

How can you change your risk level?

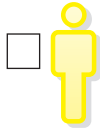
The correct implementation of preventive and therapeutic procedures (as reported in the right column of this page) results in a better chance of maintaining a healthy, functional and esthetically acceptable dentition for a long time.

Patient

Date/...../..... your risk score:



low risk



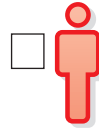
low-medium risk



medium risk



medium-high risk



high risk

you should improve your brush technique:

Bass

Roll

Electric toothbrush

you should use a mouthrinse containing antimicrobial agents:

you should use devices for interdental oral hygiene

floss

interdental brush

superfloss

you have to reduce/eliminate the consumption of cigarettes:

you should improve your diabetic status (diabetologic consultation recommended)

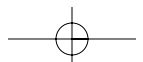
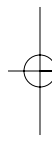
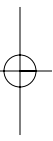
you should reduce depth of the pockets:

with non surgical therapy

with surgical therapy

you should undergo osseous reconstructive surgery

you should undergo professional oral hygiene sessions every months



A method for individual periodontal risk assessment

Informative and interactive brochure to:

- inform patients about Periodontitis and its risk factors
- evaluate the patient's risk level

Patient

Operator



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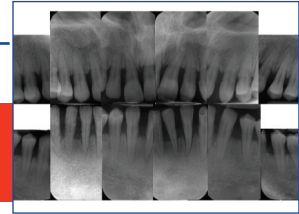
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Bone loss/age ratio

The more severe, extensive and early the bone loss is around teeth, the greater the susceptibility to Periodontitis will be



What is bone loss/age ratio?

Periodontitis determines, as a primary outcome, the destruction of bone tissue supporting the teeth on one or more often numerous dental elements. The bone / age loss ratio is the estimate of the severity and extent of bone loss supporting the teeth in relation to the age of the subject. The more severe, extensive and early the bone loss is, the greater the susceptibility of the subject to Periodontitis will be. And, as a result, the worse will be the prognosis of the teeth.

How can you intervene on the ratio to lower your risk level?

The periodontal therapy, eliminating or reducing periodontal infection, aims to preserve the remaining bone support and, in certain cases, to reconstruct the bone that has been lost (osseous reconstructive surgery).

Record the bone loss/age ratio and report it into the corresponding box.

Using endoral radiography or orthopantomography, the distance between the cement-enamel junction (CEJ) and the bone crest is evaluated on the interproximal surfaces of all teeth. Then, the number of teeth with a distance between CEJ and bone crest of at least 4 mm on the mesial or distal surface is counted. This will provide with an assessment of the severity and the extent of bone destruction caused by Periodontitis. The number of teeth with bone loss ≥ 4 mm is then related to the age range of the subject, using the table below, to obtain the level of risk.

For example, a 30 year old subject with 6 dental elements with a bone loss of 4 mm or more is characterized by a score of 6.

Bone loss/age ratio

Number of teeth with bone loss ≥ 4 mm

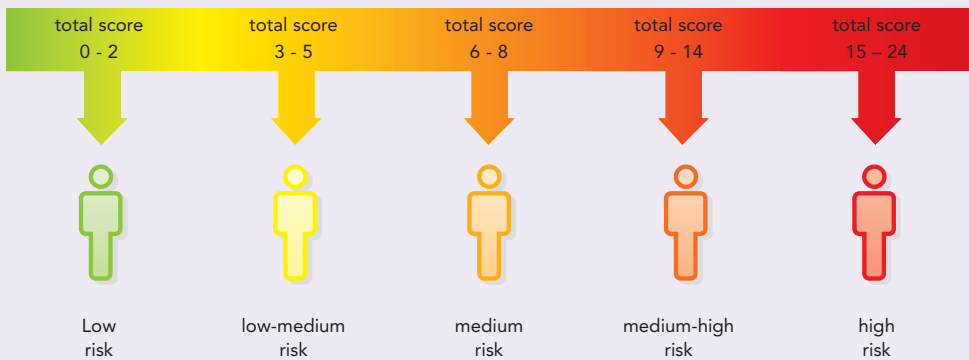
	0	1-3	4-6	7-10	>10
0-25	0 points	8 points	8 points	8 points	8 points
26-40	0 points	6 points	6 points	8 points	8 points
41-50	0 points	4 points	4 points	6 points	8 points
51-65	0 points	2 points	4 points	6 points	8 points
>65	0 points	0 points	2 points	4 points	6 points

What is your risk level?

With the help of your Dentist or Dental Hygienist, a score will be assigned to each risk factor/indicator (see sections in light blue). That score will represent the importance the factor/indicator has (when considered individually) for your overall risk level.

To obtain the value of your individual risk level, the scores of each risk factor/indicator must be reported in the following table (ticking the appropriate boxes) and then summed.

Risk factor/indicator	Score				
Smoking habit	0 points	1 point	2 points	3 points	4 points
Diabetic status	0 points		2 points		4 points
Number of pockets \geq 5 mm	0 points	1 point	2 points	3 points	4 points
Gingival inflammation (Bleeding on probing score, %)	0 points	1 point	2 points	3 points	4 points
Bone loss/age ratio	0 points	2 point	4 points	6 points	8 points
total score points				



Purpose of the brochure

What utility has the individual risk level for Periodontitis?

For the Patient

This pamphlet was designed to help you to understand the potential risk of developing or getting worse bone loss for your teeth.

Knowing your level can greatly facilitate your degree of collaboration in controlling the risk factors, by modifying your lifestyle and following the preventive and therapeutic indications suggested by your Dentist or Dental Hygienist.

Knowing your own risk level also makes the outcome of your periodontal therapy easier to understand and appreciate, for example comparing pre- and post-treatment risk levels.

For the Dentist and Dental Hygienist

This brochure provides the Dentist or Dental Hygienist with a monitoring tool of how preventive and therapeutic measures may result in a decrease in the risk of losing teeth due to Periodontitis.

Knowing the patient's risk level allows you to personalize your preventive or therapeutic interventions. The measures adopted to prevent or treat Periodontitis (if present) will be calibrated on the individual risk level, thus improving their effectiveness.

How is the brochure structured?

The brochure is composed of two different type of sections:

- **WHITE BOXES, to inform the Patient** by explaining the meaning of "Periodontitis" and "Individual Risk Level for Periodontitis", as well as the preventive and therapeutic procedures aimed at reducing or maintaining low their risk level;
- **LIGHT BLUE BOXES, to guide the Dentist and the Dental Hygienist** through the calculation of the individual risk level of the Patient for Periodontitis.

Periodontitis

What is Periodontitis?

Periodontitis is a chronic disease which causes the destruction of the tooth-supporting apparatus, consisting in the fibers of the periodontal ligament and the alveolar bone. If not appropriately treated, Periodontitis unavoidably leads to tooth loss.



Patient affected
by gingivitis



Patient affected by moderate
periodontitis



Patient affected by advanced
periodontitis

What is the cause of Periodontitis onset?

The cause of Periodontitis is bacterial plaque, which accumulates daily close to or inside the sulcus between the gum and the tooth surface. Bacterial plaque is responsible for the inflammatory process of the gums (Gingivitis), which manifests as redness, swelling and bleeding. If not diagnosed or inappropriately treated, Gingivitis may affect the tooth-supporting tissues more deeply, causing the formation of the pockets and the destruction of the alveolar bone (Periodontitis).

How can Periodontitis be diagnosed?

Periodontitis is often silent, and clinical symptoms such as abscess or tooth mobility can appear only at advanced stages of the disease.

Although patients can occasionally detect some clinical signs of the disease, the diagnosis of Periodontitis is performed during a specialist visit performed by the Dentist.

How is Periodontitis prevented and treated?

Prevention is performed through accurate oral hygiene, carried out by the patient with mechanical (e.g., toothbrush, dental floss, interdental brush) and chemical control (toothpaste, mouthwash etc.) of the bacterial plaque, as well as a program of screening visits and professional hygiene sessions programmed by the Dentist on a regular basis and implemented by the Dental Hygienist. Periodontal treatment consists of the professional removal (by the Dentist and Dental Hygienist) of plaque and calculus deposits above and under the gingival margin.

The improvement of oral hygiene by the patient and the control of risk factors for Periodontitis (see the white boxes dedicated to risk factors) are of critical importance for the success of Periodontitis prevention and therapy. Periodontal treatment will not only determine the recovery of a health status of your mouth, but also an **effective reduction in Periodontitis risk** through the control of factors that affect the incidence/progression of the disease.

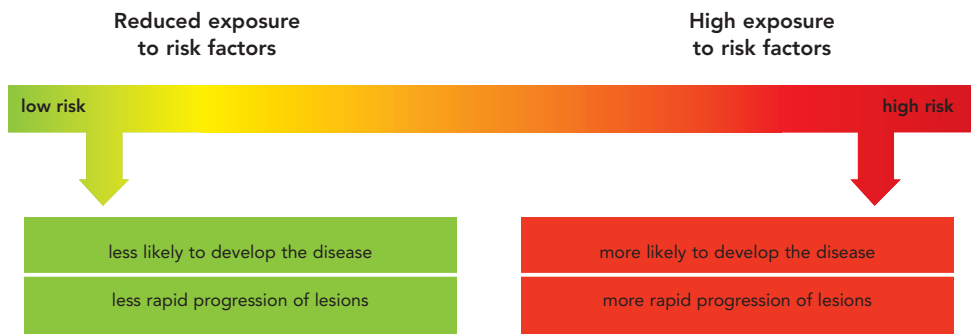
Periodontal risk

What does "to be at risk" for Periodontitis mean?

Scientific evidence indicates that bacterial plaque colonizing the gingival sulcus is the main cause of Periodontal Diseases, in general, and destructive Periodontitis (pyorrhea), in particular. It has also been demonstrated that the inflammatory response of the individual to bacterial plaque plays a primary role in the onset and progression of Periodontitis.

This inflammatory response varies greatly from one person to another, even in relation to the genetic profile. However, a significant part of the susceptibility of the individual (i.e. the risk) to Periodontitis depends on several factors (risk factors) which are related to lifestyle, concomitant diseases, and clinical signs of Periodontitis.

Being at risk for Periodontitis means having a greater susceptibility to the destruction of periodontal tissues and, therefore, spontaneous loss of teeth. In other words, subjects who present a high risk level are more likely to lose teeth substantially faster than those who have a low risk level.



Calculation of individual risk level

Calculating the individual risk level for the Periodontitis

Fazio

Da 14 dicembre 2017 per il periodo 2017-2018, il rischio di agenzia è stato valutato.

Esiste una relazione tra Fazio e Periodontite?

Il Fazio (o una sua variante) agenzia è un fattore di rischio direttamente per la Periodontite. Il Fazio (o una sua variante) agenzia è un fattore di rischio indirettamente per la Periodontite. Il Fazio (o una sua variante) agenzia è un fattore di rischio indirettamente per la Periodontite. Il Fazio (o una sua variante) agenzia è un fattore di rischio indirettamente per la Periodontite.

Con il più alto punteggio si ha il più alto rischio di rischio?

Un Fazio (o una sua variante) agenzia è un fattore di rischio indirettamente per la Periodontite. Il Fazio (o una sua variante) agenzia è un fattore di rischio indirettamente per la Periodontite. Il Fazio (o una sua variante) agenzia è un fattore di rischio indirettamente per la Periodontite.

Registrazione consenso generale di agenzia e spartito nella casella corrispondente.

Consenso generale di agenzia

Non esiste	Esiste	Esiste di grado	Esiste di grado	Esiste di grado
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

1. Assign a score for each individual risk factor / indicator: within the schemes pertaining to each risk factor/indicator, tick the box corresponding to the patient's specific risk. You will then receive the risk score for that factor/indicator.

Qual è il suo livello di rischio?

Con il Fazio (o una sua variante) agenzia, il rischio di agenzia è stato valutato. Il Fazio (o una sua variante) agenzia è un fattore di rischio indirettamente per la Periodontite. Il Fazio (o una sua variante) agenzia è un fattore di rischio indirettamente per la Periodontite. Il Fazio (o una sua variante) agenzia è un fattore di rischio indirettamente per la Periodontite.

Per ottenere il valore del suo generale livello di rischio, il punteggio di ciascun fattore indicatorio di rischio deve essere sommato nel campo corrispondente al rischio complessivo di rischio.

Fattore indicatorio di rischio	Punteggio
Fazio	1
Diabete	2
Consumo di zuccheri > 7 mg	3
Intervento chirurgico	4
Presenza di diabete insulina	5

Punteggio totale: 15

2. Report the 5 scores inside the summary table: copy the scores assigned to each risk factor / indicator in the summary table in the last light blue section.

3. Sum the 5 scores inside the summary table: Report the sum of the 5 scores inside the "Total Score" box within the summary table (last section in light blue) to obtain the individual risk level of the patient.

The hematochimic examination performed by Diabetologist is performed by measuring serum glycosylated hemoglobin (HbA1c) concentration. The concentration of HbA1c is commonly used in the monitoring of the diabetic patient to determine the true degree of metabolic compensation as it is a good indicator of the mean blood glucose value in the 5-10 weeks prior to blood withdrawal.

High risk subjects should undergo specific preventive or therapeutic programs to lower the risk level. Low-risk subjects should enter a program where preventive and therapeutic measures aim at maintaining their risk level constantly low.

Only those risk factors / indicators with scientific validation and characterized by easy and rapid clinical evaluation were included in the calculation of the individual risk level.

While limiting the completeness of the method, this approach has made it possible to formulate an effective risk assessment tool of simple clinical use.

Smoking habit

If you are a smoker your risk for periodontitis is 2-7 times higher than a non-smoker



Is there a relationship between smoking and periodontitis?

Smoking (a cigarette, a cigar or a pipe) is an important risk factor for Periodontitis.

Cigarette smoking has a dose-dependent relationship with Periodontitis, ie the greater the daily consumption of cigarettes, the higher the risk of onset, the severity of the lesions and the progression rate of Periodontitis.

How can you intervene on smoking to lower your risk level?

A smoker should limit, or even better eliminate, the daily consumption of tobacco (cigarettes). Note that smoking has a deleterious effect on periodontal tissues independently of your level of oral hygiene.

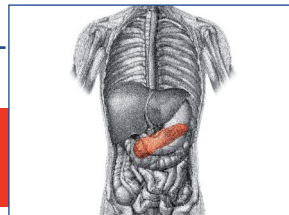
Record the daily consumption of cigarettes and report it into the corresponding box

Smoking habit

Never smoker	Former smoker	1-9 cig/die	10-19 cig/die	≥20 dig/die
low risk	low-medium risk	medium risk	medium-high risk	high risk
0 points	1 point	2 points	3 points	4 points

Diabetic status

If you are affected by Diabetes Mellitus your risk for Periodontitis is up to 11 times higher than those who are not diabetic.



Is there a relationship between Diabetes and Periodontitis?

It has been widely demonstrated that the presence of Type I and Type II Diabetes Mellitus increases the likelihood of onset as well as the severity of Periodontitis. In patients with Diabetes, the presence of Severe Periodontitis is up to 11 times greater than that observed in the general population.

How can the Periodontitis risk level improve in a Diabetic patient?

Since a poor blood glucose control may adversely affect periodontal conditions, it is imperative that the diabetic patient improves his/her diabetic status and the associated complications according to the Diabetologist recommendations.

At the same time, it is demonstrated that the professional control of the periodontal infection by the Dentist and Dental Hygienist determines, in turn, a benefit on the control of glucose metabolism.

Record the diabetic status in the corresponding box.

The hematochimic examination performed by Diabetologist is performed by measuring serum glycosylated hemoglobin (HbA1c) concentration. The concentration of HbA1c is commonly used in the monitoring of the diabetic patient to determine the true degree of metabolic compensation as it is a good indicator of the mean blood glucose value in the 5-10 weeks prior to blood withdrawal.

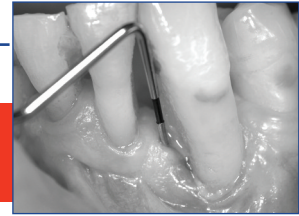
The serum concentration of glycosylated hemoglobin (HbA1c) is evaluated with a laboratory exam prescribed by the Diabetologist. The concentration of HbA1c is commonly used to monitor the Diabetic patient to determine the level of metabolic control of the disease, since HbA1c is a good indicator of the mean glycemic levels within the 5-10 weeks preceding the exam.

Diabetic status

No Diabetic	Diabetic with sufficient metabolic control (HbA1c <7.0%)	Diabetic with insufficient metabolic control (HbA1c > 7.0%)
low risk	medium risk	high risk
0 points	2 points	4 points

Number of pockets

The greater the number of pockets in your mouth, the greater the chance that your periodontitis will progress over time.



What is a Periodontal Pocket?

The pocket is a gingival sulcus that is pathologically deepened. In simple words, the sulcus that is between the tooth and the gum (which is 1-3 mm deep in healthy conditions) becomes deeper because of the destruction of periodontal tissues associated with Periodontitis. In the pocket, pathogenic bacteria proliferate undisturbed, resulting in further progressive destruction of tooth-supporting structures.

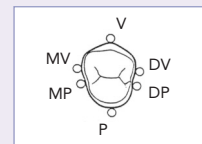
During the visit, the Dentist or the Dental Hygienist record the depth of the pockets using a painless procedure which is based on the use of a calibrated periodontal probe.

How can the pockets be used to reduce the risk level?






To reduce the risk level you have to eliminate or reduce the number of existing pockets. Only professional procedures, carried out by the Dentist or the Dental Hygienist, reduce the depth of the pocket. Pockets deeper than 5 mm normally require reduction by surgical therapy.

Record the number of pockets with a depth of 5 mm or more and report it into the corresponding box.

The depth of the sulci and pockets is measured at 6 points (mesio-buccal, mid-buccal, disto-buccal, mesio-lingual, mid-lingual, disto-lingual) for each tooth element.



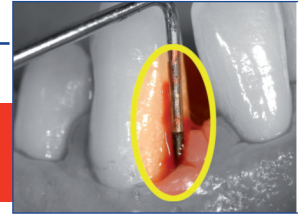
Number of pockets \geq 5 mm

0-1	2-4	5-7	8-10	> 10
low risk	low-medium risk	medium risk	medium-high risk	high risk
0 points 	1 point 	2 points 	3 points 	4 points 

Gingival inflammation

(Bleeding on probing score, %)

The higher the number of teeth with bleeding gums, the greater the likelihood that Periodontitis progresses over time.



What is gingival bleeding on probing?

Bleeding on probing consists of a blood spill from the gingival sulcus or pocket after the insertion of the periodontal probe. Bleeding on probing indicates the presence of inflammation of superficial or deep periodontal structures, which in turn proves the presence of bacterial plaque inside the sulcus or pocket.

During the visit, the Dentist or the Dental Hygienist record, in an accurate and painless way, the presence of bleeding on probing through the simple use of a calibrated periodontal probe. Your level of gingival inflammation will be estimated through the Bleeding on Probing Index.

How can bleeding gums be treated to lower the risk level?

To reduce the risk level, it is necessary to eliminate or reduce gum bleeding. This is achieved by improving the hygienic conditions of your mouth and through the professional removal of plaque and calculus deposits in the supra- and sub-gingival areas.

Record the bleeding index and report it into the corresponding box.

During the periodontal examination, the sulci and pockets on the clinical chart are recorded after the probe is inserted.

The Bleeding on Probing Index is then calculated using the following formula:

Calculation of the Bleeding on probing Index (%):

$$\frac{\text{number of sites that bled after insertion of the probe}}{\text{total number of probed sites}} \times 100$$

0-5%	6-16%	17-24%	25-36%	> 36%
low risk	low-medium risk	medium risk	medium-high risk	high risk
0 points	1 point	2 points	3 points	4 points