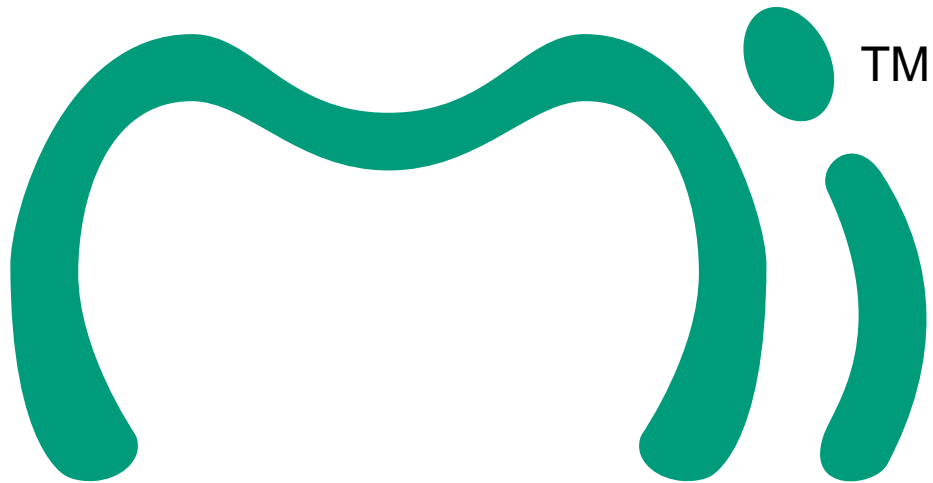


What is MI ?

MINIMUM
INTERVENTION



MI is your passport to the future !!

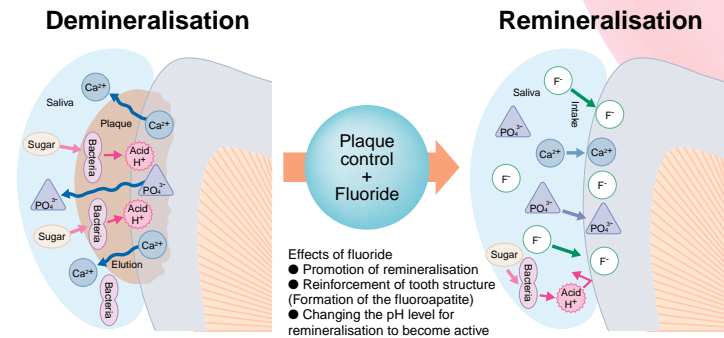
– With the progress in understanding the caries process, the MI Concept has evolved as a proposal for dentistry in the 21st century –

MI (an abbreviation for Minimum Intervention dentistry), this concept has been created to allow new thinking and a new approach to dentistry where restoration of a tooth becomes the last treatment decision rather than first consideration as at present. It provides a practical approach to caries preventive measures based on the notion of "demineralisation and remineralisation" in a micro phase in order to retain healthy teeth.

The caries risk is identified in the first stage of MI. In the next stage, preventive dentistry such as proper oral hygiene and the use of fluoride toothpaste and / or fluoride rinses to prevent caries. Finally restoration or repair of dental caries. Here we recommend removing only the active caries (infected tooth structure) where remineralisation is not expected. Then remove the minimum amount of sound tooth structure as possible. Restoration is completed with an adhesive fluoride releasing material as an integral part of the total procedure.

"Prevention of caries" and "removal of the smallest amount of decayed tooth structure" have always been the goals of dentistry. We believe that the MI concept fits into the ideal of the "80/20 Activities" promoted by Japan Dental Association (80/20 means that 80-year-old people should still retain at least 20 natural teeth).

As we enter the 21st century, GC CORPORATION is eager to contribute to the improvement of dental health for all people around the world by providing the techniques, materials, instruments, equipment and information in each of the three areas of the MI concept: 1) identification of caries risk, 2) prevention of caries, and 3) control of caries.



Bacteria absorb residual sugar in the mouth, discharging acid (H⁺). This acid displaces calcium ions (Ca²⁺) and phosphate ions (PO₄³⁻) from tooth structure, causing demineralisation of the tooth.

Thanks to the buffer action of saliva, the intraoral environment turns from being acid to neutral. The displaced calcium and phosphate ions are taken in beneath the surface of the enamel, and the demineralised part is recrystallised, that is, remineralised. If fluoride ions (F⁻) are present in saliva, it is expected that remineralisation of tooth structure will be stimulated and its acid resistance will be increased by the formation of the fluorapatite.

Cariology

Identify

"Identify" means "to diagnose." With the MI concept, it means identify the caries risk in each individual patient as a first step, thus making the patient more aware of dental health through education, and where applicable preparing a preventive/treatment plan. Identification includes the following:

- Evaluation of saliva
- Evaluation of caries activity
- Examination of the amount of saliva and salivary buffer ability
- Confirmation of the morphology and dentition
- Understanding the patient's current health, diet and giving appropriate guidance



Prevention

"Prevention" means "to prevent." For the MI concept, this means education and practical oral hygiene guidance, promoting measures to halt the progress of caries and actively promote remineralisation of tooth structure.

- Prevention includes the following:
- Removal of plaque by brushing
 - Promotion of remineralisation using fluoride
 - Use of fluoride-releasing protection materials

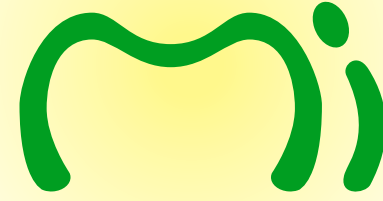


Plaque control



Fissure protection with GC Fuji III

MINIMUM INTERVENTION



Control

"Control" means "treatment of caries and maintenance of the restored tooth."

With the MI concept, only the active caries area is removed (where remineralisation is not possible.) Restoration is completed using an adhesive fluoride-releasing material as part of the total restoration. After treatment, patients are asked to revisit periodically to reduce the possibility of secondary caries by PTC (Professional Tooth Cleaning) and application of fluoride. Control includes the following:

- Restoration of the tooth with a glass-ionomer
- Restoration with a glass-ionomer base and a fluoride-releasing composite resin
- Maintenance of the restored tooth by PTC and fluoride application



Before treatment



Removal of active caries



Immediately after restoration with Fuji II LC



One year after restoration

Dr. Hisanori Komatsu

Dr. Ko Himoura

Worldwide dental trends with Minimum Intervention

International Dental Journal (2000) 50, 1-12

Minimal intervention dentistry – a review*

FDI Commission Project 1-97

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The concept of minimal intervention dentistry has evolved as a consequence of our increased understanding of the caries process and the development of adhesive restorative materials. It is now recognised that demineralised but noncavitated enamel and dentine can be "healed", and that the surgical approach to the treatment of a caries lesion along with "extension for prevention" as proposed by G.V. Black is no longer tenable. This paper gives an overview of the concepts of minimal intervention dentistry, describes suggested techniques for a minimally invasive operative approach, and reviews clinical studies which have been carried out in this area.

For most of the twentieth century the profession has used the cavity classification designed by G.V. Black¹ whereby caries lesions were treated by a surgical approach requiring the removal of diseased portions of the tooth and extension to areas which were presumed to be caries resistant. The reasons for this included a lack of understanding of the caries process, in particular the potential for

Related Products for Minimum Intervention Dentistry



Home Care Dental Plaque Disclosing Gel
DENTAL PLAQUE DISCLOSING GEL



In Vitro Test for pH & Saliva Buffering Capacity
SALIVA-CHECK BUFFER



Professional Tooth Cleaning Paste with fluoride (for preliminary / final polishing)
P.T.C. PASTE



New MI Interproximal Brush
INTERPROXIMAL TOOTH CLEANING BRUSH



Topical creme with bio-available calcium and phosphate
GC TOOTH MOUSSE



Orthodontic/Interproximal Toothbrush Ideal for Cleaning Around & Between Orthodontic Brackets & Bands
ORTHOPROX



Light-cured Reinforced Glass Ionomer Dentin/Enamel Bonding Agent
GC Fuji BOND LC



Glass Ionomer Fissure Protection Material
GC Fuji III



Light-cured Reinforced Glass Ionomer Restorative
GC Fuji II LC CAPSULE



High strength Posterior Glass Ionomer Restorative
GC Fuji IX_{GP} FAST



High strength Posterior Glass Ionomer Restorative
GC Fuji IX_{GP} FAST



Light cured Composite Restorative Units & Syringes
GRADIA DIRECT

Note : Some of the above products may not be available in your areas.

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