

PREMIUM WHITENING

# CAVEX WHITEPAPER

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Everything you need to  
know about in-office  
teeth whitening



YOUR  
IMPRESSION  
IS OUR  
SPECIALTY

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P R E M I U M   W H I T E N I N G

# EVERYTHING YOU NEED TO KNOW ABOUT IN-OFFICE WHITENING

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ALL AROUND THE WORLD PEOPLE ARE LOOKING FOR WAYS TO GET BEAUTIFUL WHITE TEETH, AND FOR GOOD REASON. AN OVERWHELMING MAJORITY OF ADULTS (85%) THINK THAT PEOPLE WITH BEAUTIFUL TEETH ARE MORE ATTRACTIVE.

When it comes to teeth whitening there are various methods available. This whitepaper will provide you with all the information you need about in-office whitening, and the differences to at-home whitening.

#### Topics covered

- Why is teeth whitening so popular?
- The history of teeth whitening
- What causes tooth discoloration?
- Different types of whitening gel
- Cavex In-Office Whitening System
- The in-office whitening procedure
- In-office versus at-home whitening
- Case study

We will make sure you are an expert on the topic after you finish reading. So grab a cup of coffee and let's get started.



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# WHY IS TEETH WHITENING SO POPULAR?

TEETH WHITENING HAS BECOME THE MOST POPULAR DENTAL TREATMENT IN THE LAST FEW YEARS. WHY? BECAUSE IT'S EASY, FAST, EFFECTIVE AND IT HAS BECOME REASONABLY PRICED. A BRIGHTER AND WHITER SMILE CAN MAKE YOU LOOK YEARS YOUNGER AND BOOST YOUR SELF-CONFIDENCE. STUDIES EVEN SHOW THAT A STAGGERING 85% OF THE POPULATION CONSIDERS A SMILE THE MOST IMPORTANT FACTOR FOR A PERSON'S ATTRACTIVENESS.

But that's not the only reason why more and more people schedule an appointment for teeth whitening. Social media's picture-perfect culture is creating a massive demand for whiter teeth. Most people want whiter looking teeth because social media features celebrities and influencers that all have the perfect smile.



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# THE HISTORY OF TEETH WHITENING

The practice of teeth whitening began around 3000 years ago, when the ancient Egyptians created a whitening paste using ground pumice stone mixed with wine vinegar. Ancient Romans actually used urine to whiten their teeth. The ammonia was used as the active whitening agent.

In the early 1800s, people started using caustic soda or acids to whiten their teeth. This can be effective on removing surface stains, but will not have an effect on deeper discoloration in the enamel and dentin, the yellowish tissue that makes up the bulk of all teeth. Unsurprisingly, caustic soda or acids also caused a lot of damage to the teeth of the patients.

Later, in the 1900s, hydrogen peroxide became a popular whitening agent. It was discovered that hydrogen peroxide was also an effective tooth whitener during an investigation on how to treat gum disease. In 1989 Dr. Haywood first introduced Nightguard Vital Bleaching. This involved the application of whitening gel containing hydrogen peroxide in a thin custom-fitted tray. The patient wore the tray overnight or for several hours during the day for a period of 2 to 6 weeks.

Nowadays, hydrogen peroxide continues to be the main ingredient in teeth whitening gels. They work by penetrating the enamel and breaking up colored molecules within the dentin.

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# WHAT CAUSES TOOTH DISCOLORATION?



## EXTRINSIC CAUSE

In some cases, tooth discoloration has a slight extrinsic cause. These are stains on the tooth surface. These stains can be a result of smoking or consuming colored foods and drinks, like coffee and red wine. To remove extrinsic stains, an abrasive toothpaste can best be used.

## INTRINSIC CAUSE

The main portion of the tooth, the dentin, is the part of the tooth that's responsible for the base color. Molecules within the dentin and enamel become discolored, causing the teeth to become yellow or grey. This is what we call an intrinsic cause. In almost all cases, teeth discoloration has a primarily intrinsic cause. This makes whitening gel containing hydrogen peroxide the only effective treatment.

## HOW DOES TEETH WHITENING WORK?

During a whitening treatment, hydrogen peroxide ( $H_2O_2$ ) breaks down into water ( $H_2O$ ) and oxygen ( $O_2$ ). The energy released in this reaction breaks down the large colored molecules in the elements into small uncolored molecules. By repeating this several times, all colored molecules are broken down, the discoloration on the teeth has disappeared and the patient has radiant, natural white teeth.

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# DIFFERENT TYPES OF WHITENING GEL

There are several variants of whitening gel available for whitening treatments. Each variant has a number of unique properties. All professional whitening gels use hydrogen peroxide as the primary ingredient.

HP

Hydrogen peroxide is the active ingredient in tooth whitening gels, and therefore essential. It breaks down fast and is not stable in itself.

## HYDROGEN PEROXIDE

Essential, but not stable at room temperature

CP

Most whitening gels contain Carbamide peroxide, which consists of hydrogen peroxide and urea. When the carbamide peroxide comes into contact with saliva, hydrogen peroxide is released. More than 50% of the hydrogen peroxide is released during the first two hours. After that, it can remain active for up to six hours. The shelf life is up to three years when stored in the refrigerator.

## CARBAMIDE PEROXIDE (CP)

Stable when stored refrigerated

PVP

Polyvinylpyrrolidone peroxide is a polymer. Because of the larger molecules, it is a very stable whitening solution. It gives a fast reaction when it comes into contact with saliva. Because PVP is stable at room temperature, it can be stored outside the refrigerator. This makes it ideal for on-the-go whitening solutions.

## POLYVINYLPIRROLIDONE PEROXIDE (PVP)

Stable at room temperature

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# HYDROGEN PEROXIDE SUPERIOR (HPS)

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The latest innovation in whitening gels developed and patented by Cavex.

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**FASTER, MORE STABLE AND MORE EFFECTIVE.**

In our search for stability, Cavex developed **Hydrogen Peroxide Superior**. We used a special production process to create HPS. We used a pure form of hydrogen peroxide which we then encapsulated. This created the necessary stability at room temperature. Therefore HPS gel does not need to be stored in the refrigerator.

The HPS gel reacts inside the mouth due to the high temperature and presence of saliva. Hydrogen peroxide is released and breaks down into water and oxygen. This releases radicals that penetrate the enamel and whitens the teeth. During the whole process, an exotherm reaction takes place, which means the whole process feeds on itself. This makes the HPS gel extremely fast and effective.

## FEATURES

- Ready-to-use product, no mixing required
- Unique and controlled application with a pen
- High viscosity gel stays perfectly in place
- Maximum result after only two to three applications in one treatment
- More comfort and better results with just 25% hydrogen peroxide

## READY-TO-USE PRODUCT, NO MIXING REQUIRED

HPS gel is ready for use without pre-mixing. The HPS technology keeps the 25% pure hydrogen peroxide stable. As a result, the gel is immediately ready-to-use. The reaction only starts in contact with moisture (saliva). A very convenient, time-saving solution for the dental professional.

**UNIQUE AND CONTROLLED APPLICATION WITH A PEN**  
Looking for a more precise way to apply the whitening gel? Cavex Bite&White is the only in-office whitening system that uses pens with a brush to apply the gel. Experience complete control over the dosing and application thanks to this unique technique.



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# HYDROGEN PEROXIDE SUPERIOR (HPS)

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## HIGH VISCOSITY GEL STAYS PERFECTLY IN PLACE

Cavex Hydrogen Peroxide Superior contains a poloxamer which is thermo-reversible. Most materials become more liquid when the temperature increases, HPS actually become thicker. Thanks to the thicker consistency, the gel remains perfectly in place during the treatment.

## MAXIMUM RESULT AFTER ONLY TWO TO THREE APPLICATIONS IN ONE TREATMENT

The Cavex Bite&White In-Office whitening gel is based on the revolutionary Hydrogen Peroxide Superior technology, which achieves unprecedented whitening results with 25% hydrogen peroxide in just one treatment. Applying the gel two or three times for just 15 minutes is enough to achieve maximum whitening results.

## EXCELLENT RESULTS WITH 25% HPS

One of the misconceptions about teeth whitening is that the higher the percentage hydrogen peroxide, the better the whitening results. Hydrogen Peroxide Superior proves that using a lower concentration can be just as effective and is also safer.

Generally the higher the percentage of hydrogen peroxide, the lower the pH. Research has shown that a low pH can cause damage to the tooth enamel. Treatments with lower concentrations of hydrogen peroxide, applied for shorter periods, minimize the risk of potential damage to the enamel. Cavex Bite&White In-Office whitening gel only needs to be applied three times for 15 mins, to achieve maximum whitening results.

## BENEFITS FOR PATIENTS

- Maximum result after only two to three applications in one treatment
- Lower risk of tooth sensitivity than other in-office solutions.
- Comfortable and safe treatment

## BENEFITS FOR DENTISTS

- The most effective whitening gel on the market
- Unique and controlled application with a pen
- High viscosity gel stays perfectly in place
- HPS gel can be stored outside of the refrigerator
- Ready-to-use product, no mixing required



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# CAVEX BITE&WHITE IN-OFFICE WHITENING SYSTEM



## RECOMMENDED BY PROFESSIONALS

The Dental Advisor tested our Cavex Bite&White In-Office Whitening System. After a clinical evaluation by a team of dentists, our whitening solution was rewarded with a clinical rating of no less than 86%. Professionals praise the effectiveness and the simple application method. To read the full report go to <https://www.dentaladvisor.com/evaluations/cavex-bitewhite-in-office-whitening-system/> or [click here](#).

## CONSULT YOUR DENTIST

Cavex Bite&White is only available through your dentist. Always consult a dental professional before you start a whitening treatment. He or she can prepare your teeth and provide you with useful tips to maximize the results.

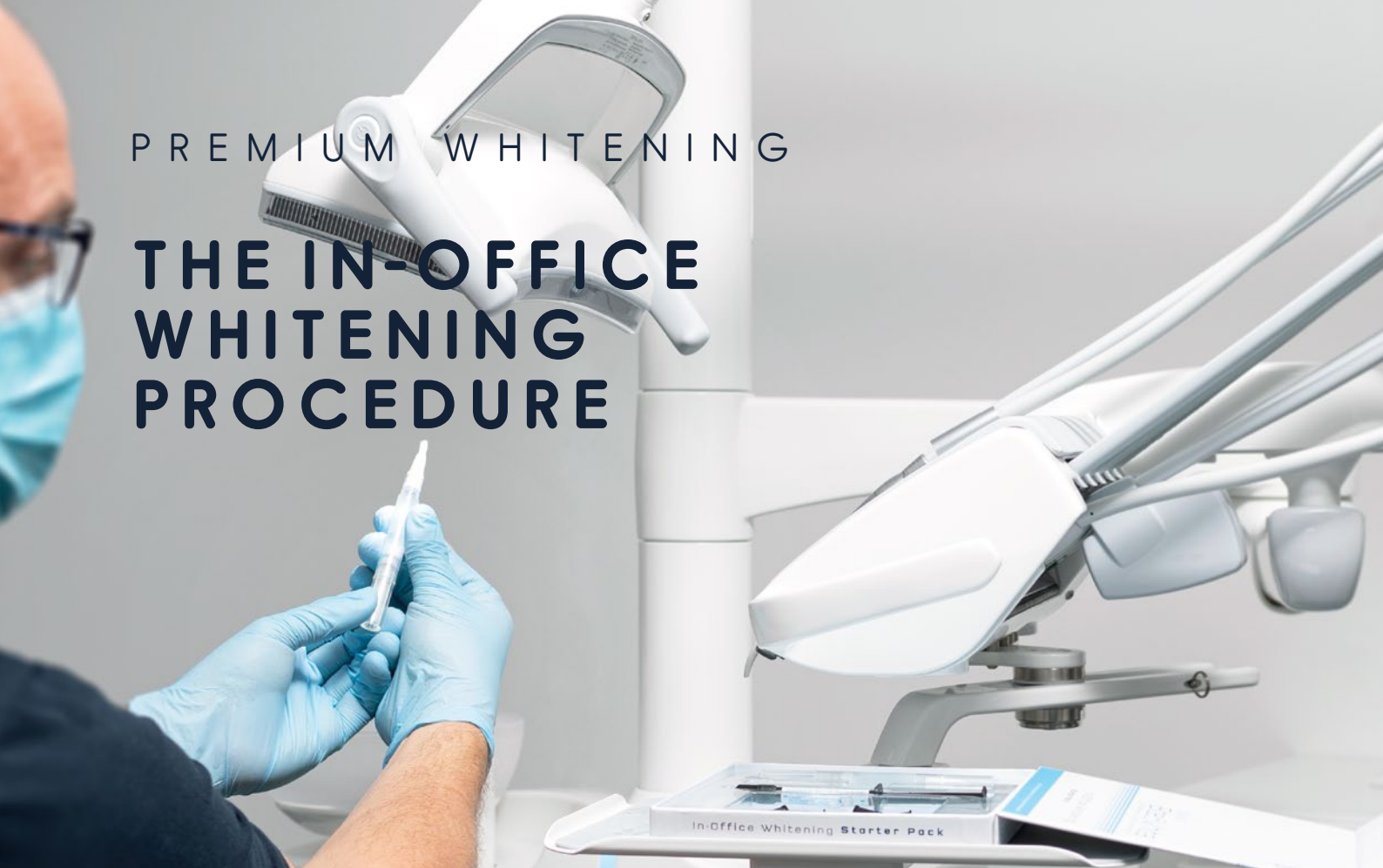
Maximum whitening result with minimal sensitivity? That is the Cavex Bite&White In-Office System. The whitening gel is based on revolutionary Hydrogen Peroxide Superior (HPS) technology, which achieves unprecedented whitening results with 25% hydrogen peroxide. Using the extremely quick and effective HPS gel, the maximum whitening result is achieved in just two or three applications in one treatment.

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# THE IN-OFFICE WHITENING PROCEDURE



## BEFORE TREATMENT

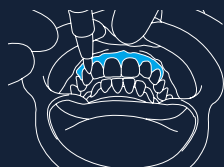
First, the dentist will review the patient's current oral health and make realistic expectations about the final results. He or she will also take a pretreatment photo. Then, the dentist will perform a prophylactic cleaning to remove plaque and surface stains. Lastly, the dentist will insert a cheek retractor and apply and cure the whitening barrier to the soft tissue to protect it from coming into contact with the whitening gel.

## DURING TREATMENT

When the preparation is complete, the dentist will apply a thin layer of Cavex Bite&White In-Office 25% HPS gel onto the teeth. The whitening gel contains hydrogen peroxide. This is the active ingredient that does the actual whitening. After ten to fifteen minutes the gel is removed by suction. These steps are repeated two or three times.

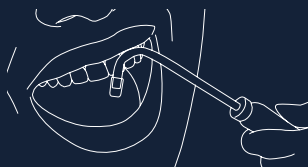
1

APPLY THE GINGIVAL BARRIER AND A THIN LAYER OF GEL ONTO THE TEETH



2

AFTER 10-15 MINUTES REMOVE THE GEL BY SUCTION



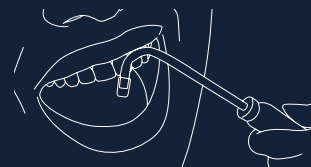
3

REPEAT THE GEL APPLICATION AND REMOVAL TWO TIMES



4

RINSE THE TEETH WITH WATER AND APPLY SUCTION



## AFTER TREATMENT

After the last application and removal of whitening gel the treatment is finished. The dentist will take a posttreatment photo and compare it to the pretreatment photo. He or she will also advise the patient not to smoke, eat or drink any acidic or strong-colored products for at

least 8 hours after treatment. Patients who experience sensitive teeth after the treatment, can be recommended to use a desensitizer like Cavex ExSense for at least one week to instantly relieve any discomfort caused by sensitive teeth.

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## THE DIFFERENCE BETWEEN IN-OFFICE & AT-HOME WHITENING

THERE ARE MANY IN-OFFICE AND AT-HOME TEETH WHITENING SOLUTIONS AVAILABLE. BUT WHAT IS THE ACTUAL DIFFERENCE?

These are the four most important differences between In-Office Whitening and At-Home Whitening.

### HYDROGEN PEROXIDE PERCENTAGE

The main difference is the percentage of hydrogen peroxide that is used to whiten the teeth. In Europe, whitening solutions for cosmetic use are prohibited to contain more than 6% hydrogen peroxide and are only available via the dentist. Whitening solutions containing more than 6% hydrogen peroxide are considered a medical device and may only be used for treatment in the dental office by the dentist. In-office whitening gel can contain up to 45% hydrogen peroxide.

### NUMBER OF TREATMENTS

Due to the higher peroxide percentage, the Cavex Bite&White In-Office System only requires two or three applications in one treatment to achieve maximum results. At-home whitening takes longer. Our at-home whitening solution, The ABC Masterkit, contains enough gel for

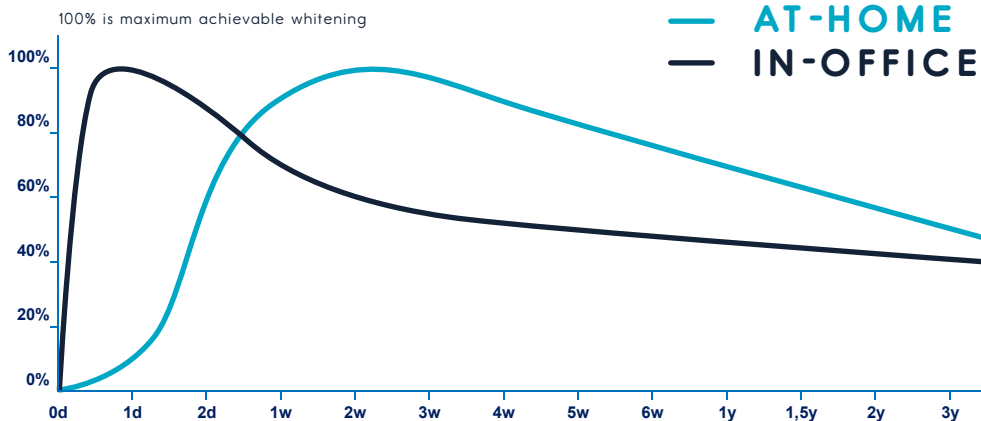
about 15 days of whitening. This amount of gel will make sure the patient has white teeth after the treatment. Of course its possible to extend the treatment or do a touch-up, by using the seperately available syringes.

### SENSITIVITY

While teeth whitening is safe and effective, it is possible that patients experience sensitivity after treatment. With higher concentrations hydrogen peroxide the risk of sensitivity is greater due to the fact that more energy is released during the procedure. Cavex ExSense is a proven and effective way to minimize potential sensitivity after treatment. This desensitizer is based on 2% hydroxyapatite that seals the tubules and microcracks in the enamel using a hydro-dispersing sol. In doing so, it completely closes off sensitive areas.

### LONGEVITY RESULTS

While in-office whitening achieves the maximum whitening results a lot faster than at-home whitening, the results also degrade somewhat faster. At-home whitening takes longer to achieve maximum results, but the results will last longer.



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# WHAT'S THE BEST WHITENING SOLUTION?

## IN-OFFICE vs. AT-HOME



Cavex In-Office Starter Pack



Cavex ABC Masterkit (at-home)

### WANT BRILLIANT WHITE TEETH TOMORROW?

#### - IN-OFFICE

Does the patient have a wedding or other big event scheduled this week? If he or she is looking for immediate results, In-office whitening is the best solution. Due to the extremely fast and effective whitening gel, the maximum whitening result is achieved in just two or three 15 minute sessions. After just one hour, the patient will leave the dental office with brilliant white teeth.

### WANT TO GET YOUR TEETH WHITENED BY A PROFESSIONAL? - IN-OFFICE

If the patient is not sure if they can follow the at-home whitening instructions properly, we advise them to visit the dental office for an in-office whitening treatment. Or if the patient simply prefers to leave it to a professional. The dentist will also take pre- and posttreatment photos to show the results.

The patient only needs to visit the dental office once. The dentist will take an impression of the teeth to make a custom whitening tray, and tell the patient how to use it. Afterwards, the patient only needs to keep the whitening tray with whitening gel in their mouth for 30 to 60 minutes per day, while they sit back, relax and watch their favorite show.

### WANT TO WHITEN YOUR TEETH IN THE COMFORT OF YOUR OWN HOME? - AT-HOME

Does the patient feel more comfortable whitening their teeth in the comfort of their own home? And are they willing to wait a little longer to see the results? Then we recommend at-home teeth whitening.

### WANT TO DO A QUICK TOUCH-UP? - AT-HOME

It's also possible to first whiten the teeth using Cavex Bite&White In-Office System, and do a quick touch-up later using our Bite&White ABC Masterkit. After some time, the whitening effects can start to fade depending on the patient's lifestyle. In this case, the patient can use the ABC Masterkit to do a quick touch-up and make their smile bright again.

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# CASE STUDY ARGENTINA



Application



Before



After



Dr. Lucas Echandia

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# INTERESTED? DISCOVER MORE!

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**LOOKING FOR A SAFE WAY  
TO BRIGHTEN YOUR SMILE?**

Looking for a safe way to brighten your smile? Visit your dentist to ask which whitening solution (in-office or at-home) fits your needs best. Our teeth whitening solutions are only available through dentists.

Are you a dental professional? Visit our [distributor's page](#) to discover where the products are available.

All the best on your teeth whitening journey!

[CLICK FOR  
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