

Anything new in back pain for the 21st century?

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Conflict of Interest- real or potential

Mohan Radhakrishna



have no conflict of interest with the contents
of this presentation

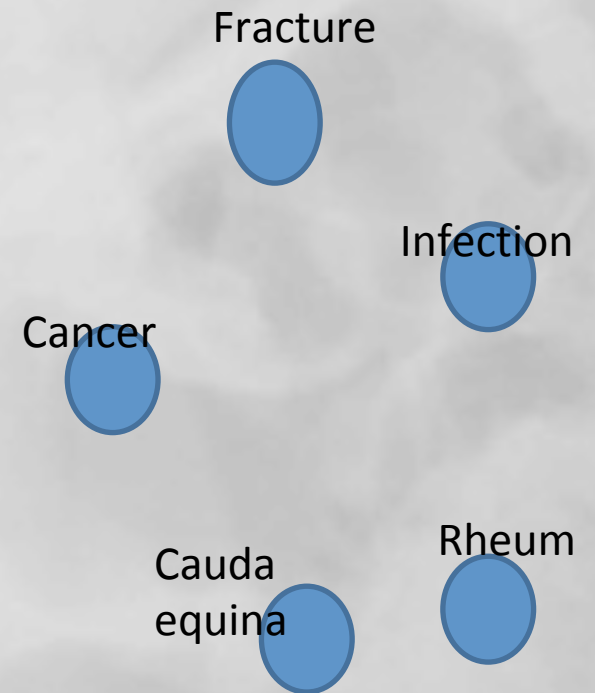
Objectives

- Name the most frequent cause of chronic LBP based on age of the patient
- Name three exercises that can be taught to patients with LBP
- Name new, up and coming non-surgical treatments for LBP





Non-specific LBP



IASP



Extra, extra, read all about it!

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A new kind of pain?

- Nociceptive
- Neuropathic
- Nociplastic?

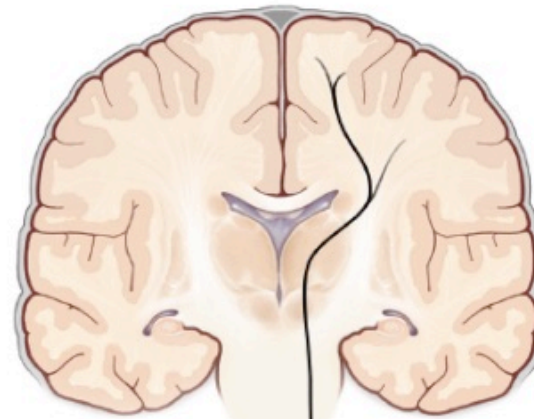
IASP definition

- Nociceptive pain:
- A third type of pain after nociceptive and neuropathic pain
- Thought to represent confluence of altered function on the periphery and CNS resulting in increased sensitivity

Lancet May
29, 2021

Features of nociplastic pain conditions

- Combined peripheral and central pain sensitisation
- Hyper-responsiveness to painful and non-painful sensory stimuli
- Associated features
 - Fatigue
 - Sleep disturbance
 - Cognitive disturbances
 - Hypersensitivity to environmental stimuli
 - Anxiety and depressed mood

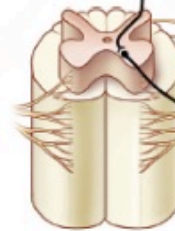


Supraspinal mechanisms

- Hyper-responsiveness to pain stimuli
- Hyperactivity and connectivity in and between brain regions involved in pain
- Decreased activity of brain regions involved in pain inhibition (ie, descending inhibitory pathways)
- Elevated cerebrospinal fluid substance P and glutamate concentrations, decreased GABAergic transmission
- Changes in the size and shape of grey and white matter regions involved in pain processing
- Glial cell activation

Spinal mechanisms

- Regional clustering and convergence of signals from different pain loci
- Spinal cord reorganisation
- Amplified spinal reflex transmission
- Diminished spinal inhibition
- Wind-up and temporal summation
- Glial cell activation



Peripheral features

- Minor local muscle pathology (eg, changes in pH, muscle fibre composition, and latent and active trigger points)
- Peripheral sensitisation (eg, expansion of receptive fields, elevated cytokine and chemokine concentrations)
- Hyperalgesia, dysesthesia, and allodynia
- Localised or diffuse tenderness, or both



Nociplastic LBP

- Imagine LBP + fibromyalgia construct
 - Eg fatigue, sleep disturbance, cognitive disturbance, anxiety-depression, hypersensitivity to environmental stimuli



**PARTY
LIKE IT'S**

~~1999~~ 2021

**Non-
specific
LBP**

Fracture



Infection



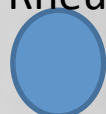
Cancer



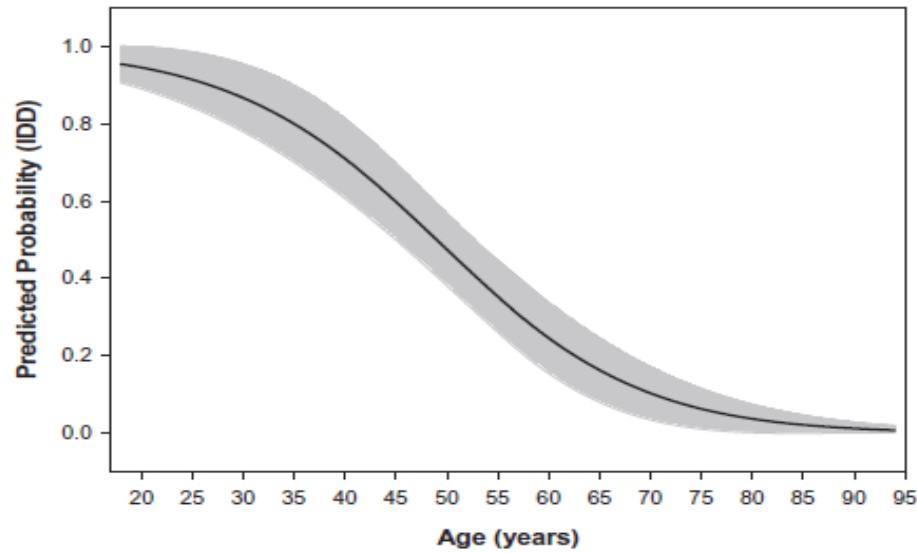
Cauda
equina



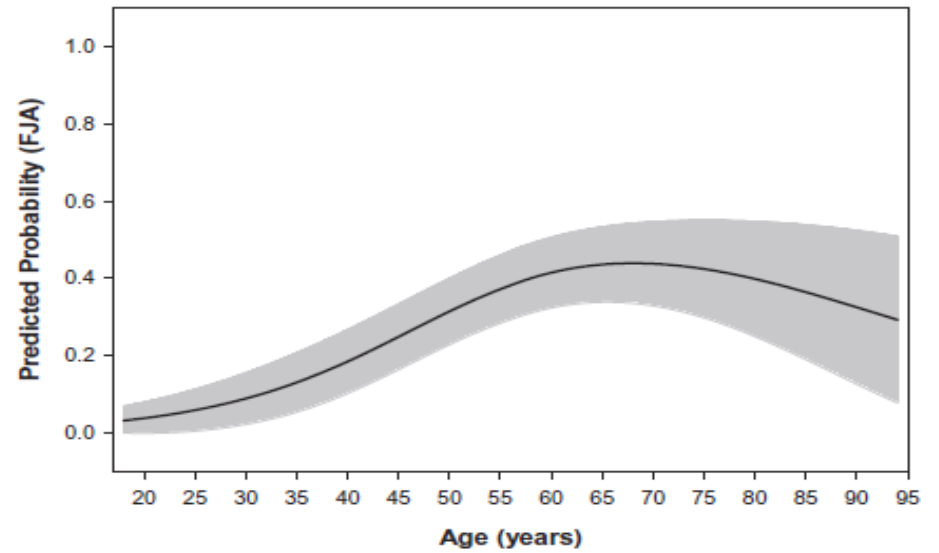
Rheum



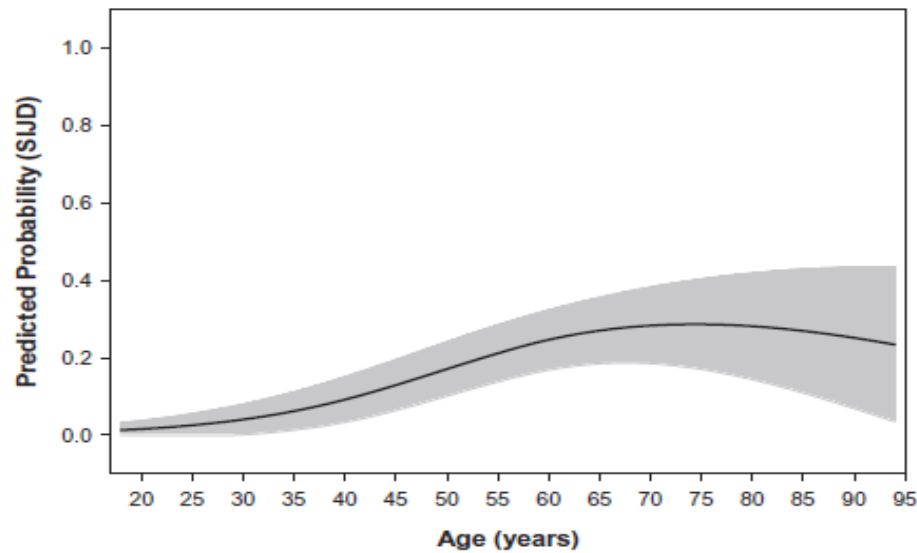
Predicted Probability of IDD versus Age (years)



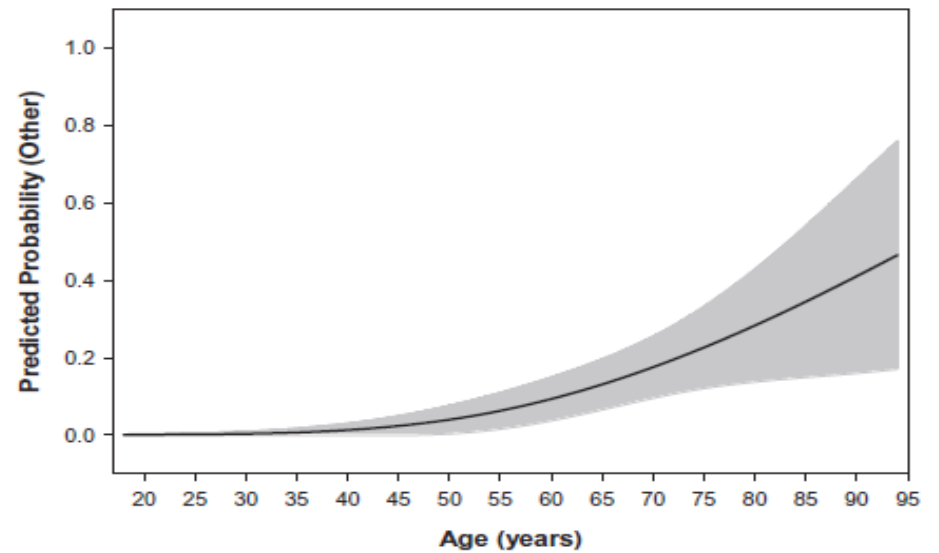
Predicted Probability of FJA versus Age (years)



Predicted Probability of SIJD versus Age (years)



Predicted Probability of Other Source versus Age (years)



Case 1

- 35 year old banker
- No PMHx
- LBP, no sciatica
- 8 years



Case 2

- 70 year old female with LBP
- Refers into buttocks and upper thighs
- X-ray shows DDD and arthritis





Case 3

- 60 year old male
- Right LBP
- Little radiation into his thigh
- Worse with ambulation

**THEY SAY DON'T TRY
THIS AT HOME...**

@minionslifequotes

**SO I'M GOING
TO GO TO MY
FRIENDS HOUSE
AND TRY IT.**



DespicableMeMinions.org

Exercises for LBP

- Squats
- Lunge
- Bird-Dog
- Fast walking





