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Chiropractic &
Manual Therapies

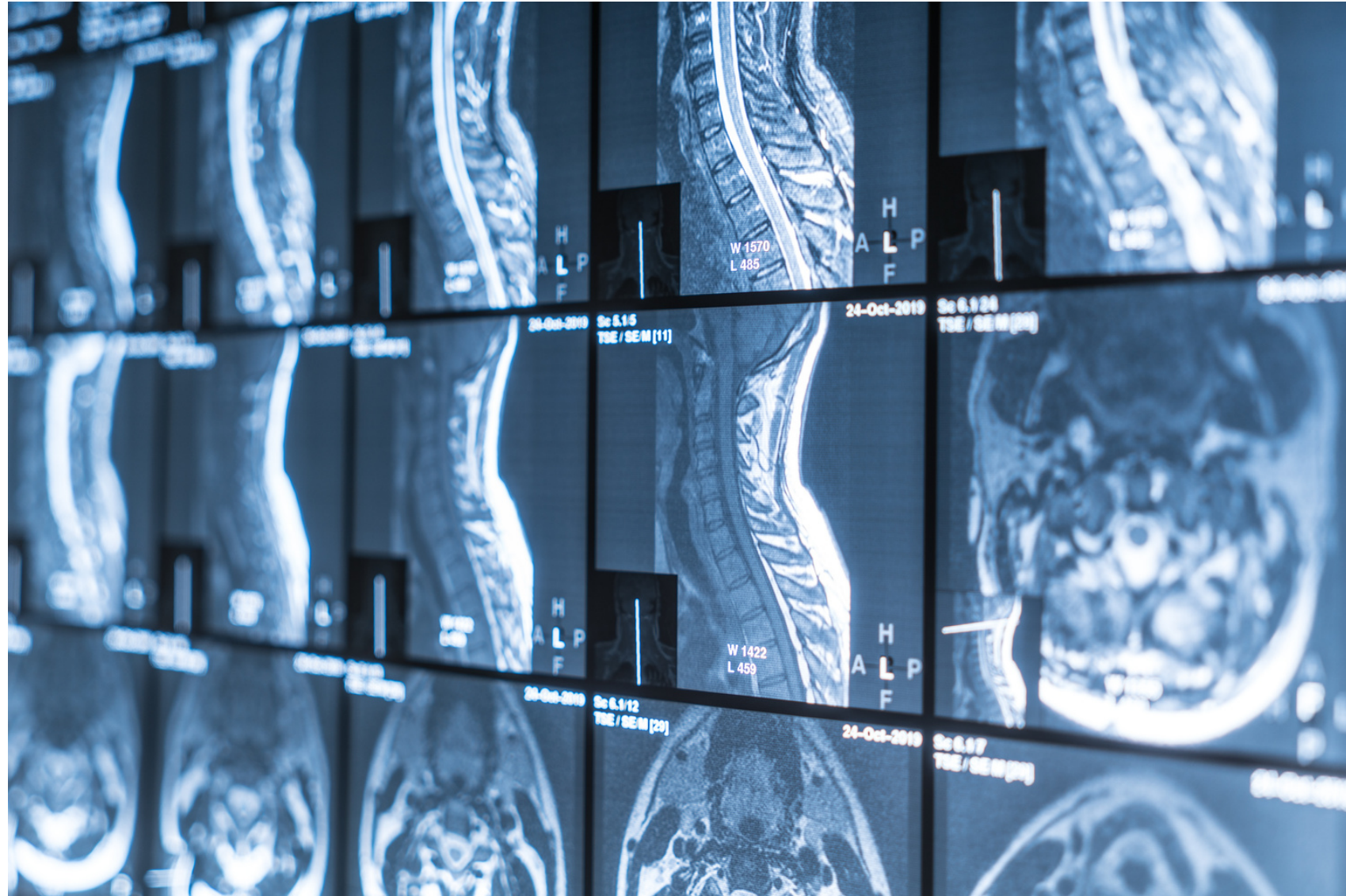
RESEARCH

Open Access

The association between cervical degenerative MRI findings and self-reported neck pain, disability and headache: a cross-sectional exploratory study

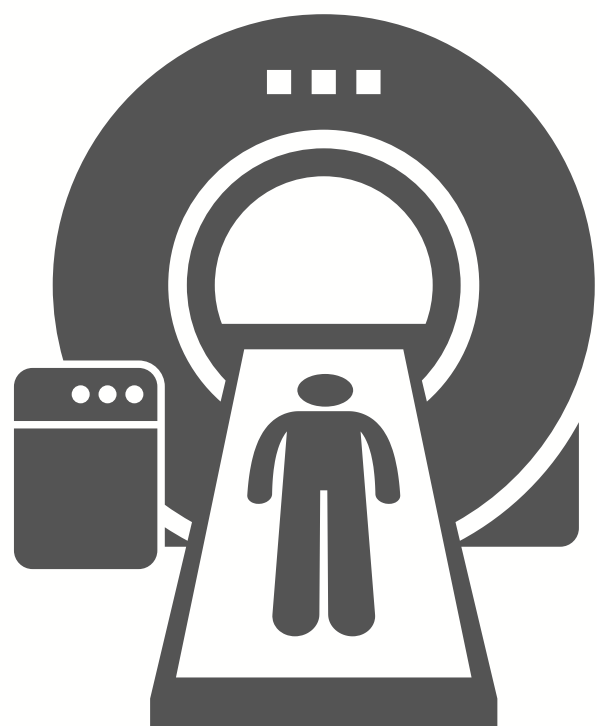


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Oppfølging 4 år etter baseline





NRS:

Nakkesmerter

Neck Pain Disability Index:

Nakkefunksjon

Hodepine

MR:

VESC (vertebral endplate signal changes (modic))

- benmargsødem og fettavlinger i vertebra

Skivedegenerasjon (høyde og signalintensitet)

Skivekontur (protrusjon, ekstrusjon, sekvestrering)

Fasettledd (benmargsødem og fettavlinger i beinmarg)

600 gjennomførte MR-undersøkelse
og svarte på spørreskjema



Degenerative
forandringer



Nakkesmerter

VESC (vertebral
endplate signal
changes (modic))



Nakkefunksjon

Ingen assosiasjon



Hodepine

Hva gjør resultatet overraskende?



Spine

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DIAGNOSTICS

OPEN

Association of Lumbar MRI Findings with Current and Future Back Pain in a Population-based Cohort Study

Richard Kasch, MD,^a Julia Truthmann, PhD,^b Mark J. Hancock, PhD,^c Christopher G. Maher, DM Markus Otto, PhD,^e Christopher Nell, MD,^e Niklas Reichwein,^a Robin Bülow, MD, MSc,^e Jean-François Chenot, MD, MPH,^b Andre Hofer, MD,^a Georgi Wassilew, MD,^a and Carsten Oliver Schmidt, PhD^f

AJNR

This information is current as of October 26, 2023.

Systematic Literature Review of Imaging Features of Spinal Degeneration in Asymptomatic Populations

W. Brinjikji, P.H. Luetmer, B. Comstock, B.W. Bresnahan, L.E. Chen, R.A. Deyo, S. Halabi, J.A. Turner, A.L. Avins, K. James, J.T. Wald, D.F. Kallmes and J.G. Jarvik

AJNR Am J Neuroradiol 2015, 36 (4) 811-816
doi: <https://doi.org/10.3174/ajnr.A4173>
<http://www.ajnr.org/content/36/4/811>

Table 2: Age-specific prevalence estimates of degenerative spine imaging findings in asymptomatic patients*

Imaging Finding	Age (yr)						
	20	30	40	50	60	70	80
Disk degeneration	37%	52%	68%	80%	88%	93%	96%
Disk signal loss	17%	33%	54%	73%	86%	94%	97%
Disk height loss	24%	34%	45%	56%	67%	76%	84%
Disk bulge	30%	40%	50%	60%	69%	77%	84%
Disk protrusion	29%	31%	33%	36%	38%	40%	43%
Annular fissure	19%	20%	22%	23%	25%	27%	29%
Facet degeneration	4%	9%	18%	32%	50%	69%	83%
Spondylolisthesis	3%	5%	8%	14%	23%	35%	50%

* Prevalence rates estimated with a generalized linear mixed-effects model for the age-specific prevalence estimate (binomial outcome) clustering on study and adjusting for the midpoint of each reported age interval of the study.

Kasch R, Truthmann J, Hancock MJ, Maher CG, Otto M, Nell C, Reichwein N, Bülow R, Chenot JF, Hofer A, Wassilew G, Schmidt CO. Association of Lumbar MRI Findings with Current and Future Back Pain in a Population-based Cohort Study. *Spine (Phila Pa 1976)*. 2022 Feb 1;47(3):201-211. doi: 10.1097/BRS.00000000000004198. PMID: 34405825

Brinjikji W, Luetmer PH, Comstock B, Bresnahan BW, Chen LE, Deyo RA, Halabi S, Turner JA, Avins AL, James K, Wald JT, Kallmes DF, Jarvik JG. Systematic literature review of imaging features of spinal degeneration in asymptomatic populations. *AJNR Am J Neuroradiol*. 2015 Apr;36(4):811-6. doi: 10.3174/ajnr.A4173. Epub 2014 Nov 27. PMID: 25430861; PMCID: PMC4464797.

Jensen RK, Dissing KB, Jensen TS, Clausen SH, Arnbak B. The association between cervical degenerative MRI findings and self-reported neck pain, disability and headache: a cross-sectional exploratory study. *Chiropr Man Therap*. 2023 Oct 11;31(1):45. doi: 10.1186/s12998-023-00517-w. PMID: 37821958; PMCID: PMC10568844.

Hva betyr dette for oss i praksis?



Tittel



Physiotherapy 121 (2023) 13–20

Physiotherapy

Effect of exercise on the inter-rectus distance in pregnant women with diastasis recti abdominis: an experimental longitudinal study



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Mål

Artikkelen har som mål å:

- Undersøke effekten av muskelkontraksjon i bekkenbunnsmusklatur og mageøvelser på inter-rektus distanse (IRD) sammenlignet med ingen kontraksjon
- Undersøke forskjeller i rektus diastase hos gravide kvinner i uke 27 og uke 37

Metode



Artikkelen er en eksperimentell longitudinell studie med gjentakende målinger gjort på deltakerne ved to tidspunkt: uke 27 og uke 37 i svangerskapet

Utfallsmål:

Forandring i IRD fra uke 27 til uke 37 under trening og i hvile målt i mm

Resultater

- 38 gravide kvinner inkludert; >18 år, mindre enn 27 uker gravid, en IRD større enn 2,8 cm (målt 2 cm både over/under navlen)
- Ultralyd for å måle IRD
- IRD viser til seperasjon av rectus abdominus langs linea alba, mens- DRA er en abnormal forstørret IRD
- Diastase recti abdominus (DRA) ble målt, samt evnen til å gjennomføre bekkenbunnsøvelser og mageøvelser korrekt

Resultater

- Deltakerne måtte holde de ulike øvelsene 3-5 sekunder mens de tok ultralydbilder av IRD

Table 1
Operational description of the exercises, including description of how a correct performance was ensured.

Exercise	Operational description	Assessment
PFM contraction	Position: Supine, knees hip-width apart and bent 90°, feet resting on plinth, head resting on a pillow, arms resting alongside the body Instruction: Squeeze muscles around all pelvic openings, lift up-wards and in-wards	Ultrasound imaging using a curved linear array transducer placed in the mid-sagittal plane immediately suprapubically observing the cranioventral displacement of the pelvic floor in a sagittal plane
Drawing-in	Position: Supine, knees hip-width apart and bent 90°, feet resting on plinth, head resting on a pillow, arms resting alongside the body Instruction: Inhale, and at end of exhalation the umbilicus is drawn down towards the spine, activating the transversus abdominis muscle	Ultrasound imaging of the Transversus abdominis muscle on the lateral abdominal wall at the level of the umbilicus. A correct performed exercise involved minimal activation of the adjacent abdominal muscles.
PFM + drawing-in	Position: Supine, knees hip-width apart and bent 90°, feet resting on plinth, head resting on a pillow, arms resting alongside the body Instruction: Contract the PFM first, and then add the drawing-in exercise	Observation that exercise was performed in accordance with operational description
Head lift	Position: Supine, knees hip-width apart and bent 90°, feet resting on plinth, head resting on a pillow, arms resting alongside the body Instruction: Lift and clear the head off the plinth. Shoulders are to stay on the plinth during the manoeuvre.	Observation that exercise was performed in accordance with operational description
Curl-up	Position: Supine, knees hip-width apart and bent 90° feet resting on plinth, head resting on a pillow, both hands behind head Instruction: Lift head and shoulders upwards until the shoulder blades clear the plinth	Observation that exercise was performed in accordance with operational description
Drawing-in + curl-up	Position: Supine, knees hip-width apart and bent 90°, feet resting on plinth, head resting on a pillow. Both hands behind head Instruction: Start with the drawing-in exercise, and then do a curl-up	Observation that exercise was performed in accordance with operational description
PFM + drawing-in + curl up	Position: Supine, knees hip-width apart and bent 90°, feet resting on plinth, head resting on a pillow Both hands behind head Instruction: Start with the PFM contraction, then add the drawing-in exercise, and then do a curl-up	Observation that exercise was performed in accordance with operational description
Diagonal curl-up left and right	Position: Supine, knees hip-width apart and bent 90°, feet resting on plinth, head resting on a pillow Instruction: Placed right arm behind the head, elbow pointing laterally. Keep hand under head and move the elbow towards the left hip, lifting head and clearing the right shoulder blade of the plinth. Repeat on other side.	Observation that exercise was performed in accordance with operational description

Abbreviations: PFM, Pelvic Floor Muscle.

Resultater

- Det var en økning av IRD ved bekkenbunns-sammentrekning, ved sammentrekning av mage (rectus abdominus) og ved av bekkenbunns og mage-sammentrekning
- Det var en reduksjon av IRD ved løft av hodet, ved en curl-up og ved en diagonal curl-up
- Det var høyere verdier på IRD over navlen sammenlignet med under navlen

Hva gjør resultatet overraskende?

- Momentan effekt av øvelser på IRD hos gravide
- IRD øker ved aktivering av bekkenbunn og transversus aktivering
- IRD minsker ved hodeløft, curl-up og diagonal curl-up -
- IRD viser ingen signifikant forskjell ved hvile

Hva betyr dette for oss i praksis

- Aktivering av bekkenbunn har ingen betydning for IRA, men fortsatt gode bevis på forebygging av inkontinens
- Vi kan råde kvinner å gjøre øvelser med rectus abdominus - vil ikke gi en større DRA; snarere tvert om