Tooth Lightening
Enhancing tooth whitening results with GC Tooth Mousse Plus
GC Tooth Mousse Plus: A perfect partner for whitening

Research from around the world reports that GC Tooth Mousse/GC Tooth Mousse Plus containing RECALDENT™ (CPP-ACP):

- Greatly decreases the intensity of post-whitening sensitivity, leading to greater compliance.\(^1\)
- Will not interfere with the action of bleaching agents.\(^2,3\)
- Improves the aesthetic outcome following whitening treatment, by increasing mineral content in the enamel structure.\(^2,3\)
- Reduces the propensity for freshly bleached teeth to be stained by smoking or the drinking of tea.\(^4,5\)

Tooth Lightening

To improve whitening treatment results

Application of GC Tooth Mousse (Plus) can resolve pre-existing dentine sensitivity.\(^6-8\) Optimum results are achieved when patients start to apply GC Tooth Mousse (Plus) 1-2 weeks before the whitening procedure, twice a day after flossing and brushing.

During and after whitening treatment

Following removal of the whitening tray and whitening gel, patients apply GC Tooth Mousse (Plus) for at least 2 weeks after the final whitening application.

Mode of action

GC Tooth Mousse (Plus) is able to protect and soothe areas of exposed dentine, which are potential sources of sensitivity during the bleaching process.\(^6-8\) Bleaching helps clean protein from interprismatic spaces, providing avenues for improved penetration of RECALDENT™(CPP-ACP) so that higher levels of mineralisation can be achieved.\(^2,3\)
What is tooth lightening?

Dr Brostek: Tooth lightening involves daily application of GC Tooth Mousse Plus to increase blue light reflection of enamel and enhance the illusion of white teeth. Lightening is achieved by increasing the enamel mineralisation and therefore improving enamel translucency. Anecdotal clinical cases demonstrate the efficacy of GC Tooth Mousse Plus’ lightening effect, with teeth appearing whiter, without undergoing any additional use of tooth whitening oxidising agents.

How is tooth lightening achieved?

Dr Brostek: GC Tooth Mousse Plus is applied for several weeks to months after the tooth whitening procedure has been completed. Preferably application should start two weeks prior to beginning the tooth whitening procedure.

To understand how GC Tooth Mousse Plus (RECALDENT™ (CPP-ACP)) can enhance tooth aesthetics, a basic understanding of tooth optics and tooth whitening chemistry is important.

Tooth optics: basic concepts

- Light is scattered by the enamel prisms – and is re-transmitted and absorbed by dentine.
- Yellow is the base colour causing patient distress; the human eye is more sensitive to yellow-green than to blue light.
- As people age, teeth appear yellower – with more intrinsic and extrinsic stain.
- Thinner enamel in older patients also increases the yellow appearance.
- Increasing the blue-light reflection of teeth enhances the illusion of whiter teeth.

The mechanism of action of tooth whitening utilises the breakdown of hydrogen peroxide into free radicals, to irreversibly oxidise and unfold the stain molecules (chromophores) within dentine and achieve whiter teeth.

The concept of ‘tooth lightening’ is quite distinct from, and different to, tooth whitening, as it does not involve the use of oxidising agents such as hydrogen peroxide and it can promote the illusion of whiter teeth.

What is the role of GC Tooth Mousse Plus during tooth lightening?

Dr Brostek: GC Tooth Mousse Plus is a topically-applied, crème combining two proven tooth protection and strengthening technologies – RECALDENT™ (CPP-ACP) and fluoride (900 ppm). The use of RECALDENT™ (CPP-ACP) present in GC Tooth Mousse Plus has been reported to improve the aesthetics of hypomineralised and stained enamel by promoting mineralisation, which improves lustre and translucency of the treated tooth enamel. RECALDENT™ (CPP-ACP) has also been shown to remineralise white spot lesions of enamel (WSL) and to slow progression of caries in a randomised, controlled clinical trial. Clinically, achieving these objectives is usually slow, as a gradual process of increasing enamel mineralisation takes place.

How long does it take to achieve tooth lightening?

Dr Brostek: As seen in the clinical case below, tooth lightening and reversal of small hypocalcific areas was evident after 10 weeks of nightly application of GC Tooth Mousse Plus.

Tooth lightening case

Before: 24-year-old female patient with small hypocalcific areas.

After: No tooth whitening procedure was performed. This result was achieved solely with nightly applications of GC Tooth Mousse Plus for 10 weeks.
Can GC Tooth Mousse Plus applications enhance aesthetics of teeth after tooth whitening?

Dr Brostek: Yes. In my clinical experience, GC Tooth Mousse Plus application before and after tooth whitening procedures, has been shown to be effective in improving the overall aesthetics of teeth.

A lightening effect can also be used to enhance the results of normal peroxide tooth whitening procedures (in-office and home tray gel) by ongoing use of GC Tooth Mousse Plus by the patient (Protocol A).

Protocol A: Improved whitening

1. Use of mildly abrasive micro-polishing toothpastes for two weeks before tooth whitening. Additional benefit may be obtained with a stain-displacing hexametaphosphate-containing toothpaste.

2. Two weeks prior to whitening, GC Tooth Mousse Plus should be finger-applied nightly to anterior teeth surfaces in a ‘wet’ mouth after toothbrushing (mouth must contain saliva, or be pre-wet with water in a xerostomic patient, as GC Tooth Mousse Plus dissolves in the presence of moisture, releasing calcium, phosphate and fluoride ions, that will then be diffused into tooth structures).

3. In the clinical whitening appointment, a critical step is the prophylaxis with oil-free pumice paste to totally remove any remaining extrinsic stain on the teeth, to allow adequate peroxide and free radical penetration into the tooth structure.

4. Usual clinician whitening procedures are carried out, using in-office whitening and pre-made custom home whitening trays (carbamide or hydrogen peroxide topical gel) of appropriate concentration. If preference is for the sole use of home tray whitening gels, the following GC Tooth Mousse Plus procedure is still applicable.

5. Patient finger-applies a ‘pea-sized’ amount of GC Tooth Mousse Plus on anterior teeth surfaces (no rinsing or spitting afterwards) before bedtime, continuing for weeks to months after the whitening procedures are complete. This can be continued until the clinician and patient are satisfied with the improved aesthetic result.
How can we reverse ‘white patching’ areas that become noticeable after tooth whitening?

Dr Brostek: Hypocalcific white patches on teeth that become emphasised after in-office tooth whitening procedures are a problem for the patient (and the dentist) as the extreme white patching is generally unaesthetic. A protocol for reversal of post-whitening hypocalcific or ‘white patching’ areas follows (Protocol B). This protocol includes both in-office and at-home treatments:

In-office treatment:
• Application of an alkali (Milton’s solution) to remove the protein layer on the surface of the enamel.
• Application of diluted GC Tooth Mousse Plus (This dilution procedure was recommended by Professor Eric Reynolds, University of Melbourne, head of the Oral Biology Research Group, original developer of RECALDENT™ (CPP-ACP). Improved dilution technique utilising glycerine, was recommended by Professor Laurie Walsh, University of Queensland.)

At home treatment:
• Nightly, the patient applies a pea-sized amount of GC Tooth Mousse Plus with a finger, after toothbrushing, with no spitting or rinsing after application.

Protocol B. In-office reversal of post-whitening hypocalcific areas

1. Appearance of ‘white-patching’ following in-office whitening

2. Isolate teeth affected with ‘liquid dam’. Using a microbrush, rub Milton’s solution on surface of enamel for 2 mins. Rinse and dry.

3. Dilute GC Tooth Mousse Plus in a dappen dish by mixing with water or glycerine (glycerine allows higher calcium concentrations).

4. Remove liquid dam from teeth, avoiding any salivary contamination. Using a microbrush, paint the diluted GC Tooth Mousse Plus onto enamel surfaces and leave for 1 min.

5. Implement at home treatment protocol (nightly applications of GC Tooth Mousse Plus).

6. Review weekly to assess results; when required, the in-office treatment can be repeated.

Tooth Mousse application

1. Squeeze a small amount of GC Tooth Mousse Plus onto your clean finger. Your dental professional will guide you on the right quantity to use.

2. Apply to all teeth with your finger and then use your tongue to spread evenly around all your teeth.

3. Leave GC Tooth Mousse Plus on teeth for at least 3 minutes. After application, do not rinse your mouth; you can spit out or swallow the remainder.

Clinical appearance after treatment with Protocol B (one in-office treatment and one week of home treatment). In this case, patient used 6% hydrogen peroxide for one hour daily. After removing the whitening tray and gel, and rinsing the teeth with water, GC Tooth Mousse Plus was applied. Note the final clinical result is whiter and less patchy than the original.
GC Tooth Mousse Plus

GC Tooth Mousse Plus is a water-based crème containing RECALDENT™ with incorporated fluoride (CPP-ACP: casein phosphopeptide-amorphous calcium phosphate fluoride). The level of fluoride is 900 ppm which approximates that in adult strength toothpastes. When CPP-ACP is applied in the oral environment, it will bind to biofilms, plaque, bacteria, hydroxyapatite and soft tissue localising calcium, phosphate and fluoride.

RECALDENT™ (CPP-ACP) is the end result of many years of research by the University of Melbourne into the anticariogenic properties of milk. GC Tooth Mousse Plus is able to protect and soothe the areas of exposed dentine which are potential sources of sensitivity during the bleaching process.6-8 Bleaching helps clean protein from interprismatic spaces, providing avenues for improved penetration of RECALDENT™(CPP-ACP) so that higher levels of mineralisation can be achieved.2-3

GC Tooth Mousse

Topical crème with calcium, phosphate and fluoride

Assorted pack 10pcs contains:
4 x Mint, 4 x Strawberry, 2 x Vanilla
40g tube (35ml)
Also available in a mint only 10 pack.
New Zealand stocks only GC Tooth Mousse Plus Mint 10 pack.

References

13. The late Dr Nathan Cochrane (Melbourne University – Oral Health CRC Group) improved techniques for reversal of hypocalcific WSL.

GC Tooth Mousse (Plus) contains RECALDENT™ (CPP-ACP), a unique ingredient developed by The School of Dental Science, The University of Melbourne, Victoria, Australia. RCALDENT and RECALDENT Device are trademarks used under licence. GC Tooth Mousse (Plus) should not be used by people with milk protein allergies. If any allergic reaction occurs, this may indicate sensitivity to the benzoate preservatives, or to some other component of the product. In this event, discontinue use of the product and contact your physician.

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