Pre-test habituation improves the reliability of a handheld test of mechanical nociceptive threshold in dairy cows - DTU Orbit (30/12/2018)

Pre-test habituation improves the reliability of a handheld test of mechanical nociceptive threshold in dairy cows

Mechanical nociceptive threshold (MNT) testing has been used to investigate aspects of painful states in bovine claws. We investigated a handheld tool, where the applied stimulation force was monitored continuously relative to a pre-encoded based target force. The effect on MNT of two pre-testing habituation procedures was performed in two different experiments comprising a total of 88 sound Holsteins dairy cows kept either inside or outside their home environment. MNT testing was performed using five consecutive mechanical nociceptive stimulations per cow per test at a fixed pre-encoded target rate of 2.1 N/s. The habituation procedure performed in dairy cows kept in their home environment led to lowered intra-individual coefficient of variation of MNT (P < 0.001), increased MNT (P < 0.001) and decreased the discrepancy between applied and target force during stimulations (P < 0.001). Pre-test habituation improved the reliability of the handheld tool when used in dairy cows kept in their home environment.

General information
State: Published
Organisations: National Veterinary Institute, Section for Epidemiology, University of Copenhagen, Swedish University of Agricultural Sciences, Aarhus University, University of British Columbia
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Number of pages: 7
Pages: 189-195
Publication date: 2015
Peer-reviewed: Yes

Publication information
Journal: Research in Veterinary Science
Volume: 102
ISSN (Print): 0034-5288
Ratings:
BFI (2018): BFI-level 2
Web of Science (2018): Indexed yes
BFI (2017): BFI-level 2
Scopus rating (2017): CiteScore 1.82 SJR 0.593 SNIP 0.941
Web of Science (2017): Impact factor 1.616
Web of Science (2017): Indexed yes
BFI (2016): BFI-level 2
Scopus rating (2016): CiteScore 1.46 SJR 0.646 SNIP 0.779
Web of Science (2016): Impact factor 1.298
BFI (2015): BFI-level 2
Scopus rating (2015): CiteScore 1.57 SJR 0.774 SNIP 0.933
Web of Science (2015): Impact factor 1.504
Web of Science (2015): Indexed yes
BFI (2014): BFI-level 2
Scopus rating (2014): CiteScore 1.58 SJR 0.687 SNIP 0.887
Web of Science (2014): Impact factor 1.409
Web of Science (2014): Indexed yes
BFI (2013): BFI-level 2
Scopus rating (2013): CiteScore 1.62 SJR 0.691 SNIP 0.945
Web of Science (2013): Impact factor 1.511
ISI indexed (2013): ISI indexed yes
Web of Science (2013): Indexed yes
BFI (2012): BFI-level 2
Scopus rating (2012): CiteScore 1.63 SJR 0.633 SNIP 1.067
Web of Science (2012): Impact factor 1.774
ISI indexed (2012): ISI indexed yes
Web of Science (2012): Indexed yes
BFI (2011): BFI-level 2
Scopus rating (2011): CiteScore 1.65 SJR 0.726 SNIP 1.054