuppressed, predisposed to oral infections such as candidiasis
- In people with halitosis
- In people who are receiving orthodontic treatment with poor control of bacterial plaque
- To prevent caries in patients at high risk of suffering from them
- In patients with xerostomia (dry mouth), to reduce candida and plaque, and to increase the flow of saliva →

Antiseptic mouth washes have anti-plaque and anti-gingivitis activity



THE
OPINION
OF THE
EXPERTS

“Mouth washes are an ideal complement to brushing teeth in the prevention and treatment of many oral diseases”

Dr. Jorge Serrano

Collaborating professor,
Master's degree
in Periodontology,
Complutense University
of Madrid.



5 ideal properties

-
- In patients with mouth ulcers
 - In patients with partially removable prothesis
 - In patients with dental implants

Why do we use them?

Mouth washes can be used to tackle various dental problems: to combat mouth infections (antiseptic), to prevent the appearance of dental caries, to treat dental sensitivity, to treat halitosis (bad oral smell), and to treat xerostomia (dry mouth).

Which ones to use?

ANTISEPTIC MOUTH WASHES

These have anti-plaque and anti-gingivitis activity. Used as a support for the treatment of periodontal disease.

Chlorhexidine (CHX)

The one most commonly used for the treatment of inflamed gums. It is the best and most efficient anti-plaque and anti-gingivitis agent, but its use on a daily and continual basis cannot be recommended because of its numerous side-effects (changes in taste, swelling of the parotid gland, flaking and irritation of oral mucosa, increase in the formation of calculus, staining of the teeth).

Its use should be indicated by the dentist and should not be prolonged for lengthy periods of time.

Once used, the CHX remains active in the mouth for up to 12 hours. The patient must wait half an hour between brushing teeth and mouth-rinsing, as many of the ingredients in toothpastes can reduce its anti-bacterial effect. This complicates the correct use of the product.

Mouth washes should be used correctly and following the instructions of the product and the dentist who prescribes it

Chlorhexidine has an anti-plaque effect of 33% and an anti-gingivitis effect of 26% and acts against bacteria, fungi, and viruses. There is another group of mouth washes designed to maintain the general health of the mouth, thanks to their composition with disinfectant agents that can be used on a daily basis and do not present side-effects or staining.

They are useful in periodontal maintenance in patients who have had problems with their gums and need to complement their brushing with a mouth-rinse: essential oils, triclosan, and cetylpyridinium chloride.

Mouth washes should be used to tackle different dental problems

Essential oils

Essential oils can be a good option in the long term because they have fewer side-effects than chlorhexidine. However, because of the high alcohol content in some of them, their taste can be strong and this can restrict their use by patients. They are used as a combination of essential oils: eucalyptus, menthol, methyl salicylate, and thymol. They can provoke a burning sensation and, on occasions, staining, but they do not produce changes in taste perception nor an increase in the forming of tartar. They can irritate the mucosa if not used correctly.

Triclosan

Mouth washes with triclosan have an anti-plaque and anti-gingivitis effect.

They should be combined with copolymers and/or zinc to reinforce their action.

Cetylpyridinium chloride

These mouth washes have an effect that moderately inhibits plaque, but have little anti-gingivitis effect. →

“Mouth washes, used as a complement to mechanical methods of oral hygiene, provide an additional benefit in the reduction of dental plaque and gingivitis”

Dr. Antonio Santos

Associate Professor
of Periodontology,
International University
of Catalonia.



Antiseptic mouth washes must include, at least, these five properties:

- 1 **Quick, safe, and easy to use**
- 2 **Able to kill the plaque bacteria in difficult-to-reach areas**
- 3 **Good taste**
- 4 **Good price**
- 5 **Must penetrate the dental-plaque biofilm and reach difficult-to-reach areas**

MOUTH WASHES WITH ANTI-CARIES EFFECT

These are used in people at high risk of caries. They are washes rich in fluoride and have an anti-plaque effect.

→ These washes can be used on a daily basis and help teeth to have a reduced possibility of suffering caries, together with a correct diet and good oral hygiene.

In children, the dose of fluoride should vary in relation to age and care should be taken that they do not swallow the liquid.

ANTI-SENSITIVITY WASHES

For people who present sensibility to cold, to heat, to brushing teeth, or to the consumption of acids (citric, vinegar, carbonated drinks), there are specific mouth washes of different compositions that help combat this sensitivity.

GLOSSARY

1. **Dental plaque:** hardened layer of bacteria and proteins which forms at the base of teeth and molars and which encourages the appearance of caries and other oral diseases.
2. **Mechanical methods of oral hygiene:** brushing and interdental cleaning.
3. **Orthodontic surgery:** mainly aimed at moving the jaw into a more appropriate, more aesthetic, more functional, and healthier position.
4. **Gingival infections:** infections that affect the gums.
5. **Root scaling:** a procedure to remove tartar, plaque, and bacterial film from the surface of the teeth and below the gum line.

Mouth washes should be used to tackle different dental problems

It is very important to follow some simple diet and hygiene guidelines for their use to be as effective as possible.

Causal factors should be removed, and it is recommended to use toothpastes, gels, mouth washes, and sprays that contain substances for dental sensitivity.

The effect is not immediate and sensitivity decreases over a period of several weeks.

ANTI-HALITOSIS

Halitosis is a disagreeable smell coming from a person's breath and which is result of the productions of malodorous substances through the degrading of bacteria located mainly in the tongue and periodontal pockets.

The treatment of oral halitosis is focused on reducing the number of bacteria that produce bad odour in the mouth through instructions on oral hygiene, cleaning the tongue, and dental cleaning together with the use of a mouth rinse that contains a low concentration of chlorhexidine (0.05%), cetylpyridinium chloride, and zinc lactate.

TREATMENT FOR DRY MOUTH

Xerostomia or the reduction of the saliva flow is a common disorder. In these cases, the dentist recommends the use of mouth washes for oral rinsing, and toothpastes or specific sprays to reduce the sensation of oral dryness and to refresh the mouth.

In addition, good daily hydration and slow chewing is recommended, along with good oral-hygiene technique as well as avoiding smoking and consuming alcohol, caffeine, and other irritants. ■

SECTION SPONSORED BY:



How to prevent tobacco use from the dental clinic?

The consumption of tobacco represents one of the main causes of preventable illness and death in the world, and has a particularly negative impact on oral health. Your dentist can be key to help you give up this harmful habit

SECTION CO-ORDINATED BY:

Desirée Abellán
Associate professor, Master's degree in Periodontology, UIC Barcelona

THE USE OF TOBACCO AFFECTS the health of all the organs of our body.

It can be the cause of different types of cancer, cardiovascular and respiratory diseases, and diseases of the reproductive system ... and it has many effects that are potentially damaging to the health.

Furthermore, its consumption has a great impact on the oral cavity and can be considered a risk factor for the appearance of oral cancer, lesions in the mucosa, and periodontal diseases.

Smoking is a risk factor for periodontitis and contributes to the development of the most serious cases of periodontal disease. Smokers are four times more likely to suffer from periodontitis and they also present a greater amount of harmful periodontal bacteria and an alteration in the response of the immune system. As a result, the risk that periodontal disease will progress and that teeth will be lost is greater in smokers than in non-smokers.

The villain of the piece

Today, smoking is considered to be a chronic disease and the origin of addiction could result from biological, genetic, psychological, and social factors. Among the thousands of substances

that tobacco contains, it is nicotine that generates addiction, similar to that created by the use of other drugs.

Clinical treatment of smoking

The treatment of tobacco use can be approached from the psycho-social or the pharmacological point of view. The psycho-social focuses on detecting the addictive habit and in working on strategies that allow a change of behaviour, routine, and lifestyle.

Patients should be asked about their consumption of tobacco and should adopt strategies in relation to this. If the patient is inclined to kick the habit, the recommended strategy is 5A; if, on the contrary, the patient does not want to give up smoking yet, the 5R strategy should be implemented. (Figure 1).

The 5A Strategy

Ask about: all patients must be asked about their consumption of tobacco, the time of the day when they smoke their first cigarette, and the number of cigarettes smoked daily

Advise: use clear and firm arguments for stopping smoking and emphasize its negative effects →

THE OPINION OF THE EXPERTS

“The dental surgery provides a unique stage for tackling tobacco use: users tend to be more receptive to health advice and motivated to improve their lifestyle”



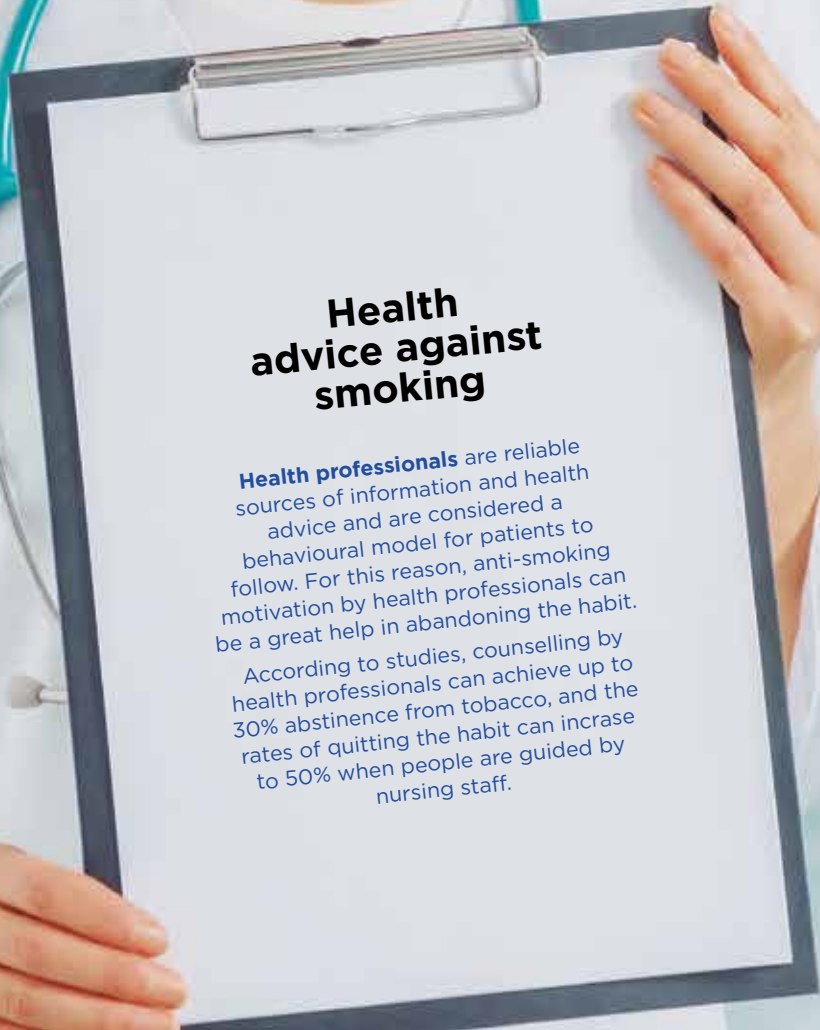
Dra. Regina Dalmau
President of the National Committee for the Prevention of Tobacco Use.

THE OPINION OF THE EXPERTS

“The promotion of healthy habits from the dental surgery should include motivation for giving up smoking, adopting the necessary skills to involve, help, and accompany our patients through the change”



Dra. Regina Izquierdo
Associate professor of periodontology at the University of Valencia and spokeswoman for the SEPA management board.



Health advice against smoking

Health professionals are reliable sources of information and health advice and are considered a behavioural model for patients to follow. For this reason, anti-smoking motivation by health professionals can be a great help in abandoning the habit. According to studies, counselling by health professionals can achieve up to 30% abstinence from tobacco, and the rates of quitting the habit can increase to 50% when people are guided by nursing staff.

Figure 1





A global scourge

ACCORDING TO DATA FROM the World Health Organization (WHO), 63% of deaths across world can be attributed to chronic diseases, for which smoking is one of the main risk factors. Today, about six million people die every year as a result of the consumption of tobacco, and most of them live in developing countries. More than 600,000 deaths occur among non-smokers who are exposed to tobacco smoke. It is estimated that by the 2030 there will be more than eight million deaths per year.

MPOWER: 6 measures to confront the epidemic

IN 2008, the World Health Organization (WHO) created the MPOWER initiative, with the aim of implementing a control of the consumption of tobacco at international level. The six measures of the MPOWER plan allow the epidemic of tobacco use to be confronted and the number of mortal victims to be reduced.

Monitor: observe tobacco consumption and prevention policies.

Protect: protect the population from tobacco smoke.

Offer: offer help for giving up tobacco.

Warn: advise about the risks of tobacco.

Enforce: ensure compliance with prohibitions on tobacco advertising, promotion, and sponsorship.

Raise: increase taxes on tobacco.

THE
OPINION
OF THE
EXPERTS

“Helping to stop smoking should be an important part of periodontal treatment and implant therapy”

Dra. Bettina Alonso
Associate professor at
the Faculty of Dentistry
of the Complutense
University of Madrid.



- **Agree the intervention period:**
- If the patient does not want to quit smoking now, it is recommended that he or she be offered help for the future
 - If the patient is uncertain about giving up the habit, promote the advantages of stopping smoking
 - If the patient wants to stop smoking, offer him or her a strategy for giving up the habit

Aid: When the patient has decided to quit the habit, a “Stop Day” is selected within the next two to four weeks; it is essential that this date does not coincide with periods of high stress for the patient.

Smokers are four times more likely to suffer periodontitis

Accompany: It is recommended to carry out a monitoring of the patient, with check-up visits: the first two weeks after the “Stop Day” and the second a month later.

The 5R Strategy

Relevance: emphasize to patients the importance of stopping smoking both for their own health and for that of those around them

Risks: help them to identify the health risks associated with smoking

Rewards: stress all the benefits that will be obtained by giving up smoking: health, economic, better smell...

Resistance: identify the reasons why the patient is resisting quitting smoking and offer help to overcome these barriers (weight gain...)

Repetition: reiterate this strategy in a systematic way to raise awareness of smoker-patients so that they make attempts to stop smoking

Pharmacological treatment is fundamental to help confront this habit. Various medications for smoking

About six million people die every year because of consuming tobacco

cessation have now been authorized by health authorities. These are divided into products that provide a substitute source of nicotine and those that do not contain nicotine.

Nicotine replacement products

Designed to provide nicotine to the body in controlled amounts and to help the smoker disengage from the consumption of cigarettes.

On sale without medical prescription:

- Transdermal nicotine patches
- Nicotine chewing gum
- Nicotine tablets that dissolve in the mouth

On sale with medical prescription:

- Nasal aerosols and oral inhalers

Products that do not contain nicotine (with medical prescription)

There are two medications that do not contain nicotine approved by the US Food and Drug Administration (FDA) as products for stopping smoking:

- Champix® (varenicline)
- Zyban® (bupropion hydrochloride)

Both products have been evaluated by relevant health authorities and it has been determined that the benefits produced outweigh the risks. However, if you are thinking of taking one of these products, carefully read the product guide and consult a medical professional about any concerns about their negative effects, risks, ingredients, warnings, or any other doubt that might arise. ■



To consider before starting a nicotine-replacement therapy...

PREGNANCY AND BREAST-FEEDING:

pregnant and breastfeeding women can use these products only with the approval of their health professionals.

CONSULT YOUR DOCTOR IF:

- You suffer from diabetes, cardiac diseases, asthma, or stomach ulcers
- Have recently suffered a heart attack
- Suffer from hypertension that is not controlled with medication
- Have a history of irregular heartbeat
- If you take prescription medication for depression or asthma

IT IS RECOMMENDED TO STOP THE TREATMENT AND VISIT YOUR DOCTOR if you note nausea, dizziness, vomiting, irregular or accelerated heartbeat, mouth problems with the consumption of the tablets or chewing gum, reddening or inflammation around the patch that does not disappear.

“Providing information to young people about the repercussions of smoking on health is vital to prevent tobacco use”

Dra. Cristina Vallés

Co-ordinator of the Master's degree in Periodontology at the International University of Catalonia.



SECTION SPONSORED BY:



All you ever wanted to know about orthodontics but were afraid to ask

Orthodontics is a branch of dentistry that is involved with preventing, diagnosing, and treating anomalies in the positioning and relationship of teeth and the bones that house them (maxilla and mandible)

SECTION CO-ORDINATED BY:

Nerea Sánchez
Master's degree in
periodontology, Complutense
University of Madrid

What is orthodontic treatment?

DURING ORTHODONTIC treatment, slight forces are applied to the teeth aimed at moving them in a controlled way to improve the relationship between the upper and lower set, to correct crowding and align the teeth, to close gaps... and, ultimately, to improve masticatory functioning, aesthetics, and/or hygiene.

Advances in science and technique have increased the range of devices for the placement of the teeth.

Today, there are many available systems: from fixed orthodontic treatment with metal or ceramic braces (which are placed on the labial or external side of the teeth), through lingual orthodontics (apparatus cemented to the inside of the teeth), to transparent and removable aligners. Each treatment mode has its specific indications, adapted to each person.

How can orthodontic devices affect the gums?

The placement of orthodontic devices (brackets, arch wires, rubber bands...) is often associated with changes in oral-hygiene habits and in the health of the gums. The presence of these devices can make tooth-brushing more difficult, which can create an obstacle for the removal of bacterial plaque. It can also hinder the use of tools for interdental cleaning, such as floss or tape.

Because of this, to adapt to the new situation, devices that enable cleaning between teeth will be needed.

The placement of orthodontic devices is frequently associated with changes in habits of oral and general hygiene

The accumulation of plaque on the gums can lead to their inflammation (or gingivitis) and consequent bleeding. Over time, continued inflammation creates a predisposition to "gingival enlargement" or the chronic increase in the volume of the gums which, in turn, makes dental hygiene even more difficult. To prevent these problems, regular visits to the specialist for checking and cleaning the teeth and gums are advised, as well as using mechanisms for the total cleaning of the teeth. On the other hand, a successful orthodontic treatment can be a valuable ally for oral health, as the alignment of teeth that were previously "crowded" can greatly facilitate their brushing and cleaning. →



THE
OPINION
OF THE
EXPERTS

"For orthodontics to be a success, it is essential that the gums are in good health and this requires that the patient takes care of their oral hygiene"

Dr. Domingo Martín
Orthodontist.



Before orthodontics, healthy gums

IT IS CRUCIAL TO HAVE healthy gums before starting to move the teeth; if not, the accumulation of bacterial plaque below the gums can produce inflammation and trigger the destruction of the tissues that support the teeth.

The number of adults who demand orthodontic treatment to align their teeth and improve the appearance of their smiles is growing.

Because of this, it is important to keep in mind that the prevalence of periodontitis (or gum disease) increases in line with the increase in age, and there is a marked increase in the disease between the third and fourth decades of life (with a peak at 38 years old).

As a result, before starting any form of orthodontic treatment, our dentist or periodontist must

give us a thorough check-up of the gums and thereby rule out the presence of gingivitis (inflammation of the gums) or periodontitis. In the case of gum disease, it will be essential to treat this before starting orthodontics and carry out regular maintenance visits to keep the gums healthy during the placement of our teeth and afterwards.

Even with healthy gums, regular check-ups and cleaning of the gums is recommended to prevent the appearance of problems, as orthodontic devices encourage the accumulation of bacterial plaque.

Orthodontic treatment tries to improve masticatory functioning, aesthetics, and/or hygiene

→ How to clean teeth if we wear orthodontic apparatus?

BRUSHING

We should brush after every meal with a medium or soft toothbrush, cleaning the gums, the teeth, and the braces. According to various studies, **electric brushes** with oscillating-rotating technology (conventional round head or a specific one for orthodontics) and a high number of revolutions per minute are very efficient at removing bacterial plaque.

FLUORIDE TOOTHPASTE

The difficulties in oral hygiene can also encourage the formation of caries; to reduce their appearance and to strengthen the enamel it is advisable to use a toothpaste with **high fluoride content (>1450ppm)**.

INTERDENTAL HYGIENE

Brushing is the main tool for correct oral hygiene, but it does not eliminate bacterial plaque effectively from the areas between the teeth. So it is necessary to use interdental hygiene devices **every day**.

In people in orthodontic treatment with braces, the wires make it impossible to use floss or dental tape, so it is advisable to use **“threaders”** or very rigid floss that can be put between the teeth. **Interdental brushes**, available in different diameters according to the size of the space, are also very useful, as they not only allow cleaning between the teeth but also correct cleaning of the area between the wire and the brackets.

MOUTH WASHES

As a supplement to help oral hygiene, the use of mouth washes with fluoride or anti-plaque agents is recommended to reduce the appearance of demineralisation of the enamel, caries, and inflamed gums.

However, this is not a substitute for the necessary brushing nor the use of other devices for interdental hygiene.

If I suffer from periodontitis, can orthodontic devices be placed?

If we suffer from periodontitis and the disease is NOT under control, we CANNOT be treated with orthodontics. First, it is necessary to treat and stabilize the disease.

To start orthodontic treatment, periodontal disease must be controlled and periodontal maintenance – with

regular visits to the dental clinic every 4-6 months for check-up and close cleaning of the gums – must be followed.

Can orthodontics help overcome the consequences of periodontitis?

Often the placement of teeth is necessary to reverse the consequences of periodontitis as, in advanced phases, this disease can produce the so-called “syndrome of pathological dental migration.”

In this case, as a result of the loss of the support of the teeth and other factors, an alteration in the position of the teeth is produced which can have negative functional and aesthetic repercussions.

This syndrome is characterised by the appearance of spaces between the teeth that were not there before, the fanning out of the upper teeth (movement towards the exterior), or the loss of the harmonic relationship between the upper and lower arch. To treat this disorder, if there is a significant alteration, as well as controlling gum disease it will be necessary to return the teeth to their original position. ■

“The technique of invisible aligners in the periodontal patient allows an excellent plaque control and a result that is aesthetic and functionally stable over time”

Dr. Kamy Malekian

Collaborating professor of the Master's degree in orthodontics, Complutense University of Madrid.



SECTION CO-ORDINATED BY:

Assumpta Carrasquer
Professor of Master's degree
in periodontology and implants.
Faculty of Dentistry, University
of Valencia



A person cannot be considered healthy if they have a periodontal disease”

ADRIÁN GUERRERO

PRESIDENT OF THE
SPANISH SOCIETY OF
PERIODONTOLOGY (SEPA)

Gum diseases are among the most prevalent diseases in the global population. It is estimated that eight out of every 10 Spaniards older than 35 has some periodontal disease and it is calculated that about 10% of the population presents advanced periodontitis. But, most importantly, the impact of these diseases is not limited to the mouth but also has repercussions on general health.

Is oral health still a question of unfinished business for the Spanish population?

In general, the population is more aware of the importance of oral health. The child population is cared for from very early ages and instructed in oral-hygiene measures with the aim of preventing future pathologies; for its part, the adult population is already conscious of the impact that oral health has on quality of life and general health.

Although there remains much to do, we are moving in the right direction in promoting oral health.

How do you evaluate the image that society has of dentists?

Until now, society has associated the dentist with a profession tied solely to aesthetic and functional treatments, but the reality is that dentists are health professionals.

This fact is being understood by some sectors of society, who are concerned about their quality of life, about their wellbeing, and about general health, and who see in the dentist a professional who can help them to prevent and treat oral pathologies and, at the same time, to maintain appropriate general health.

The lack of oral care and infrequent visits to the dentist is nearly always attributed to the high costs. Is this criticism justified?

In effect, dental treatment is costly, like any other medical treatment, but the latter is covered by social security, which means that the end-user is not aware of the costs involved.

That said, prevention is accessible to everyone. The efforts directed towards prevention will have an impact on the patients' economy, reducing the cost of future treatments; but, in addition, prevention in oral health has an impact on the individual's general health.

The prevention of oral disease is very cheap and accessible to everyone, and has a positive impact on general health

Do you consider, then, that the prevention of periodontal diseases is relatively cheap and simple?

Both gingivitis and periodontitis, which are the most frequent gum diseases, can be prevented from early ages by correct oral hygiene and by controlling risk factors that favour their appearance (mainly smoking and control of diabetes). Furthermore, the cost of a visit to the dentist to prevent disease is much lower than the cost implied by the loss of dentition or the need for its complete repositioning.

Are we seeing a real golden age of periodontology in our country?

Among the general population, the word “periodontology” is increasingly well known.

Although much work remains to be done, we are moving in the right direction in promoting oral health

People are understanding that bleeding gums are not normal and that an early diagnosis not only prevents complex dental and oral problems but also facilitates general health.


At the institutional level, the Spanish Society of Periodontology, which was founded in 1959, is reaping the harvest of all the good work sown by the management boards who have been working for almost 60 years. The involvement, commitment, and delivery on the part of SEPA members and their partners means that periodontology is living this great moment, to the benefit of the population as a whole.

In this respect, what role is being played by the Alliance for Periodontal and General Health?

This alliance is a scientific co-operation initiative that has been driven by the SEPA Foundation with the aim of informing, researching, and providing knowledge to all health professionals about the relationship between oral health – principally the health of the gums – and general health. All this with a single final objective: to improve the health of the population and the patients whom we treat every day.

The approval of the partner scientific societies is very positive, and we have established very close bonds of co-operation with cardiologists, diabetologists,





“Periodontal diseases are associated with more than 50 pathologies”

What is periodontology and what does it deal with?

PERIODONTOLOGY IS the specialism within dentistry that is concerned with the care of the gums, both of natural teeth and of dental implants. When the gums are healthy they form perfect seals around teeth or implants; however, when they are infected, these gums lose their sealing and allow bacteria to gain access to the blood stream. In addition, if these diseases are not stopped in time, the loss of bone around the teeth can provoke the loss of teeth or implants.

The good news is that the prevention of these diseases is easy and their treatment, if we arrive too late for prevention, is relatively straightforward.

→ gynaecologists, primary-care doctors, pharmacists, and other health professionals.

How would you assess the growing involvement of medical scientific societies in the promotion and improvement of oral health?

Very positively. They understand that health should be approached from an integrated point of view and that oral diseases have their impact at a general level. Cardiologists are already implementing a programme of prevention of oral diseases among patients who have suffered a heart attack.

Diabetologists are informing their patients that good gum health influences directly the control of their diabetes. Gynaecologists are recommending pre-conception visits to the dentist with the aim of prevent possible adverse effects of future pregnancies. And primary-care doctors are more than ever aware of the need to give their patients recommendations about oral health.

What repercussions do gum diseases have on oral health?

The local repercussions of periodontal diseases start with gingival bleeding and the inflammation of the gums which start to look blotchy. If the process is not stopped at an early stage, gum retraction can appear, along with tooth mobility, halitosis or bad breath, high dental sensitivity, separation of teeth, and – ultimately – the loss or falling out of the teeth.

In your oral hygiene, remember the rule of two

THE PRIMARY PREVENTION of oral diseases is based on performing correct daily hygiene and a check-up by a dentist once or twice per year. It is known that the combination of good hygiene and professional supervision prevents gum diseases, as well as caries, in a very high proportion of the population (close to 96%).

In terms of basic advice on oral care, Dr. Adrián Guerrero says that "it is very important to follow the rule of two": clean the teeth at least twice a day, for two minutes, using two types of brush (one to clean the outside and inside of the teeth, and the other to clean the point of contact between one tooth and another using interdental brushes or dental floss), and with the aid of two therapeutic agents (toothpaste and, when indicated, a mouth wash).

Logically, the loss of dentition has a very important impact on the quality of life of the patients and on their nutrition, as this implies that they will not be able to chew properly.

And how do they affect general health?

They affect general health because the bacteria that produce the infection of the gums enter into contact with other organs through the circulation of the blood.

Also, the inflammation that appears as a consequence of these periodontal bacteria can provoke a systemic inflammation that can aggravate or activate other inflammatory processes, such as cardiovascular diseases, diabetes, or certain adverse pregnancy outcomes, including premature or low-weight birth.

Early diagnosis not only prevents complex oral problems but also favours general health

Can a person be considered healthy if they have a periodontal disease?

Clearly not. There is an epidemiological association demonstrated in many studies that shows us that patients who have diseased gums have poorer control over their glycaemia, a higher risk of suffering from cardiovascular diseases, expectant mothers present pregnancy complications with greater frequency...

Periodontal diseases are associated with more than 50 pathologies, including rheumatoid arthritis, Alzheimer's Disease, and even erectile dysfunction.

Can gum diseases be considered as a kind of indicator or thermometer of a person's general health?

To a certain extent, yes. Some serious diseases of the organism, such as HIV or certain diseases related to the defences, manifest first of all in the gums.

Of the periodontal diseases, which give most cause for concern?

Gingivitis and periodontitis, which are very common and connected with each other. All gum diseases start with gingivitis, which involves a superficial inflammation of the gums. If this is not treated in time, it gives way to periodontitis.

A recent study of the working population in Spain shows that periodontitis in the adult population is very common, with its advanced form affecting one in four people. But the majority of these cases can be treated successfully, maintaining the patients' natural dentition and reducing the economic costs of complex treatments.

The word "periodontology" is more and more known by the general population

Is the increase in peri-implant diseases worrying?

Dental implants are not free of infections; it is estimated that infections around dental implants affect 30% of the people who have them. In this case, the treatment of these diseases is not so predictable, and more studies are needed so that dentists can understand which treatment would be the most suitable.

However, prevention is effective. Someone with dental implants should ensure meticulous hygiene of all the tissues around the implant as part of their routine.

With all this, do you believe that people pay sufficient attention to periodontal diseases?

Normally no. In contrast to caries, they are not painful, and this means that they often pass unnoticed. But we know that the simple bleeding of the gums is already an indication that something is not right with our oral health and that we should go to the dentist for a check-up.

If this is not done in time, the later can see gum retraction, tooth mobility, and separation between the teeth. If sufficient attention is paid to these signs and professional help is sought in time, these diseases can be treated with little problem.

Public-health managers must opt more for prevention and must finance the coverage of periodontal treatment

From the point of view of public-health managers, does more need to be done to reduce the impact of these diseases?

The key is that they back prevention and finance the coverage of periodontal treatment – at least for risk groups, such as people with diabetes, people with heart disease, and pregnant women. ■



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Dismantling 10 myths

The lack of knowledge or lack of concern with oral health in our country has led to widespread errors and beliefs with little or no scientific basis. These are some of the most common.

Let's carry on dismantling the myths!

1. It's normal that gums bleed ... and, anyway, it doesn't hurt

There is an erroneous idea that bleeding gums is something normal; however, bleeding is one of the few signs that warn that the gum is diseased. A healthy gum should not bleed.

Gum diseases do not produce pain and can pass unnoticed, typically detected only when there has been extensive and irreversible bone loss. When pain appears, it is the unequivocal sign of the existence of a more significant pathology and, as such, something that requires more effort and cost to treat.

Do not wait until you feel pain before going to your dentist, and thereby avoid more costly and complex treatments.

A healthy gum should not bleed and when it causes pain it means that significant damage has already taken place

2. Periodontal diseases are not contagious

Periodontitis is an infectious disease produced by bacteria and it is logical to ask if it can be transmitted to children and partners.

In published studies, one appreciates a presence of the same bacterial profile in both members of the same couple when they have lived together for more than ten years: these pathogens have also been observed in children.

This supports the hypothesis of horizontal transmission (between couples) and vertical transmission (parents-children), and curiously atypical periodontal pathogens¹ have been found in cats and dogs, which suggests that humans can transmit these micro-organisms to our pets.

So, when one member of a stable couple has periodontal disease he or she can infect the other, if there are suitable conditions of bacteria to which they have genetic susceptibility.

Because of this, it is highly recommended that the periodontist evaluates the partner of a patient with periodontal disease and their children once they reach adolescence.

When one member of a stable couple has periodontitis, they can transmit the bacteria to the other who, if susceptible, can develop periodontal disease

3. Orthodontic treatment is only for children

Orthodontic treatment can be carried out at any age, with the only necessity being that the oral cavity is healthy.

Controlling inflammation of the gums and the absence of bleeding are especially important during the whole treatment.

The prior diagnosis of any periodontal disease is essential, as it can worsen during the orthodontic treatment if it has not been treated correctly. Optimal and excellent levels of oral hygiene are also required to avoid the formation of bacterial plaque and inflammation.

The controlled movements of orthodontics in treated periodontal patients do not produce additional bone loss; on the contrary, they are beneficial for occlusion, function, and stability over the long term.

Orthodontic treatment can be performed at any age; it is necessary only that the periodontal disease is treated and controlled and that there is no inflammation

4. Gum retractions are the result of age

Retractions of the gums (that is, the loss of gum or bone that exposes part of the root of the teeth) are not related to age.

They can also occur in young patients, either as the result of vigorous or energetic brushing that damages the tissues, tooth malposition, or through the presence of piercings – all of which facilitate root exposure.

This situation can be treated and corrected through gum grafting,² to improve both health and aesthetics. Your periodontist can inform you of the available techniques and when it is suitable and necessary to deploy them.

Retractions of the gums have no relation to age



5. My saliva causes a lot of tartar to form

Saliva is 99% water, and the remaining 1% comprises organic and inorganic molecules. Bacterial plaque³ is a biofilm made up of bacteria and salivary compounds.

The first phase of formation of this biofilm takes place within minutes of having performed a correct cleaning of the teeth.

This happens through the irreversible adhesion of oral bacteria, constituting the base for colonisation; this phase lasts from 4 to 24 hours.

If this acquired biofilm is not removed by brushing (at least once a day, meticulously), it will produce a secondary colonisation during the following days (1-14); it is here where germs multiply, increasing the thickness of the plaque and mineralising it, creating calculus or tartar.

It is true that, as a result of the pH, there are people with greater and more rapid formation of tartar, but this can be avoided with correct, comprehensive, and thorough brushing during the first 24 hours of the formation of plaque, avoiding its calcification.

Correct, comprehensive, and thorough brushing during the first 24 hours of plaque formation minimises the forming of tartar

SECTION CO-ORDINATED BY:

Rosa Puigmal
Master's degree in periodontology,
University of Barcelona

ths in oral health

6. Tobacco only stains my teeth

The damage caused by tobacco goes beyond the stains that it provokes. Furthermore, it can encourage bad breath or halitosis, and – above all – it is a silent threat and a real factor for the failure of periodontal and implant treatments.

Smoking is the cause of a wide variety of diseases and a risk factor for suffering periodontitis.

Smokers have three times more risk of suffering periodontal disease, and tobacco makes this progress more rapidly and lessens its response to treatment, leading to the loss of teeth.

Together with alcohol, it is the main cause of oral cancer.

Tobacco use is a key factor in the failure of periodontal and implant treatments

7. My gum problems remain in my mouth

There is now solid evidence of the relationship between periodontitis and other common disorders, such as diabetes, cardiovascular diseases, adverse pregnancy outcomes, and respiratory diseases.

It is thought that periodontitis, as an inflammatory disease, has the capacity to spread this inflammation to other parts of the body, provoking a classic effect of systemic disease. The inflammation produced by periodontitis is not local; thus, we should make an oral evaluation to avoid the possible repercussions in physical conditions and general health.

People who are physically active have a greater capacity to avoid the risks associated with periodontal disease. A good recommendation is to exercise, to reduce the risks of systemic diseases associated with periodontitis.

Periodontitis is characterized by the presence of inflammation which, through difference mechanisms, extends to other parts of the human organism

8. I brush three times a day: my gums are healthy

The efficacy of the battle against periodontal diseases is not directly and exclusively linked to the type of brush or the number of times we brush our teeth, but also to the degree of motivation, access to difficult locations, and the time employed. Basically, to the enthusiasm with which we do it.

The efficacy of tooth-brushing is not directly and exclusively linked to the type of brush or the number of times that we clean our teeth

9. The electric brush damages my gums and teeth

The incorrect use of the electric brush can produce abrasion on the teeth and retraction of the gums, but not as a direct consequence of the brush itself but fundamentally because of the technique employed, the use of abrasive toothpastes, and the type of bristles (especially hard ones).

The correct brush position during sufficient time on each tooth optimizes the result.

The technique employed, the use of abrasive toothpastes, and the time of bristles can damage the teeth; the possible damage does not, therefore, depend on whether the brush is manual or electric

10. I am old: I can't have implants and they are not worth the bother

Optimal masticatory functioning is of great importance regardless of age. Today, life expectancy is longer and longer and this means that rehabilitation treatments with implants are being performed on older and older patients. Advanced age is not a condition for placing implants; the only limitation is the health of the patient.

But there is a minimum age. The patient must have finished the period of growth (roughly between 18 and 25 years, depending on sex).

It is never too late to start a treatment with implants if this is indicated



GLOSSARY

- 1. Pathogens:** bacteria or micro-organisms that cause infectious diseases.
- 2. Gum grafting:** a technique of periodontal plastic surgery which consists of placing of gum tissue from the palate or substitute materials to improve the band of gum around a tooth and to maintain health or to cover the exposed roots when there are gum recessions and to improve aesthetics; through this, the appearance of "long teeth" is corrected.
- 3. Bacterial plaque:** also called biofilm. These are complex microbial communities, formed above all by bacteria that stick to hard surfaces such as teeth.
- 4. Systemic:** having a relation to the whole of a system. In health terms, it implies that it affects the general level – that is to say, various organs or systems.

The “litmus test” of oral hygiene

Social concern for following correct guidelines for oral hygiene is increasing in our country but, in many cases, there are still questions about whether these practices are being performed correctly

SECTION CO-ORDINATED BY:

Olalla Argibay
Master's degree in periodontology and implants, University of Santiago de Compostela

THE ACCUMULATION OF

BACTERIAL plaque on the surfaces of the teeth is responsible for the development of the main diseases that appear in the mouth: caries, periodontal diseases, and peri-implant diseases.

Using an adequate oral-hygiene technique will condition the maintenance of good oral health and ultimately reduce the risk of losing teeth.

Prevention programmes in which patients are informed and instructed in the importance of prevention and maintaining correct hygiene measures over the long term should be established in a routine way in the dental clinic.

Without plaque control, certain failure

As with a house, having good foundations is an indispensable requirement for assuring the stability and quality of what they support.

In the mouth, we have a very similar situation: the maintenance of supporting tissues (bone, periodontal ligament, and gums) that support the teeth in the mouth is essential.

Most treatments demanded by patients are related to aesthetic reasons and the first thing that dentists need to bear in mind is the “white aesthetic” – that is to say the tooth. However, the “pink aesthetic” – that which refers to the gums – can be responsible for the aesthetic failure of any treatment carried out on the tooth.

The oral-hygiene technique that is used conditions the maintenance of good oral health and the risk of losing teeth

Periodontal disease has a great impact on the aesthetics of the smile of the patient. The appearance of retractions, black spaces, inflammation, bleeding, or pathological dental movement can lead to the long-term failure of any treatment that has been carried out. Because of this, a correct diagnosis of this type of pathology, an appropriate treatment, and – of course – a good programme of maintenance and control of bacterial plaque is necessary. →



“The duration of brushing and the method used are key to maintain proper oral health”

Dra. Reyes Jaramillo

Associate Professor at the Faculty of Dentistry, University of Seville.



Resources for removing bacterial plaque: Resolving doubts

MANUAL VS ELECTRIC BRUSH

The removal of dental plaque by means of tooth-brushing helps to prevent the inflammation of the gums (gingivitis). This dental brushing can be carried out with manual brushes (using different techniques) or electric ones.

Electric toothbrushes are those that simulate manual brushing in various ways, such as moving from side to side or in a circular movement. The review of various studies shows that only rotation and oscillation (when the head of the brush moves in one direction and then in the other) is better than manual brushes in removing plaque and reducing inflammation. Furthermore, with this type of brush there is no possibility of damaging the gums.

“Antiseptic mouth rinses are complementary to the mechanical systems of bacterial-plaque control to improve oral hygiene”

The recommendation of using one or other device should come from the professionals, and it should be they who evaluate the most suitable device for each patient and at each point of treatment.

INTERDENTAL BRUSHING

With tooth brushing, bacterial plaque is eliminated from the outside and inside of the teeth but not from the spaces between the teeth. To clean these spaces, the most widely used and effective alternatives are dental floss and interdental brushes.

Generally, dental floss is used when the space between the teeth is closed or is very narrow (without bone loss around the teeth). When there are open

spaces between the teeth because of the loss of supporting bone (periodontitis), the use of interdental (interproximal) brushes is advised.

There are many sizes and formats of interdental brushes in the market. The right size and most suitable thickness of brush for the anatomy of these spaces should be chosen and changed according to morphological changes in the gums resulting from the progress of the treatment plan.

Brushing these zones completes the hygiene carried out with normal brushing and should be established as a habit at least once a day, as not doing so implies leaving about 40% of the dental surface uncleaned.

MOUTH WASHES

Mouth washes or mouth rinses are basic products in dental cleaning which help improve the health of our mouth, but which do not replace brushing or cleaning between the teeth. There is scientific evidence that shows that mouth rinses contribute to the prevention and treatment of mouth diseases, thus helping to maintain a healthy mouth for longer.

They should be used at least once a day, always after brushing and kept in the mouth for 30 seconds, avoiding eating or drinking anything for half an hour after their use.

Taking into account the different formulas of mouth rinses that are available today in the market, it is best that the dentist recommends which one to use, as he or she will best know the needs of each patient and what would be the most suitable treatment.



Dra. Isabel Lanzós
Periodontist.

“The regular reinforcement of oral hygiene techniques by a professional is vital for the patient’s correct and sustained motivation”

Dr. Luis Pavillard

Department de
Periodontology, Faculty
of Dentistry, University
of Seville.



→ Without these conditions of prior health, treatments with dental implants or orthodontics are completely counter-indicated, as their success would be constrained.

Incorrect habits

Although we usually assume that everyone knows how to brush correctly, the reality is completely otherwise.

Ever since we were little, few of us have received instructions on brushing techniques and on how to use the different types of toothbrush that can be found in the market.

The hygiene habits of the general population are generally rather poor. Short brushing time, inadequate brushing technique, and the lack of an ordered brushing sequence are the most common errors noticed by dentists when they evaluate their patients' brushing techniques. It is estimated that some 75% of patients who visit dental clinics have a bad brushing technique; this is not always because of a lack of motivation but sometimes because there is a lack of instruction and training about the technique to use.

Role of the dental team

Starting from this reality, a determining role is played by the members of the dental team. Dentists and hygienists make up the team responsible for oral health and are in charge of a correct diagnosis of the diseases present in the mouth and of establishing a suitable treatment for each of them. But, without doubt, the most important task is that of informing and educating patients in techniques of prevention and oral hygiene. For their part, patients should maintain their oral health, performing the indicated hygiene techniques.

Short brushing time, inadequate brushing technique, and the lack of an ordered brushing sequence are the most common errors in dental hygiene

Information, motivation, and education of patients must be done in a continuous way. Throughout the different phases of treatment, the hygienist should carry out this important job, evaluate the advances made by the patient, and detect any errors and difficulties that arise. In visits for professional cleaning, maintenance, and specific hygiene-control visits, time must be reserved that is dedicated specifically to this area, individualizing the training that is offered according to the needs of the patient.

Basic hygiene instructions

The accumulation of plaque varies considerably between patients. Each person accumulates a greater amount of plaque and calculus in a specific area conditioned by the brushing technique and the anatomical conditioning factors of each patient. Before introducing changes, it is necessary to evaluate the brushing technique and detect possible errors that are being committed. Using plaque detectors is a very practical way to show the patient and at the same time evaluate their brushing with the aim of introducing any changes that are considered necessary.

In later visits, this will also allow checking whether the guidelines that have been given have been correctly included in the patient's routine.

We should not forget that in order to acquire hygiene habits, these must become part of the patient's daily routine.

The greater the number of changes it is desired to introduce, the harder it will be that they are implemented.

Brushing technique

A multitude of brushing techniques with different objectives have been described.

Thus, a brushing technique can be indicated for one type of patient but not for another; because of this, it is our dentist who must guide us.

First the patient's habitual brushing must be evaluated, to see if it is effective at eliminating dental plaque and that it does not damage either teeth or gums.

Not having healthy gums can be responsible for the aesthetic failure of any treatment carried out in the tooth

An inadequate technique, in which the brush is moved in a horizontal direction, can begin to reveal the roots of the teeth, create more exposure to caries, and create concavities in which the tooth's nerve can begin to be affected. All this implies not only an aesthetic problem but also increases the risk of sensitivity when eating hot or cold food, which would continue to worsen if the brushing technique is not corrected. ■

“With good oral hygiene, gums present a pink colour and do not hurt or bleed during brushing or cleaning with dental floss”

Dr. Andrés Pascual

Director of the Master's degree in periodontology, International University of Catalonia





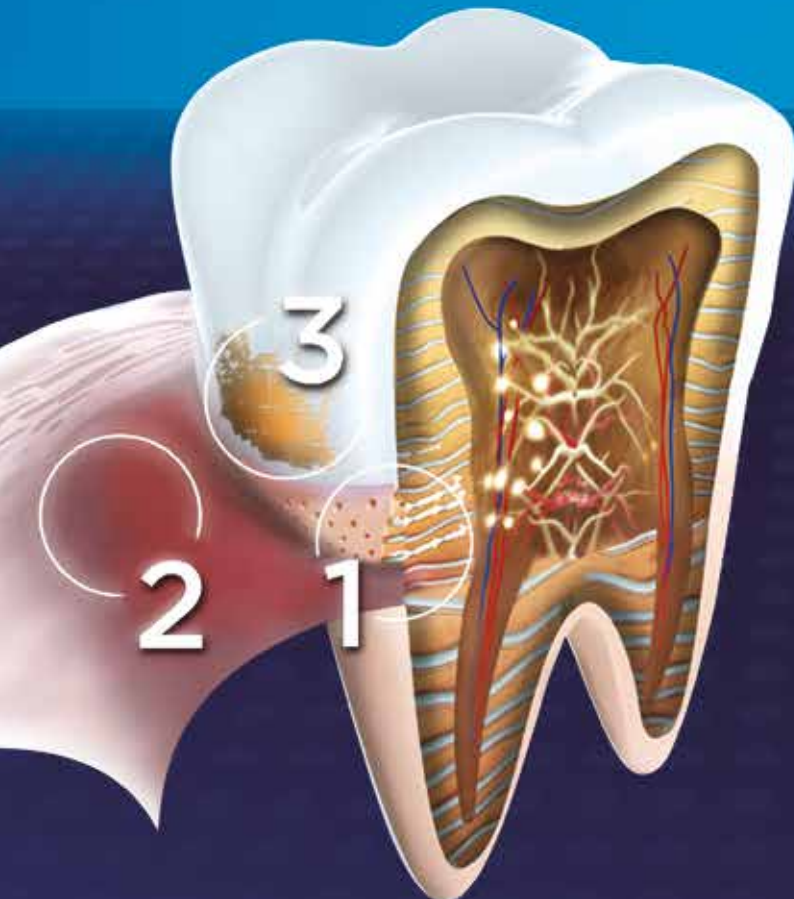
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**ALL AROUND PROTECTION
CLINICALLY PROVEN**

- 1 ✓ INSTANT AND LONG LASTING RELIEF
- 2 ✓ GUM PROTECTION
- 3 ✓ PREVENTS ENAMEL EROSION

* Survey carried out by MailTeck on 2082 dental professionals in Spain between April and June 2017.

Continuing the care that starts in your chair





Everyone with the Alliance for Periodontal and General Health

Led by leading Spanish scientific societies and promoted by the SEPA Foundation and the Spanish Society of Periodontology and Osteointegration (SEPA), the Alliance for Periodontal and General Health is consolidating and growing

SECTION CO-ORDINATED BY:

Mónica Muñoz
Master's degree
in periodontology,
Complutense University
of Madrid. Certified in
implantology. Univeristy
of the Basque Country

IN THE FRAMEWORK OF THE Complutense University of Madrid's summer courses, there was a presentation of the achievements and the challenges facing the members of the Alliance for Periodontal and General Health – an entity driven by the Spanish Foundation of Periodontology and Dental Implants, in collaboration with the Spanish Society of Cardiology (SEC), the Spanish Society of Diabetes (SED), and the Spanish Society of Periodontology (SEPA), and which has been subsequently joined by, among other medical organisations, the Spanish Society of Obstetrics and Gynaecology (SEGO) and the Spanish Society of Primary-Care Doctors (SEMERGEN).

Present and future

“The solid evidence that confirms the links between certain diseases of the gums with other systemic diseases necessitates a multidisciplinary integration to confront this problem,” said Dr Adrián Guerrero, president of SEPA. “This need to establish a framework of collaboration between the professionals involved has been covered by the creation of the Alliance for Periodontal and General Health in 2016, but it is now necessary to take some more steps forward and we shall soon know the results of the first research that has arisen from this Alliance.”

The aim is that in the coming years, the project will be consolidated among scientific entities, universities, businesses, and public authorities in Spain, and also expand to other countries.

In terms of initiatives that are being carried out within the framework of this Alliance, SEPA has reported on the creation of joint protocols of clinical application for oral-health professionals to act in the primary prevention of cardiovascular diseases. It is also working on the early detection of diabetes and on initiatives to promote healthy lifestyle habits, with the aim of promoting periodontal and general health.

Specifically, and within the framework of the Alliance, programmes are being developed for the prevention of periodontal and peri-implant diseases, for tobacco cessation from the dental clinic, the promotion of cardiovascular health in periodontal health and periodontal health in cardiovascular patients (in collaboration with the Spanish Society of Cardiology), of encouraging women's health and lifestyle (with the Spanish Society of Obstetrics and Gynaecology), and the early detection of diabetes in the dental clinic (with the Spanish Society of Diabetes).

Message for health authorities

This course also had a clear and agreed message for the country's health authorities: that they should be open to the new evidence that confirms the impact of periodontal health on general health and, above all, listen to the call to include certain periodontal treatments in public financing.

In the opinion of the SEPA president, “periodontal treatment should be included in the portfolio of

The aim is that in the coming years the project will consolidate among scientific societies, universities, businesses, and public authorities in Spain

services offered by the national health system, at least for specific groups of patients such as those who suffer a cardiovascular disease or people with diabetes.”

As, according to Dr. Mariano Sanz, director of the course and a world leader in periodontology, “the care of periodontal health must be an integral part of the treatment received by a person with diabetes, and it is necessary to establish specific periodontal care for cardiovascular patients.”

From the perspective of prevention, it is even suggested that there are important benefits of the role that can be played by periodontal health and dental check-ups in this area.

According to Dr. Sanz, “the experts in oral health are health professionals who treat a higher percentage of the healthy population, which puts us in a privileged position to carry out prevention.” In this line, he emphasises that “the utility of diabetes screening in the dental clinic has been demonstrated as has the efficacy of including in our consultations programmes to control certain risk factors and to promote health (smoking, obesity...).



What they said...

In the context of a summer course at the Complutense University of Madrid (UCM), carried out in collaboration with the Spanish Society of Periodontology (SEPA), national leaders such as Antonio Bujaldón (SEPA), Manuel Anguita (SEC), Adrián Guerrero (SEPA), Mariano Sanz (UCM, SEPA), Antonio Zapatero (SEMI), José Luis Llisterri (SEMI), and David Herrera (UCM, SEPA) reviewed some of the most current and controversial aspects of oral health and their implications on general health. These are some of the most outstanding contributions:



Mariano Sanz.
Professor of Periodontology, Faculty of Dentistry, Complutense University of Madrid. Director of the course.
"The experts in oral health are health professionals who treat a higher percentage of the healthy population, which puts us in a privileged position to carry out prevention"

David Herrera.
Professor of Periodontology, Faculty of Dentistry, Complutense University of Madrid. Secretary of the course.
"There are now more than fifty systemic diseases that have been associated with periodontitis, which highlights the impact that gum health has on general health"

Adrián Guerrero.
President of the Spanish Society of Periodontology (SEPA).
"It is not possible to have good general health if the health of the mouth is poor. The health of the mouth is not independent of the health of the rest of the body, and general health can also influence oral health"

Juan Gírbés.
Co-ordinator of the Diabetes Unit of the Valencia Department – Hospital Arnau de Vilanova – Liria. Member of the Spanish Society of Diabetes (SED).
"People with diabetes should pay special attention to their periodontal health: not only do they have an increased risk of suffering periodontitis, but they can lose control of their blood-sugar levels if this disease is present in the gums"

Manuel Anguita.
President-elect of the Spanish Society of Cardiology (SEC).
"Cardiologists should make patients aware of the importance of periodontitis as a risk factor for cardiovascular diseases. They should give patients questionnaires on periodontal health and refer those with periodontal disease to their dentist"

José Luis Llisterri.
President of the Spanish Society of Primary-Care Doctors (SEMERGEN).
"Oral health is the most common unmet health need in a wide range of vulnerable populations... Because of this, family doctors must pay greater attention to the oral health of our patients"

Antonio Zapatero.
President of the Spanish Society of Internal Medicine (SEMI).
"The infection and inflammation that characterize periodontitis means that, by different means, this disease present in the oral cavity extends to other parts of the organism, acting as a systemic disease"

Interdisciplinary Alliance with a common goal

The Alliance for Periodontal and General Health is "a pioneering initiative in the world, which defends the role of the dentist as a health promoter and an ally in the prevention and detection of systemic diseases, such as diabetes or certain cardiac diseases," emphasised Dr. Adrián Guerrero.

The ultimate aim of this Alliance is to try to achieve that the different health professionals form a team, seeking interdisciplinarity, carrying out prevention and treatment plans together: each professional with his or her specific knowledge and also considering the role that should be played by each patient.



New allies to fight periodontal diseases

LEADING SCIENTIFIC SOCIETIES, such as those of cardiology, diabetes, gynaecology, general medicine, and periodontology, together with professional bodies, businesses, and public entities, have reached agreement on fighting periodontal diseases and improving the oral and general health of the population, resulting in the Alliance for Periodontal and General Health.

A historic meeting

The Catalan Society of Dentistry and Stomatology (SCOE) has recently joined this initiative, in an event held in Barcelona. This was a declaration of intent and a support for the evaluation and making known of the close links between gum health and general health, and also drawing the attention of the Catalan health authorities to this reality.

The meeting served as the starting point for projects to improve the professional training of professionals in oral health and general health and to encourage awareness among the population through the promotion of health habits.

This meeting manifested the multidisciplinary vision of leading professionals in different medical and dental specialisms, defending the role of the dental check-up as a space with a high potential for health promotion and as an ally in the primary prevention and detection of systemic diseases, such as diabetes, and in the promotion of cardiovascular health.

Hand in hand

Now, the Spanish Society of Periodontology and the Catalan Society of Dentistry and Stomatology have committed to working together to be able to disseminate information about the relationship between oral and general diseases, ensuring that it is the health professionals of the various specialities, and not only dentists, who present the facts that are known today.

“The aim is to involve all professionals who treat or inform patients, in a way that incorporates into their knowledge and their practice the fact that periodontal and general health are connected,” indicated Dr. Adrián Guerrero, for whom there is no doubt that “the SCOE is a very well-known scientific society in Catalonia” and therefore “the Alliance is strengthened, and even more reinforced from the scientific point of view through an entity that is credible and close to the health professionals of this region, and the spread of knowledge will also be widened.”

For his part, SCOE president Dr. Ernest Mallat, said that “it is a great opportunity to make known the existence of the relationship between periodontal diseases and general health. We seek to make doctors in various specialities aware of the important role that controlling periodontal disease can have on the state of health of their patients.”

In Dr. Mallat’s opinion, “In Catalonia, it is the first time that the collaboration between two groups that have often worked in an independent and isolated

It is estimated that more than a million of adult Catalans have a gum disease and that in a quarter of these people the disease is a serious condition. Hence the interest of the Catalan Society of Dentistry and Stomatology in confronting this growing problem

The Catalan Society of Dentistry and Stomatology (SCOE) has recently joined this initiative

way (such as doctors and dentists) have worked together with the aim of co-ordinating their forces in favour of the health of our patients,” and – he added – “doing so in a multidisciplinary way.”

The first step

Both SCOE’s joining the Alliance and the celebration of this interdisciplinary scientific and outreach meeting are considered to represent only the first step. “Our wish is that this event is the starting point of a campaign promoted not only by scientific societies but also by the health authorities”, stressed the SCOE president.

Following this line of argument, Dr. Nuria Vallcorba, honorary trustee of the SEPA Foundation, said that “to be able to get the health administration involved in this field it is necessary to make known the importance of the relationship between oral and general diseases.”

Furthermore, indicated the Catalan periodontist, “we must advance in the knowledge and the evidence, which will progressively affect the different fields of health professionals and the health administration.”

Catalonia data

Oral diseases are the most common in human beings.

In the case of Catalonia, the figures demand attention.

Caries and periodontal diseases are extremely common.

It is estimated that **247,500** Catalan children under 12 have caries in primary teeth, but more than **4,500,000** Catalans aged 12 and over have caries in permanent teeth, and it is estimated that **110,500** people who live in this autonomous community are toothless.

The figures are not any more encouraging when gum diseases are evaluated, as there are **1,100,000** adult Catalans who present periodontitis, **276,000** of which are advanced or serious periodontitis.

In addition, it is calculated that **85%** of oral cancers in Catalonia are diagnosed at a late state, which is particularly worrying as early diagnosis could reduce mortality by half.

While **84%** of Catalans think that they should go to the dentist at least once a year, only 48% have done so in the last 12 months.

Alianza por
la Salud
Periodontal y General

From left to right: José Nart (SEPA), Elías Casals (COEC), Nuria Vallcorba (SEPA), Ernest Mallat (SCOE), Adrián Guerrero (SEPA), Anna Novials (SED), Margarida Mas (ANIS), Marta Amat

(Col·legi de Farmacèutics de Barcelona), Xavier Garcia Moll (SEC), Pere Beato (SEMERGEN Catalunya), and Pere Serrano (AHIADDEC).





For the last four years, May 12 has been celebrated as the “European Gum Health Day” (formerly the “European Day of Periodontology”, an initiative promoted by the European Federation of Periodontology (EFP), but which includes a strong Spanish role

‘European Gum Health Day’, with a Spanish accent



From left to right: Juan Ochoa, presenter of the event at the Casa de las Encías; Regina Izquierdo and Adrián Guerrero (SEPA), Pedro Manonelles and Carlos de Teresa (SEMED).

IN THIS YEAR'S EVENT, there was a record participation with a total of 27 national societies affiliated to the European Federation of Periodontology (EFP) jointly celebrating “European Gum Health Day”, highlighting gum health and its relation to general health.

For the first time, there was an unprecedented coverage of periodontology in a way that millions of people (from Portugal to Azerbaijan, from Morocco to Finland) were informed about the implications of periodontal health on general health and well-being.

Success

All this has been possible thanks to the impressive work carried out by all the participating national societies (among

The Spanish Society of Periodontology carried out a wide range of activities to celebrate this day

them SEPA, which has been a leader in this type of initiative), contributing practical advice and relevant information.

Thanks to hundreds of volunteer periodontists and dentists, who took part in dozens of public events, the message of “fighting periodontal disease together” has been spread widely.

Specifically, the Spanish Society of Periodontology carried out a wide range of activities to mark this day, activities that extended throughout the month of May and which had as their epicentre

New date

In short, European Gum Health Day 2017 was “a great success”, according to the EFP which extended its thanks to all the participating national scientific societies and made a special mention of the work carried out by former EFP president Juan Blanco, who “prepared the way to the establishment of what is today considered an indispensable annual event.”

And the EFP is now working on preparing the 2018 edition. The next European Gum Health Day will be coordinated by Dr. Xavier Struillou and will take place on May 12, 2018. Once again, the aim will be to raise the awareness of the general population, health professionals, and authorities about the importance of maintaining healthy gums throughout life.

SEPA's Casa de Las Encías (Gum Health Centre). One of the most important events was an outreach activity in which the report “Periodontal Health, Sports, and Quality of Life” – the fruit of collaboration between the SEPA Foundation and the Spanish Society of Sports Medicine (SEMED) – was presented.

Together with this, an information stand was set up in the centre of Malaga during the Congress of Periodontology and Oral Health.

And there were informational talks with the general population and students, and even informative lectures to football teams of the Malaga Football Club Academy.

'CTE' modernizes

Change of look, same spirit

Following the philosophy of constant evolution and modernization to make our content closer, more attractive, and more interesting to our readers, the magazine "Cuida tus Encías" [Take Care of your Gums] has launched a change of image in this edition

SINCE ITS LAUNCH, this publication has tried to attract the attention of oral-health professionals, their patients, and ultimately the general population with informative content related to oral and general health.

From the rigour and professionalism that characterizes the Spanish Society of Periodontology (SEPA) and the experts of this scientific society who have been designated to develop this magazine, we have attempted to provide useful knowledge and information, always with the final aim of procuring a better oral health for the population, in particular advocating the benefits that this entails for the general health of each person.

Aesthetic and functional change

To tackle this challenge, the formal aspect of the publication is key, with the aim of offering the reader information that is quick, simple, thoroughly examined, attractive, and interesting. Hence the attempt



**cuidatusencias.es,
more information
just a click away**

INITIALLY CONCEIVED as a complement to the print version of "Cuida Tus Encías", the website cuidatusencias.es has over time gained prominence, timeliness, and content.

Today, the web is no longer just a digital container of all the various reports, interviews, and news items published in the magazine. It has become a more important product, providing a much greater amount of information and in a way that is regular, direct, and close to the current demands of the population.

From cuidatusencias.es, you have access not only to the magazine's previous issues but also to new information that is regularly incorporated, along with practical advice and useful videos for all people interested in knowing more about their oral health – with the security, professionalism, and seriousness that is provided by a team of SEPA experts.

to keep "Cuida tus Encías" in the vanguard of design and layout. A restyling has been carried out and there are two aspects to the new design: one aesthetic and the other functional.

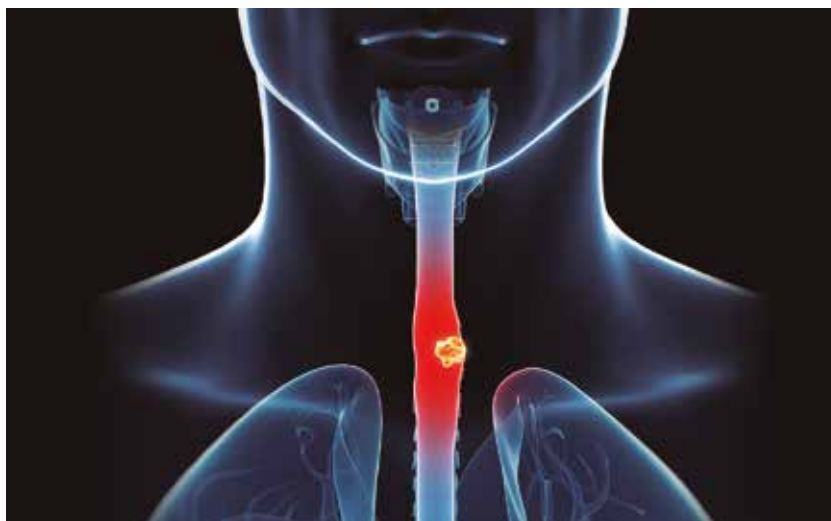
At the aesthetic level, after almost seven years and 12 issues, there was a need to update the composition, typography, colour... to approach a more modern and dynamic style.

From the functional perspective, what has been attempted is to deepen the informational character of the publication's editorial line, in which the design seeks to aid reading, whether through striking headlines, a highlighted phrase, a suggestive image, or the declaration of an expert in the matter.

In this new stage, white spaces will be boosted, symmetrical compositions will be broken, and more space will be dedicated to photography and to highlighting the meticulous editorial work.

We hope it is to your liking!

Greater risk of oesophageal cancer with diseased gums



SECTION CO-ORDINATED BY:

M^a Cristina Serrano
Master's degree in periodontology
and implants. Complutense
University of Madrid

MORE AND MORE STUDIES relate periodontal disease with cancer. The connection tends to come from systemic inflammation that is produced as a response to periodontitis, provoking an increase in various inflammatory proteins that tend to be linked also to the complex alterations which are produced in the development of cancer.

The oesophagus is a critical muscular tube in the passage of food from the oral cavity to the stomach, with two main types of cell that are implicated in the two main types of oesophageal cancer: adenocarcinoma and squamous cell cancer.

Researchers at the Faculty of Dentistry at the University of Louisville (USA) have found a periodontal pathogen – *Porphyromonas gingivalis* – in 61% of patients with squamous cell cancer of the oesophagus. They have determined the both the presence of an enzyme specific to this pathogen and remains of its DNA could be found

Almost two thirds of patients with one type of oesophageal cancer present a characteristic periodontal pathogen

in the cancerous tissue, but not in the healthy oesophageal tissue of the control patients.

This finding suggests two possible explanations: either the cells of oesophageal cancer are a preferred niche of the pathogen to multiply itself, or *P. gingivalis* facilitates the development of cancer of the oesophagus.

In the latter case, the future implications could be huge, although more studies are needed that are able to reproduce these results and understand what is the true connection between this periodontal pathogen and cancer of the oesophagus.

In adolescence, your oral health matters... a lot!



ADOLESCENCE IS A PERIOD of life in which many physical and emotional changes take place. There is solid scientific evidence that gum diseases can increase during adolescence as a consequence, among other reasons, of the lack of motivation in practising adequate oral hygiene.

Adolescence is a complicated period in which the adolescent seeks his or her own identity, and this sometimes separates them from the routine of oral hygiene created by their parents over the years. However, it has been shown that the effort of parents to create these habits of oral hygiene during childhood have their reward, because those who have managed to maintain good habits until 13 years of age have more probability of continuing to brush their teeth and use dental floss than children who have never been shown proper oral care.

Furthermore, it is known that the increase of sexual hormones – such as progesterone and oestrogen – during adolescence provokes a rise in the blood supply in the gums. This can cause greater bleeding and inflammation; the adolescent can have gums that are more inflamed, blotchy, and painful.

In some cases, it will be necessary that the dentist recommend periodontal treatment to help prevent damage to the tissues and bones that surround the teeth.

Periodontal health, a priority of people with kidney disease

CHRONIC KIDNEY disease (CKD) is damage to a kidney characterised by reduced function (glomerular filtrate <60 ml/min) and which has three or more months of evolution. It tends to be related to advanced age, diabetes, obesity, and cardiovascular disease, and the final stage of this disease is kidney failure.

Treating oral and periodontal infections must be a priority for patients with chronic kidney disease

In recent years, a multitude of studies have been carried out that have sought to provide evidence of a relationship between periodontitis and CKD.

The mechanism of association that has been proposed is through systemic inflammation. The periodontal pathogens would have the ability to adhere to, invade, and proliferate in the endothelial cells of renal vascularization.

In addition, a state of chronic inflammation would be produced, with an increase of C-reactive protein and other mediators of inflammation, which would also provoke a dysfunction in the wall of the kidney's blood vessels.

The results have recently been presented of a large epidemiological study in the USA (NHANES III), in which 13,794 people were evaluated over an average period of 14.3 years. Among other findings, researchers saw that patients with CKD had more likelihood of suffering a periodontal disease or of



being edentulous (that is to say, with one or more missing teeth).

Equally, it has been shown that mortality for any reason after 10 years of people with CKD without periodontitis was 32% while in patients with both CKD and periodontitis the rate increased to 41%, a percentage comparable to the mortality of patients with both CKD and diabetes.

As a result, it is surmised that treating oral and periodontal infections must be a priority in patients with CKD, above all in those who also have diabetes.

Brushing the tongue is more important than you think



THE TONGUE IS an organ composed of 18 muscles that are involved in a multitude of very important functions, such as the perception of tastes, swallowing, and the articulation of sounds. The anatomy of the back of the tongue is very rough, which encourages the accumulation of a very complex bacterial biofilm, implicated both in the

REGULAR BRUSHING OF THE TONGUE REDUCES BAD BREATH AND IMPROVES THE SENSE OF TASTE

appearance of halitosis and the creation of a reserve of periodontal pathogens that can contribute to keeping gum disease active.

Regular brushing of the tongue (whether with a toothbrush or with a specific tongue cleaner), in particular aiding the removal of the layer that covers the tongue, has been shown to reduce bad breath and improve the sense of taste. It also helps prevent caries, gingivitis, and periodontitis by eliminating the pathogens that are stored there.

It is advisable to visit the dentist when changes in the look of the tongue are observed or when ulcers or lesions that last for more than two weeks appear, as these can be a symptom of the presence of more serious diseases.

BY TAKING CARE OF **YOUR GUMS**
YOU ARE TAKING CARE OF **YOUR HEART**



Your cardiovascular health is in your hands

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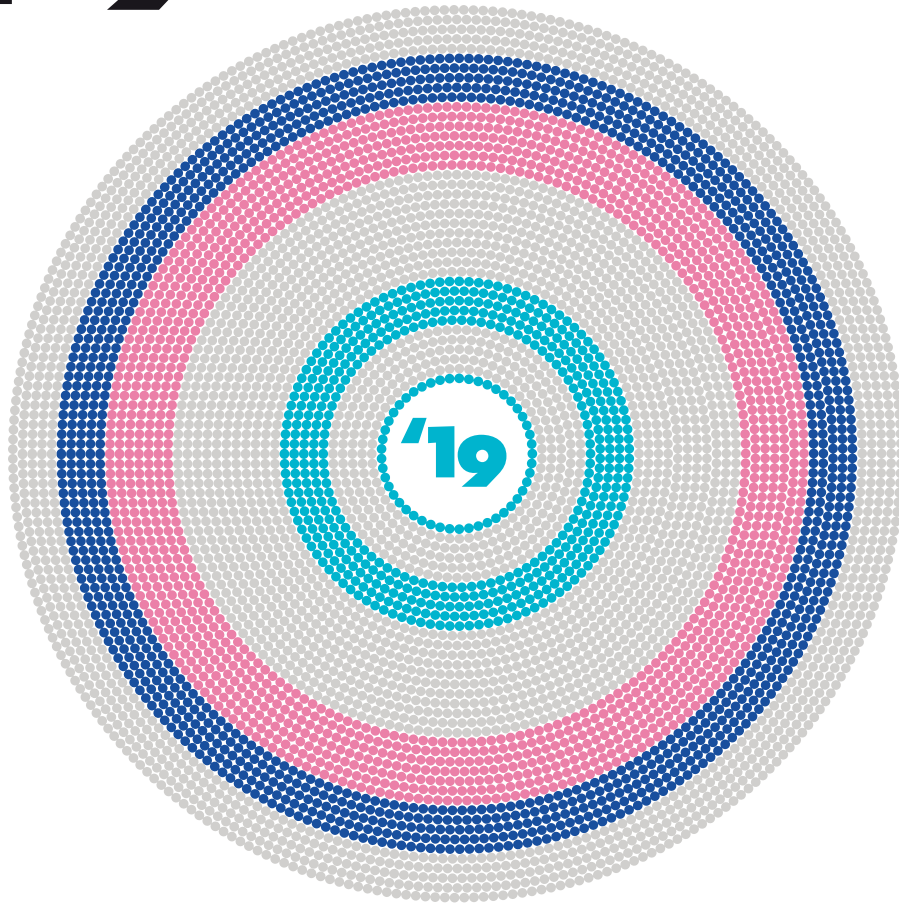
VITIS[®] gingival and PERIO-AID[®] are proud sponsors of the *Periodontal health and Cardiovascular health* scientific joint working group formed by the **Spanish Society of Periodontology** and the **Spanish Society of Cardiology**.

**The congress of
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and oral health**

Madrid
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DE PERIODONCIA
Y OSTEointegración





**GIN-
GIVI-
TIS.**

Superficial inflammation of the gums. Bleeding is the main warning sign. If it is not treated properly it can develop into periodontitis.

**PERIO-
DON-
TITIS.**

Deep inflection of the gums and the other tissues that support the tooth. It can lead to the loss of teeth. It has repercussions for general health: it increases the risk of cardiovascular disease, diabetes, and preterm birth.

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SOCIEDAD ESPAÑOLA
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Y OSTEOINTEGRACIÓN

2 times a day, act:			Every 3 months	Every 6 months
1 Brush your gums and teeth using a toothpaste	2 Use dental floss or interdental brushes	3 Strengthen your hygiene with a mouth rinse	4 Get a new toothbrush	5 Visit your dentist or periodontist for a gum check-up and to have your mouth cleaned

SEPA recommends the use of products that are scientifically endorsed.



Risk factors

- **Smoking.**
- **Stress.**
- **General Diseases** or lowered defences: diabetes, osteoporosis, HIV, herpes, transplants, etc...
- **Hormonal changes:** pregnancy, menopause.
- **Family history.**



Warning Signs

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



Simple Treatments

- **Improve oral hygiene.**
- **Complete cleaning** of bacterial plaque on the gums.
- **Evaluation** of periodontal status.
- **Control of plaque and bacteria** below the gums (scaling).
- **In advanced cases,** minor surgery.



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