REGENERATE™ ENAMEL SCIENCE WITH NR-5[™] TECHNOLOGY PROVEN TO FORM HYDROXYAPATITE. THE NATURAL MINERAL OF ENAMEL

NR-5™ technology – the first and only technology clinically proven to form new hydroxyapatite onto enamel surfaces.

The two key NR-5™ ingredients, calcium silicate and sodium phosphate, combine to form a fresh supply of enamel minerals.



Scanning electron micrograph of an in situ enamel block exposed to four weeks of brushing with REGENERATE[™] Enamel Science Advanced Toothpaste.¹⁸

PROVEN IDENTICAL CRYSTAL STRUCTURE AND CHEMICAL COMPOSITION TO ENAMEL

New hydroxyapatite has identical crystal structure and chemical composition to underlying enamel mineral¹⁸

This is confirmed through microscopy and spectroscopy studies, demonstrating the uniqueness of the patented NR-5™ technology.



Transmission electron microscopy and electron diffraction patterns showing the chemical composition and crystal symmetry of the underlying enamel and new hydroxyapatite.¹⁸

RECOMMEND REGENERATE™ ENAMEL SCIENCE

- mineral of enamel
- composition to enamel



*Based on an *in vitro* test measuring enamel surface microhardness after 7 days' use of Advanced Toothpaste and Advanced Serum and four daily acid challenges. **Based on an *in vitro* test measuring enamel surface microhardness after 3 days' combined use of Advanced Toothpaste and Advanced Enamel Serum.

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FIRST CHOICE FOR PATIENTS WITH SIGNS OF ENAMEL EROSION

✓ Two times greater protection from erosion*

✓ 82% enamel mineral regenerated after 3 days**

Proven to form hydroxyapatite, the natural

Proven identical crystal structure and chemical

Recommend twice-daily brushing with REGENERATE[™] Advanced Toothpaste and monthly application of Advanced Enamel Serum.

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REVERSE EARLY ENAMEL EROSION*

A ROOT CAUSE OF COMMON TOOTH PROBLEMS

TRANSPARENCY

YELLOWING





WEAKENED ENAMEL





SENSITIVITY

82% ENAMEL MINERAL REGENERATED AFTER 3 DAYS**



2 2 2 2 2 2 REGENERATE

*Acts on early invisible stages of enamel erosion. Helps to regenerate enamel by restoring its mineral content and microhardness with regular use. Clinically prove *Based on an *in vitro* test measuring enamel surface microhardness after 3 days' ombined use of Advanced Toothpaste and Advanced Enamel Serur



THE CONSEQUENCES OF ENAMEL EROSION CAN BE SEVERE

1 in 2 adults have signs of enamel erosion^{1*} and the prevalence is increasing.^{2,3}

Enamel erosion is caused by exposure to non-bacterial acids over time,⁴ particularly from consuming acidic foods and drinks.⁵ Erosion is progressive, with serious consequences that can significantly affect patients' quality of life.^{1,6} These can include transparency, yellowing, changes in tooth shape and sensitivity.4,6-11



Transparency is one of the first visible signs of erosion caused by enamel thinning and is most prominent on the incisal edges of anterior teeth.4



Yellowing and discolouration of the teeth results from progressive enamel loss exposing the underlying dentine, and the absorption of coloured compounds from food and drink.^{4,6,12,13}



Changes in tooth shape result from advanced enamel erosion, and can include chipping of the incisal edges and potential loss of function, leading to a loss of vertical dimension and shortening of the maxillary incisors.^{4,6}



Sensitivity is a result of enamel loss and the exposure of dentinal tubules, which becomes more severe as erosion progresses.^{4,6-11} Up to two-thirds of adults with enamel erosion may experience sensitivity.¹¹



"The first sign of enamel loss is transparency, which is more evident on the incisal edges of the anterior teeth. As the process goes on, dentine becomes affected leading to yellowing and sensitivity, which has a significant impact on quality of life."

Professor Marilia Buzalaf, University of São Paulo, Brazil

AVOID THE CONSEQUENCES OF ENAMEL EROSION BY EARLY DIAGNOSIS

Enamel erosion is commonly undiagnosed. Yet early diagnosis may help to prevent the progression of erosion and therefore avoid the consequences.¹⁴

In the clinic, there is an opportunity to identify at-risk patients and implement a prevention strategy, incorporating regular monitoring and lifestyle advice.²



The Basic Erosive Wear Examination (BEWE) Index is a four-point scale (0-3) that allows dental practitioners to assess tooth wear.¹⁵



"It is really important to start the preventive regime" to make sure enamel erosion doesn't get any worse. We developed the BEWE specifically for dentists to assess enamel erosion at their chairside."

Professor David Bartlett, Kings College London, UK

REGENERATE[™] ENAMEL SCIENCE WITH NR-5™ TECHNOLOGY

PROVEN SUPERIOR PROTECTION AGAINST ENAMEL EROSION

Two times greater protection from erosion than a fluoride-only toothpaste^{16*}

After 7 days' use and frequent acid challenges, the REGENERATE™ Enamel Science system showed significantly less reduction in enamel microhardness than a fluoride-only toothpaste.¹⁶



In vitro study measuring reduction in enamel surface microhardness from baseline after 7 days' application of REGENERATE[™] Enamel Science or a fluoride-only toothpaste.¹⁶

PROVEN TO REVERSE EARLY ENAMEL EROSION

82% of enamel is remineralised after 3 days^{17**}

The REGENERATE™ Enamel Science system resulted in significant recovery of enamel hardness after 3 days.¹⁷



In vitro study measuring remineralisation of acid-softened enamel samples using **REGENERATE™** Enamel Science Advanced Toothpaste and Advanced Enamel Serum.¹¹

*Based on an *in vitro* test measuring enamel surface microhardness after 7 days' use of Advanced Toothpaste and Advanced Serum and four daily acid challenges.

**Based on an *in vitro* test measuring enamel surface microhardness after 3 days' combined use of Advanced Toothpaste and Advanced Enamel Serun





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