Groovy Implants

The Nobel Biocare groovy implants incorporate a groove at the implant thread along the entire length of the intraosseous portion of the implant. Histomorphometric analyses in rabbit tibia and femur bone have revealed an affinity for bone formation within and along the groove and have shown that bone formation occurs more often within the groove than on other parts of the implant\(^1\); the observed preferential bone growth along the groove provides evidence of its osseoconductive properties. Removal torque analyses in rabbit tibia have shown as much as 30\% higher values for implants with a groove at the thread compared to control implants without a groove\(^1\).

Nobel Biocare has received FDA clearance to claim faster bone formation within the groove resulting in faster integration of the implant and a mechanical interlock, leading to increased stability compared to implants without the groove.

Clinical data on NobelSpeedy™ implants in Immediate Function™ \(^3\) placed at periodontally compromised\(^3\) and infected sites\(^4\) has shown good clinical outcome with respect to stability\(^4,5\). Tapered groovy implant system used in suboptimal clinical conditions has been further discussed\(^6\).

At present, Nobel Biocare is sponsoring two clinical pilot studies and one multicenter study on groovy implants\(^7-9\).

References

7. Pilot study evaluating a modified Bränemark System MkIII implant. Ongoing clinical study in one center. Clinical Research Department, Nobel Biocare AB.
8. Pilot study evaluating a modified ReplaceSelect Tapered implant. Ongoing clinical study in one center. Clinical Research Department, Nobel Biocare AB.
9. Multicenter study evaluating the NobelReplace Tapered Groovy Implant. Ongoing clinical study in 8 centers. Clinical Research Department, Nobel Biocare AB.