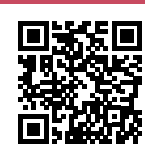


# Tissue integration begins HERE

Watch the video  
[bit.ly/mucointegration](https://bit.ly/mucointegration)

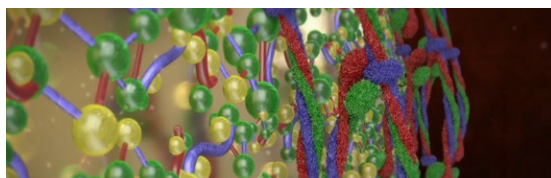
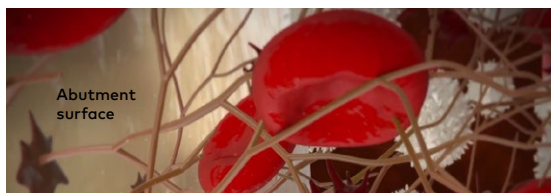
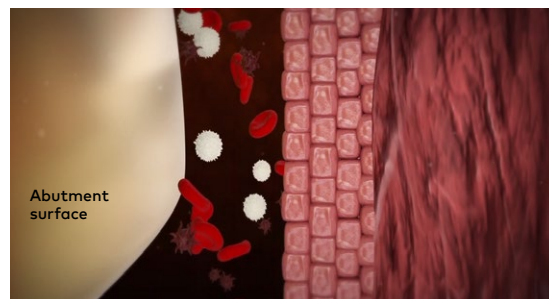


## The Mucointegration™ process

A TiUltra™ implant is placed, and a Xeal™ abutment, either a Multi-unit or an On1™ Base, is seated on top.

The surface of Xeal has a smooth, non-porous, nanostructured anodized surface.<sup>1</sup> This surface is designed to promote soft-tissue attachment through its enhanced surface chemistry and specific surface structure. This is achieved at a very specific oxide thickness. By appearance, this surface looks golden.

The nanostructured oxide layer (golden hue) is preserved by the protective layer, which is composed of sodium dihydrogen phosphate and magnesium chloride. This layer protects from hydrocarbon contamination and preserves hydroxyl groups.<sup>1</sup>



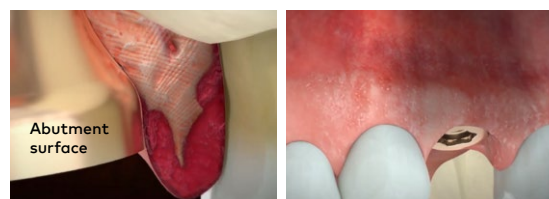
Once the protective layer is dissolved upon contact with liquids such as blood or saliva, the healing process begins. Red blood cells, lymphocytes, inactive platelets, active platelets, and keratinocytes all migrate to the wound. The hydroxyl groups act as adhesion points for these proteins and cells, increasing tissue affinity.

Because of the advanced surface chemistry, this increases **thrombogenicity** and the formation of a fibrinogen network. Stem cells begin populating the area and the soft tissue attaches to the abutment surface.

The soft tissue contact can act as a barrier against oral microorganisms, protecting the implant and underlying bone.

**Four times fewer** cultivable bacteria were found at 6 months in the biofilms extracted from the test abutments compared with the control abutments.<sup>2</sup>

The Xeal surface demonstrates **statistically significant increase** in soft tissue height compared to machined abutments.<sup>2</sup>



1. Milleret V, et al. Clin Implant Dent Relat Res 2019;21:e15–e24.  
2. Hall, et. al. A randomized, controlled, clinical study on a new titanium oxide abutment surface for improved healing and soft tissue health. Clin Implant Dent Relat Res. 2019 Mar; 21 Suppl 1:55-68. Doi: 10.1111/cid.12749. Epub 2019 Mar 12.

