I. Osseodensification and the Densah® Bur Overview

The Densah® Bur technology is based on a novel biomechanical bone preparation technique called “osseodensification.” Unlike traditional dental drilling techniques, osseodensification does not excavate bone tissue. Rather, bone tissue is simultaneously compacted and auto-grafted in outwardly expanding directions from the osteotomy, somewhat akin to a traditional hammered osteotome but without the trauma and other limitations. When a Densah® Bur is rotated at high speed in a reversed, non-cutting direction with steady external irrigation, a strong and dense layer of bone tissue is formed along the walls and base of the osteotomy. Dense compacted bone tissue produces stronger purchase for your favorite dental implant and may facilitate faster healing.

A biomechanical as well as histological validation study of the osseodensification technology and the Densah® Bur was performed by the Experimental Biomechanics Laboratory at Lawrence Technological University in Southfield, Michigan, in 2013–2014. Study concluded that, in porcine tibia, osseodensification increases primary stability and creates a densification crust around the preparation site by compacting and autografting bone along the entire depth of the hole.

Click link to view PDF: www.versah.com/ltu
OSSEODENSIFICATION
Hydrodynamic Bone Preparation

1, 2, 3, 4
Compaction Autografting / Condensation
Maintaining Bone Bulk Results In Higher BIC

5, 6, 7
Enhance Bone Density
Accelerates Bone Healing

8, 9, 10
Increase Residual Strain
Enhances Osteogenic Activity Through Mechanobiology

11, 12, 13
Increase Implant Stability
Higher Insertion Torque & ISQ Reduces Micromotion

NOTE: The references cited illustrate general principles of bone Biomechanics and implant treatment and are not specific to the Densah® Bur.