

## A 15-Minute Direct Class II Composite Technique: Supraperingival Restorative Principles

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The direct Class II composite restoration is one of the most common restorative procedures in dentistry. Unfortunately, it continues to be a complicated, frustrating, and often unsuccessful procedure for many clinicians. Recently, this became even more obvious when I heard a trainer encouraging new in-office CAD/CAM users to do *indirect* Class II inlays as a substitute for *direct* Class II composite restorations. The argument was that, because direct Class II composites are so unpredictable and complicated, it would be easier and better to do indirect Class II in-office CAD/CAM restorations. During the break, most of the dentists whom I spoke with were in immediate agreement with this rationale and were planning to follow the trainer's advice in their practices.

Every year, I lecture at a variety of continuing education events for many doctors, and, yes, the Class II direct composite restoration continues to be mentioned as a source of irritation and dissatisfaction. With frequent postoperative sensitivity, recurrent caries, the length of time these procedures take, and the challenges in creating ideal interproximal contacts, these restorations can indeed be a source of frustration.

When comparing CAD/CAM to minimally invasive supraperingival direct Class II treatment options, there are several things to consider. The time it takes to prepare and then take a digital impression, mill, and cement an indirect Class II restoration is considerably longer than a direct composite alternative. Establishing proper draw for the CAD/CAM restoration requires additional healthy tooth structure to be removed (Figure 1), potentially having unhealthy negative consequences for the pulp<sup>1</sup> and the periodontium.<sup>2,3</sup> The more tooth the clinician cuts away today leaves less tooth structure available (if needed) in the future, and, if/when the restoration fails, we often have to move into an even more aggressive restorative option. CAD/CAM users are also encouraged to create gingival clearance to permit good scanning and drop deeper subgingival margins. Lastly, it is inaccurate to assume that an indirect restoration will outperform a direct one: As with normal size Class II restorations, direct restorations will likely be as or more durable than indirect ones.<sup>4</sup>



**Figure 1.** A traditional indirect inlay preparation with tapered walls, requiring approximately 3 times more tooth structure



**Figure 2.** Injecting one-third carpule below the muco-gingival line.