

## Lumbopelvic Pain – Sensory and Motor Aspects

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When assessing a person suffering from low back- and pelvic girdle pain (lumbopelvic pain, LPP) in clinical practice it is considered important to do so within a bio-psychosocial framework. There is however, mixed evidence regarding the possible underlying cause of LPP (in pregnant and non-pregnant populations) where several biological and psychological factors have been suggested as the underlying driver of the condition.

In the current publication, a novel and reliable human in vivo experimental pain model is introduced which was used to investigate how and if pain from the lumbopelvic region changes the outcome of orthopedic tests which are commonly used clinically for diagnostic purposes. The outcome of two experimental pain studies was compared with the findings from a clinical population consisting of pregnant women where LPP is a common problem.

The results of the three studies indicate that pain alone affects the pain system to such an extent that the experimental and clinical findings were well comparable. Furthermore, it was shown that deep tissue hyperalgesia is a general finding in pregnancy but this was not related to any of the other measured variables. The pregnant women reported of problems with sleeping as well as poor emotional and cognitive health when compared with controls but these factors have all been associated with increased sensitivity of pain mechanisms. This may indicate that several factors, including biomechanical loading, cognitive and emotional problems as well as disturbed sleep may, in parallel, increase the sensitivity of the pain system via shared pathways.

Future studies should investigate this further as it provides neurobiological grounds for bio-psychosocial assessment of people suffering from chronic LPP. Furthermore, it is important to investigate whether increased pain sensitivity is a precursor for developing lumbopelvic pain.



Center for Sensory-Motor Interaction

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