Maintenance

(Regular check-up)

※ Out of the "National Health Insurance System".

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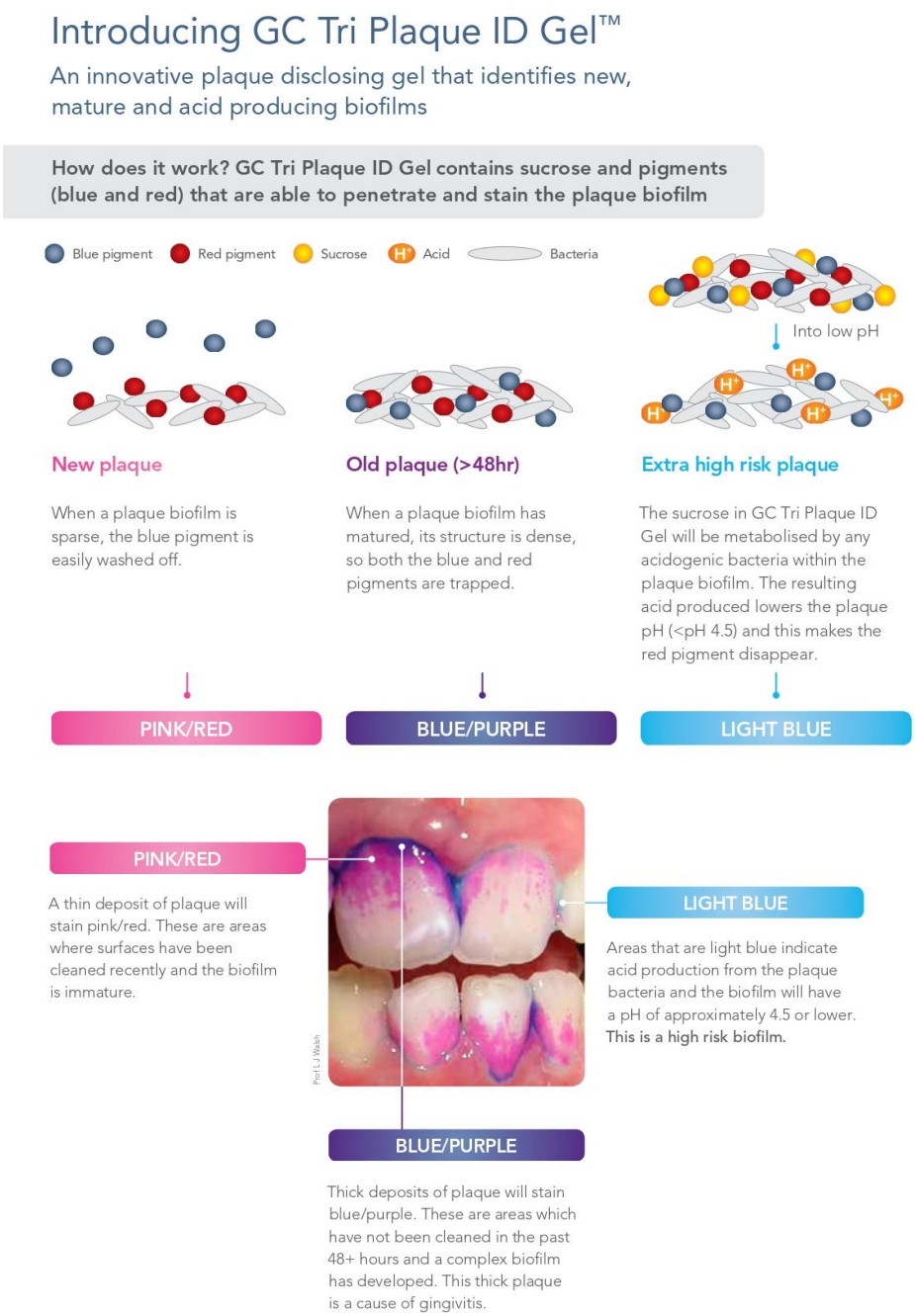
Details of the maintenance performed under private treatment.

○ **Check your hygiene, using "Disclosing Solution".** (Cleaning-Guidance：Tri Plaque ID Gel：GC)



As time passes, plaque absorbs minerals such as calcium and phosphorus from saliva, starting to harden. This process is called **Mineralization**. Once plaque hardens, it turns into '**Tartar**' and adheres firmly to the surface of the teeth. The time it takes for '**Tartar**' to form varies from person to person, but generally, plaque turns into tartar within 48 hours to two weeks.

Since tartar cannot be removed by oneself, professional **cleaning by a Dental Clinic is necessary**.

※ **We will also provide the "3D data of the staining results" as shown here.**

ex child：https://tk.dental3dcloud.com/report/v2?id=2a45cb0c-e6d5-5b4a-bbbe-f5776b7d3815&share=1

ex Adult：https://tk.dental3dcloud.com/report/v2?id=d9454051-a328-5ae6-9a69-350e3a03b174&share=1

Details of the maintenance performed under private treatment.

○ Irrigation(Valios:NSK®)

Standard scaling tip.

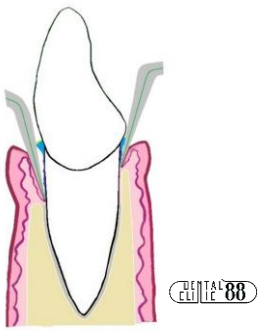
Due to the heat by the vibrations, water is released to cool it down.

This is the water coming out.

Tip for Irrigation.

Water is released to clean the inside of the Periodontal Pockets.

This is the water coming out.



To make it easier to visualize,
I will supplement with a diagram.
As shown in the figure on the left,
it is a method of cleaning from
'inside from the periodontal pocket'.

Instead of 'Water', a 'Medicated Solution'
is used for cleaning

'Tartar' contains many dead bacteria. However, just because the bacteria are dead doesn't mean they are '**Harmless**.' The membrane of the dead bacteria (the shell of the bacteria itself) is composed of a substance called '**LPS**,' which triggers an inflammatory reaction in the gingival tissue, making proper removal important. The method of cleaning out debris, including such substances, from within the pockets is called **Irrigation**.

Additionally, even if you try to apply something (such as **'Fluoride**' or '**Medication**' for prevention) to the surface of the teeth, the bacteria on the surface form a structure called a 'biofilm' (commonly known as slime), where bacteria collectively attach to the surface and secrete a sticky substance (mainly polysaccharides), creating a membranous structure. For this reason, simply applying medication is not effective. It is crucial to physically break down this 'biofilm' (slime) and deliver the 'desired solution' to the target area. Therefore, **Irrigation**, which simultaneously performs **'breaking down the slime with scaling vibrations and delivering medication to the broken surface**,' is essential.

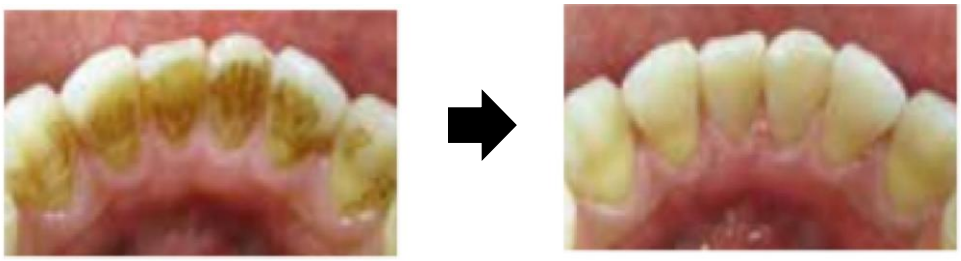
※ In particular, the company '**NSK**' has a unique ultrasonic vibration movement called the **'Acoustic Microstreaming Effect**,' where ultrasonic vibrations move horizontally through the surrounding solution, generating vibrations that affect the cementum around the tooth root, even impacting dirt embedded in the cementum. Furthermore, the discomfort caused by this vibration is noticeably different from that of conventional ultrasonic scalers, as you will realize upon experience.

Details of the maintenance performed under private treatment.

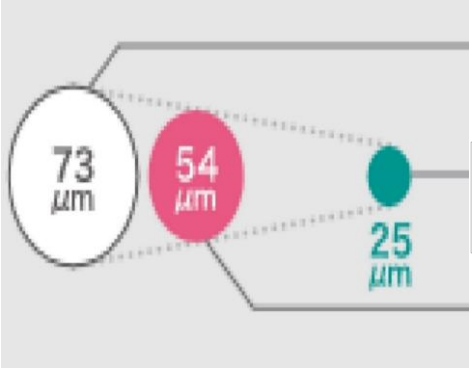
○ Air-Flow (Perio-mate:NSK®＋FIASH-pear:NSK®)

This method, where powder is used to clean dirt with air pressure in a '**Sandblasting**' manner, is called '**AirFlow**'.
Although this technology has existed on the market for some time, it has not been actively used in maintenance due to its inherent limitations.

How to Use Conventional Products.



In order to improve the aesthetics affected by **discoloration** on the teeth, we used **AirFlow**.
This alone caused the smoothness of the tooth surface to be lost, making it more prone to staining.
Thus, a '**New powder**' was developed. Historically speaking,



Sodium bicarbonate (old type) : so-called baking powder.
Has fallen out of use due to the potential for excessive salt intake.

Glycine (new powder: a type of amino acid) : A component used in artificial sweeteners and is safe. Its main characteristics are that it is '**Softer than tooth**' and '**Soluble in water**'.

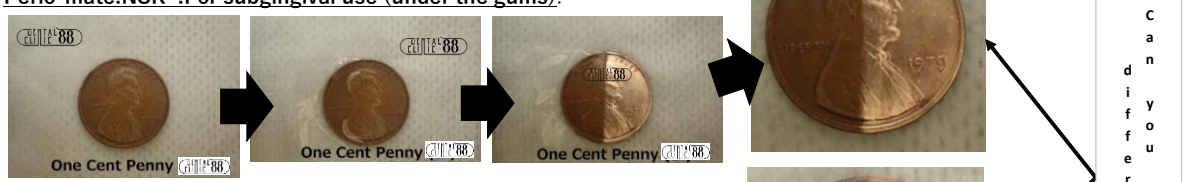
Calcium carbonate (common powder):Very hard and Insoluble.
Is good for removing stains, but it can roughen the surface if applied excessively. Therefore, it is not as suitable for Maintenance compared to other powders.
However, it is the main '**AirFlow**' for removing **Stains**.

As a powder ideal for Maintenance, we are currently using **'Perio-mate:NSK®'** at our clinic.
The noteworthy characteristics are undoubtedly the following three key features: '**Softer than tooth structure = Does not cause Damage**' '**Soluble in water = can be used inside Periodontal Pockets**' and '**Extremely fine particles = can reach every gap**'.

※ As for its '**Solubility**' and '**Fine particles**' please try it yourself with the demo product. The particles are so fine that they almost become liquid, and they dissolve sweetly in your mouth.

Here, I will specifically focus on the '**hardness of the powder**'.

・**Perio-mate:NSK®:For subgingival use (under the gums)**.



・**FIASH-pear:NSK® : Supragingival use (for use above the gums).**

Can you see This difference?

※ Other manufacturers also offer powder (granules) that use 'glycine,' but the quality is different from this product. The above features are specific to the powder (granules) from 'NSK®'.

Details of the maintenance performed under private treatment.

○ PMTC (iProphy:NSK®) ※ This alone will not remove '**Tartar**'. Basically, this is a discussion that applies after '**Tartar**' has been removed using the methods above.

PMTC stands for '**Professional Mechanical Tooth Cleaning**' and refers to professional dental cleaning performed at dental clinics. **PMTC** involves the thorough removal of **plaque** and **biofilm** from the tooth surface, between the teeth, and inside periodontal pockets using specialized tools and polishing agents. It is effective in preventing cavities and periodontal disease. The main procedures include the following:

・Cleaning of the tooth surface.

Special machines are used to remove plaque and biofilm that cannot be cleaned with regular brushing.

・Promotion of remineralization.

After cleaning the surface, fluoride is applied to promote remineralization and enhance cavity prevention.

・Smoothing of the tooth surface.

The surface of the teeth is polished to make it smoother, reducing the likelihood of plaque and dirt adhering.

● Cleaning the tooth surface.

: Many people may think that only the chewing surface of the teeth is being cleaned,
but the important thing is that we clean as far as possible, including inside the **Periodontal pockets**.

By applying it as shown in the diagram on the left, you can understand
that we are able to clean inside the **Periodontal pockets**,
where we least want plaque to accumulate.
With PMTC, we can **clean and polish** not only the tooth surfaces
but also the entrances to the tooth roots.

● Promoting Tooth Remineralization.

: After cleaning, the removal of "Biofilm" (slime) alone promotes remineralization, but it is important to apply something to the surface to expect further remineralization. Although this may seem repetitive, applying anything to a surface that still has "Biofilm" (slime) is almost meaningless. Therefore, simply using a "**Mouthwash**" alone will not be effective.
It is considered effective to use "Mouthwash after brushing your teeth".

● Smoothing the Tooth Surface.

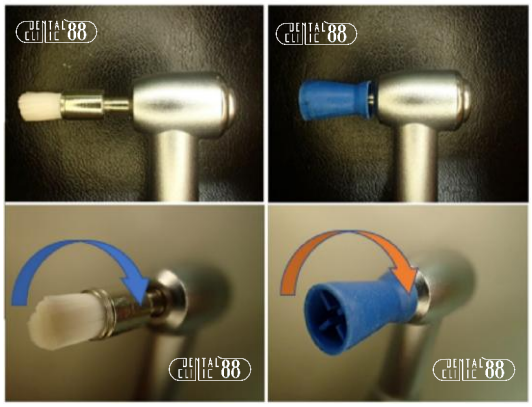
: This is the most important aspect of "**PMTC**". If the surface is smooth, dirt does not easily adhere.
The dirt will naturally wash away, and the surface will gradually return to a smooth state. For example, how does a **Smooth ceramic "Plate"** compare to a **Plastic "lunch box"?** Human teeth undergo daily cycles of "**Demineralization**" and "**Remineralization**". If left untreated, the surface becomes rough, but by smoothing the surface, it can be made more resistant to dirt, even if only temporarily.
However, while regular "**PMTC**" can improve the condition of **Human teeth**, this is not possible with artificial materials like **Ceramics**. The final result is influenced by every detail, and achieving a finish that requires no adjustment demands an extremely high level of precision. To achieve this, **Technique** is especially important, but above all, **it takes time**.

※ About 'iProphy:NSK®'

：Compared to regular instruments, the head is smaller and cordless, making it easy to handle and allowing it to reach deep areas that are inaccessible with standard instruments. Additionally, it has significantly **higher torque** (rotational force) than other devices, enabling it to provide extremely high polishing power and smooth the tooth surface.

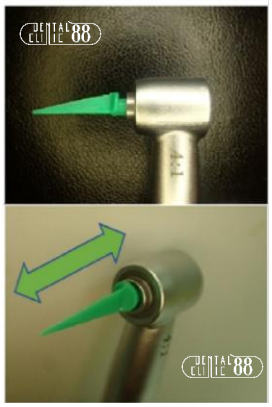
Details of the maintenance performed under private treatment.

○ EVA-tip (EVA-tip™:Dentatus)



[Rotary-brush]
Flexible nylon materia
Tooth Surface & Subgingival

[Rubber-cup]
Flexible rubber material
Tooth Surface & Subgingival



[EVA-tip]
Plastic material
Surfce & Subgingival area of the Interdental region

Generally, when we talk about "**PMTC**," the use of rotary instruments is the mainstream approach. However, the "Everchip" employs a completely different motion—back-and-forth movement—which allows it to smooth areas that cannot be reached with rotary instruments.

As shown in the left diagram above, it is possible to clean and smooth the area between the teeth (the subgingival embrasure area).In the right diagram, you can see that the patient has a **Ceramic crown** on the left side, and there is no **plaque** buildup. However, on the right side, in the Subgingival embrasure area (near the gums between the teeth), **plaque** has accumulated. The "**EVE-tip**" can clean and smoothen this area. In reality, the surface of the teeth can become relatively clean just by contact or flowing action, and if proper brushing is performed, the surface can be reasonably well-cleaned and smoothened.
While I won't claim that this alone is sufficient, **PMTC** offers a **significant advantage** in cleaning areas that are difficult to maintain on your own.

※ Regarding the "EVA-tip™: Dentatus," the way the practitioner uses the tool makes a difference. It is crucial that the it is used with proper understanding.

Details of the maintenance performed under private treatment.

○ Enamelast(Enamelast™Ultradent)

To create teeth that are resistant to **Cavities**, we utilize **Fluoride** for prevention.

There are various ways to use fluoride, but here we will discuss the method used for "permanent teeth that have already erupted."

※ The preventive method, for the teeth that haven`t erupted is entirely different. and will be explained in the **Tooth-Replacement-Check-Up (Tooth Brushing Club)**.

When food is ingested, the bacteria in the oral cavity also consume nutrients and produce acid as a byproduct of their metabolism. This acid is the cause of Cavities. When the oral environment becomes acidic, **minerals** such as **calcium** and **phosphorus** dissolve from the surface of healthy teeth in a process called "**Demineralization**." This occurs daily, but usually, Saliva helps restore the lost **minerals**, a process known as "**Remineralization**."

This process of "**Demineralization**" and "**Remineralization**" is repeated daily, but when **Fluoride** is present during **Remineralization**, the usual component of teeth, "**Hydroxyapatite (HA)**" is transformed into "**Fluoroapatite (FAp)**" which incorporates **Fluoride**. **FAp** is more resistant to acid, making it less likely to dissolve conpered with normal **HA**, even when the oral environment becomes acidic. This is how **Fluoride** helps prevent cavities.

The product "**Enamelast™ Ultradent**" contains high concentrations of **Fluoride** and retains its effects in the gaps between teeth for an extended period.

It is commonly referred to as "**Fluoride Varnish**" and various manufacturers offer similar products. The most important factor is that the effects last for a long time.

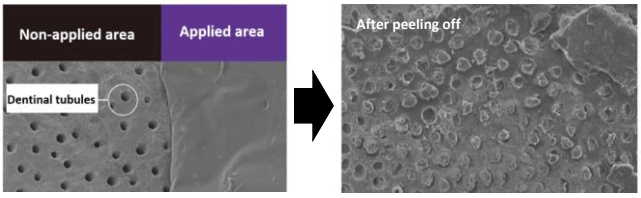
● Compared to other treatments, its concentration is higher.

[**Enamelast™Ultradent**]contains 5% NaF (22,600 ppm) and forms a coating on the tooth surface with just an application, providing a sustained release of fluoride.

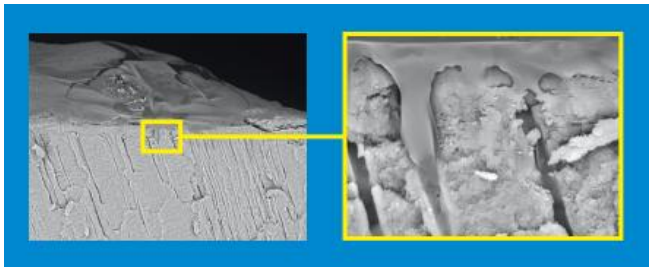
Application of Fluoride in Japan: ：
- Fluoride-containing toothpaste. (under 1,500 ppm)
- Fluoride application on tooth surfaces at a Dental cClinic. (9,000 ppm)

※ Fluoride varnish is said to detach after about one month due to brushing and other factors.

●It penetrates gaps and continues acts a long period.



※ Other gaps include the surface of demineralized teeth and the gaps between crowns and teeth. The surface peels off. When there are gaps, even when viewed in a cross-section, it penetrates deeply and adheres firmly.



In this way, it is possible to block the dentinal tubules (small tubes in the dentin, which form the root part of the tooth [communicating with the external environment and affecting the dental nerve]), and as a result, it is approved as a treatment for "**Tooth sensitivity**".

Details of the maintenance performed under private treatment.

○ Preoperative & Postoperative

This patient has noticeable staining and tartar buildup on the lower front teeth, particularly on the tongue side, where there is an opening for saliva. As I mentioned before, tartar **Mineralizes** (**calcifies**) due to the components in saliva. Although this area is not sufficiently cleaned, it is something the patient cannot fully manage on their own, and in some ways, it is unavoidable.
Because of such personal limitations, regular **Check-ups** (**Maintenance**) are absolutely necessary. However, I'd like to point out that on the patient's right side, where he has a "**Ceramic Crown**", there is hardly any plaque buildup. On the other hand, on the patient's left side, where they he has a "**Metal Crown**", you can see the plaque accumulation, right? Also, as mentioned earlier, the plastic part of the lower front teeth is also very dirty. It is important to understand these factors and adopt a "**Personalized Cleaning Method**" tailored to the patient's specific weaknesses.
Finally, I hope you understands that, after this, the tooth surfaces have become smooth and clean.

At first glance, this patient may seem to be cleaning their teeth well, and the overall condition may appear problem-free. However, when we use plaque-disclosing agents, we can see that the complex spaces between the teeth, particularly in the **lower interdental area (embrasure spaces)**, have not been properly cleaned. I hope the patient understands this. Of course, **improving their personal cleaning skills and motivation is important**, but it's also essential to recognize the limitations of self-care and consider professional maintenance as a viable option.

Additionally, could you take a look at the staining on the second tooth on the left side, starting from the upper center? Although the tooth has been filled with plastic, **plastic materials** tend to attract surface stains, and as a result, that area appears dirty. I hope this point is clear as well.

In this way, it is crucial for patients to understand a cleaning method that suits them personally.
Furthermore, the **greatest value** lies in **restoring the teeth to a smooth, polished state** through Professional Maintenance after such guidance.

Details of the maintenance performed under private treatment.

○ Summary

・Check your hygiene (Tri Plaque ID Gel : GC)

There are many things that can only be understood by staining. It is absolutely impossible to know just by looking.

・ Irrigation(Valios:NSK®)

It is not enough to just break down the dirt with scaling. Wash the area and use a medicated solution!

・ Air-Flow (Perio-mate:NSK®＋FIASH-pear:NSK®)

There are many areas that cannot be reached with instruments such as brushes or tips.

・PMTC (iProphy:NSK®)

Ultimately, polishing and smoothing is the most important thing!

・ EVA-tip (EVA-tip™:Dentatus®)

With “PMTC,” there are instruments that can clean between the teeth.

・ Fluoride (Enamelast™Ultradent®)

After addressing every surface, there is a method using fluoride that can provide not only immediate but also long-term prevention!

Details of the maintenance performed under private treatment.

○ **Price List**

Price list for Maintenance (Regular check-up)

Plapue Control Course If there is a **One-time request**, the fee will be **￥15,000+Tax.**

(A course mene, **Four** times a **Year**：**Yearly￥58,000+Tax** ： About 1hour)

※ This price will not change by your number of teeth.

：A maintenance aimed for the **Removal of the Teeth-Plaques**.

Content：Air-Flow(Surface,Supragingival,Subgingival)
Scaling & Irrigation・PMTC(Rubber-cup,EVA-tip)

※ As optional services, we can also provide the following standalone menu items at the same appointment, such as **Oral Hygiene Consultation (plaque disclosure and data analysis)** and **Enamelast (fluoride varnish)**.

Stain Remove Course If there is a **One-time request**, the fee will be **￥10,000+Tax.**

(A course mene, **Four** times a **Year** :**Yearly￥38,000+Tax** : About 1hour)

※ This price will not change by your number of teeth.

：A maintenance aimed for the **Removal of Teeth-Pigmentations**.

Content：Air-Flow(Surface,Supragingival,Subgingival)
PMTC(Rubber-cup,EVA-tip)

※ For patients with **heavy or stubborn staining** that cannot be fully removed within the scheduled appointment time, we can arrange additional treatment time for an extra **fee of ¥3,000** and perform a more thorough stain removal.

Single menu **(30minute each)** ※ **This price will not change by your number of teeth.**

- Guidance：￥5,000＋Tax (You will receive a 3D digital scan of your mouth.)
  (We will use a disclosing solution to identify plaques in your mouth and provide instructions...Please note that, unless this service is combined with another Cleaning, this does not include the cleaning or removal of the disclosed plaque.)
- Scaling & Irrigation：￥6,000+Tax
- Air-Flow(Surface,Supragingival,Subgingival)：￥7,000＋Tax
- PMTC(Rubber-cup,EVA-tip)：￥5,000＋Tax
- Fluoride(Enamelast)：￥2,000+Tax

※If you have any other questions, please ask us anything. Our staff will support you.