

## Induced Bone Tissue Temperature in Drilling Procedures: A Comparative Laboratory Study with and without Lubrication

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**Abstract :** In orthopedic surgery there are various situations in which the surgeon needs to implement methods of cutting and drilling the bone. With this type of procedure the generated friction leads to a localized increase in temperature, which may lead to the bone necrosis. Recognizing the importance of studying this phenomenon, an experimental evaluation of the temperatures developed during the procedure of drilling bone has been done. Additionally the influence of the use of the procedure with / without additional lubrication during drilling of bone has also been done. The obtained results are presented and discussed and suggests an advantage in using additional lubrication as a way to minimize the appearance of bone tissue necrosis during bone drilling procedures.

**Keywords :** bone necrosis, bone drilling, thermography, surgery

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