



## Part 3 - MI Restore and MI Recall: Maintain oral health & Maximize tooth structure

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The **Minimum Intervention (MI)** concept is well described in the literature and summarizes the clinical rationale for the preventive and cause-related approach in cariology.

The aim of the Pan-European group of clinical academics and general practitioners - the **GC Europe MI Advisory Board** - was created in order to present an evidence-based treatment approach for clinical practice: Minimum Intervention Treatment Plan (MITP).

The **RESTORE** part is a relevant part of the process.

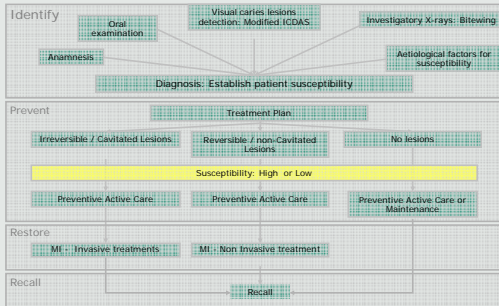


Figure 1: The Minimum Intervention Treatment Plan flow chart



### 1. MI Restore

MI Restore presents techniques for conservation of tooth structure **also when restorations have to be placed**. Distinctions are made between **non-invasive and invasive techniques**, and among several materials.

Figure 2: MI Treatment Plan Framework



Figure 3: Iatrogenic damages on enamel surface after removal of orthodontic disposal: non-invasive treatment with application of CPP-ACP (Recaldent, Tooth Mousse®)

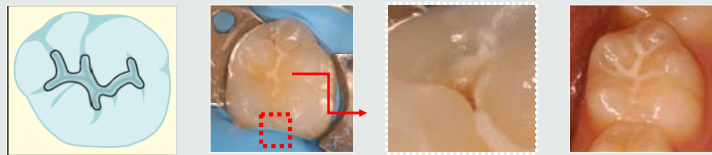


Figure 4: Secondary decay under an old glass ionomer sealant. The preferred technique for restoration would be to clean and reseal the tooth surface area using the existing GIC base.



Figure 5: Mesial lesion on 1st Upper Molar. In this case, a minimal invasive cavity preparation was performed, that includes only the proximal surface. An adhesive restorative technique was used with composite material



Figure 6: distal lesion on 2 inferior Pre-Molar. In this case, a minimal invasive cavity preparation was performed, tunnel technique, that includes only the proximal surface. An adhesive restorative technique was used with a Glass-ionomer. Material.

Table 2: Different Restorative options include Non-Invasive and Invasive techniques

Non invasive treatments	"MI oriented" invasive treatments
<b>Remineralization products</b> <ul style="list-style-type: none"> <li>•Fluoride Gels</li> <li>•Fluoride Varnishes</li> <li>•High Fluoride (<math>\geq 1500</math> ppm) toothpastes</li> <li>•RECALDENT® CPP-ACP (GC Tooth Mousse)</li> <li>•Fluoride + RECALDENT® (MI Paste Plus)</li> </ul>	<b>Temporary or "mid-term" restorations</b> <ul style="list-style-type: none"> <li>•High-viscosity glass ionomer cements (Fuji IX)</li> <li>•Resin modified GIC</li> </ul>
<b>Comfort Products</b> <ul style="list-style-type: none"> <li>•Dry Mouth Gel</li> </ul>	<b>Longterm restorations</b> <ul style="list-style-type: none"> <li>•EQUIA®</li> <li>•Resin modified GIC</li> <li>•Resin composites</li> </ul>

Adhesive materials are nowadays available for all indications, but recently developed high viscosity GICs can strongly compete also in the field of **long term restorations**.



Figure 7: Due to the evidence-based properties of strength and high wear resistance of the selected material (Fuji IX Extra & G-Coat plus, packaged in the EQUIA® system, GC Ltd, Japan) this reconstruction is intended to be a long-term restoration.

### 2. MI Recall program

Despite the lack of scientific evidence regarding optimal recall intervals, there is a need for scheduling recall period according to the patient's susceptibility, easily detectable through the **MITP flowchart**.

Table 2: MITP consensus on the dental recall frequency customized according to the patient's susceptibility and the presence of carious lesions at baseline and follow-up visits.

Identify at baseline or follow-ups	Presence of carious lesion	Cavitated (irreversible)	Non cavitated (Reversible)		No Lesion	
	Susceptibility	High & Low	High	Low	High	Low
<b>Recall frequency in months</b>		<b>2-6</b>	<b>3-6</b>	<b>6</b>	<b>6-12</b>	<b>12-18</b>



Figure 6: Bitewings are executed in a low susceptible patient at regular interval in order to ensure that the caries risk is under control. In this case, radiographs do not reveal caries progression after 3 years.

Bibliography Restore 1) Mount, G.J. and H. Ngo. *Quint Int*, 2000 2) Marinho, V.C., et al., *Cochrane Database Syst Rev*, 2003 3) Reynolds EC., *J Dent Res* 1997 4) Ahoyuo-Saloranta, A., et al., *Cochrane Database Syst Rev*, 2004 5) Beauchamp, J., et al., *J Am Dent Assoc*, 2008 6) Bader, J.D. and D.A. Shugars., 2006. 7) Reynolds EC., et al., *J Dent Res*, 1995 8) Fejerskov, O., *Caries Res*, 2004  
Bibliography Recall 1) Beirne P., et al. *Cochrane database Syst Rev* 2007 2) Davenport CF., et al., *British Dent J* 2003 3) NICE. *Dental recall*. National Institute for Clinical Excellence, 2004 4) Sheiham A., *Lancet*, 1977



Treatment Plan

By GC Europe, MI Advisory Board