

## Chronic Pain after Total Knee Replacement

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An estimated 500 million working days are lost in Europe each year due to chronic pain, of which 1 million workdays are lost in Denmark. Higher demand for more efficient drugs and medical devices for pain treatment thus continue to drive the pain management market. Therefore, technology enabling an improved diagnosis and as a result a more efficient and personalized treatment of chronic pain patients will have great perspectives.

It seems evident that preoperative sensitization of the nervous system holds prognostic information to if patients develop chronic postoperative pain. This thesis focused on the prevalence of chronic postoperative pain after total knee replacement (TKR) surgery in knee osteoarthritis (KOA) patients and to subgroup KOA patients using quantitative sensory testing (QST).

The work presented in this thesis highlights the severity of chronic pain after primary total knee replacement. While most patients will have a pain free postoperative recovery, this thesis showed that approx. 10-50% of patients, depending on the pain severity, will experience pain one year after surgery. As shown in other patient groups e.g. patients undergoing thoracotomy, preoperative sensitization of the nervous system can be linked to chronic postoperative pain. This thesis focused on preoperative subgrouping of patients to minimize the risk of development of chronic postoperative pain. The work presented in this thesis, found associations between preoperative sensitization and postoperative chronic pain in patients with KOA before TKR. Patients who develop chronic postoperative pain after primary TKR surgery have a high risk of poor outcome after revision total knee replacement, why revision surgery should be performed with care.



Center for Sensory-Motor Interaction

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