@KWernliPhysio

MYTHBUSTING:

10 scientific facts about back pain

Boorloo (Perth) – 16th March 2024
Western Australian Rural Health Conference

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Empowered Beyond Pain Podcast – Research → Real-Life

Giving Back [RURAL EDITION]

Curtin University

West Coast Health and High Performance

Matilda Health – Endometriosis care in your pocket

WorH 2024 – Western Australian Rural Health Conference

Rural Health West

Acknowledgement of Country

I respectfully acknowledge the Whadjuk people, the traditional owners of the land on which we are learning today.






Your postcode is (sadly) a big determinant of your health.

Pain (as with most health conditions) disproportionately affects people in rural and remote areas.

Big part of the motivation to try and translate contemporary knowledge.

-ground

The most disabling health condition globally

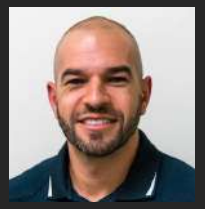
More costly than cancer and diabetes combined

Beliefs that the back is easy to harm and hard to heal.
Unhelpful belief that the spine is more vulnerable than the rest of the body

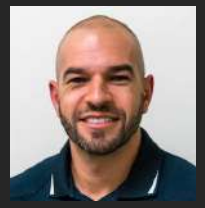
Vos et al. (2017) *The Lancet,* Darlow et al. (2015) *Spine*

Acknowledgements

Professor Peter O'Sullivan & Dr JP Caneiro – Co-hosts of podcast – Directors at Body Logic Physio

Co-authors of paper : *Back to Basics: 10 scientific facts every person should know about back pain*
Peter O'Sullivan, JP Caneiro, Kieran O'Sullivan, Ivan Lin, Samantha Bunzli, Mary O'Keeffe



PhD Supervisors:
A. Prof. Peter Kent, Prof. Peter O'Sullivan, Prof. Anne Smith, A. Prof. Amity Campbell




Curtin University

Caveats

Might challenge beliefs – a lot of this info is contrary to commonly held beliefs, but it is backed by science.

Knowledge is evolving.

This talk refers more to chronic low back pain (>3 months), and less to acute pain from a traumatic injury.

Back facts paper – the origins

Teamwork:

Peter B O'Sullivan[1,2], JP Caneiro[1,2], Kieran O'Sullivan[3,4], Ivan Lin[5], Samantha Bunzli[6], Kevin Wernli[1,2], Mary O'Keeffe[7]

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BJSM The Journal of Sport & Exercise Medicine

Back to basics: 10 facts every person should know about back pain

Peter B O'Sullivan [1, 2], JP Caneiro [1, 2], Kieran O'Sullivan [3, 4], Ivan Lin [5], Samantha Bunzli [6], Kevin Wernli [1, 2], Mary O'Keeffe [7]

Correspondence to Professor Peter B O'Sullivan, School of Physiotherapy and Exercise Science, Curtin University, Perth, WA 6102, Australia;

- ~90 people treated for low back pain.
- Common myths that kept tripping them up and keeping them in a cycle of pain, disability, depression.
- Many of these people saw large transformations.
- These were the common 'facts' ('closer to the truths') that helped them move beyond their pain.

Statistics from Altmetric.com

Picked up by **35** news outlets
Blogged by **2**
Tweeted by **1622**
On **63** Facebook pages
On **4** videos

415 readers on Mendeley

In the top 5% of all research outputs scored by Altmetric

Among the highest-scoring outputs from this source (#27 of 5,762)

THE LANCET RESTORE Trial: Kent et al., 2023

Back facts - infographic

- Co-created with input from patient voices
- Great as a patient handout

Links to these at end of slideshow

Back facts - videos

Main video

10 facts presented by people across the world.

- Patient advocates
- People who recovered or moved beyond their pain holding them back.

Stories behind the facts video

Selected 6 of those 10 people to share their recovery stories.

Links to these at end of slideshow

Back facts - podcast

Episode 4 –	Back facts and origin story with Prof Peter O'Sullivan and Dr JP Caneiro
Episode 5 –	Stories behind the back facts
Episode 11-20 –	Detailed discussions with authors, world-leading researchers, surgeons, and patient stories.

Links to these at end of slideshow

The 10 back facts – Number 1

MYTH: LBP is usually a serious medical condition.

The 10 back facts – Number 1

MYTH: LBP is usually a serious medical condition.

'If you're worried: have you had a significant injury, like a trauma or a sudden loading event? do you have a fever or other systemic illness?'

'If you get a scan, be reassured, you will have stuff on a scan'

'If its acute pain, be reassured it will get better within a couple of weeks if you do the right things'

'Keep moving, keep active, use a heat-pack, relax, gently get moving, have a positive mindset it will get better'

The 10 back facts – Number 2

MYTH: LBP will become persistent and deteriorate in later life.

FACT.

The 10 back facts – Number 2

MYTH: LBP will become persistent and deteriorate in later life.

'3 years older, closer to 80, and you feel much better… that goes against the idea that you're going to get worse with age…'

Permission to give some people the flick, have good social networks

The 10 back facts – Number 3

MYTH: Persistent back pain is always related to tissue damage.

FACT

The 10 back facts – Number 3

MYTH: Persistent back pain is always related to tissue damage.

'Persisting pain has much more to do with other factors not the actual pathology you might see on an image'

'Persisting pain often has much more to do with psychosocial factors… often turns on a lightbulb'

'Smoking, obesity, catastrophization, fear, and beliefs…talking about these things can start a conversation'

The 10 back facts – Number 4

MYTH: Scans are always needed to detect the cause of LBP.

FACT 4: S

The 10 back facts – Number 4

MYTH: Scans are always needed to detect the cause of LBP.

'Pain wasn't coming from damage, and the scan wasn't really telling the truth'

The 10 back facts – Number 4

MYTH: Scans are always needed to detect the cause of LBP.

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

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%

[a] 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.

The 10 back facts – Number 5

MYTH: Pain related to exercise and movement is always a warning that harm is being done to the spine and a signal to stop or modify activity.

FA

The 10 back facts – Number 5

MYTH: Pain related to exercise and movement is always a warning that harm is being done to the spine and a signal to stop or modify activity.

'Before if I moved and there was pain I would immediately stop'

The new mindset was 'oh the pain is still there but you can still move'

The 10 back facts – Number 5

MYTH: Pain related to exercise and movement is always a warning that harm is being done to the spine and a signal to stop or modify activity.

'All pain starts in your brain'

'Calm myself down'

'Now we know a brain repairs itself, when know the brain is plastic'

The 10 back facts – Number 6

MYTH: LBP is caused by poor posture when sitting, standing and lifting.

The 10 back facts – Number 6

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The 10 back facts – Number 6

MYTH: LBP is caused by poor posture when sitting, standing and lifting.

'Having that stereotypical good posture and keeping that upright spine all the time stiffened everything up'

'We are conditioned from a young age that backs are fragile and that we've got to protect them by keeping them straight, especially when lifting or loading'

The 10 back facts – Number 7

MYTH: Back pain is caused by weak 'core' muscles and and having a strong core protects against future back pain.

FA

The 10 back facts – Number 7

MYTH: Back pain is caused by weak 'core' muscles and and having a strong core protects against future back pain.

Gave myself permission to just stop doing that unhelpful (over) protective guarding

'As the pain reduced, my levels of concern and distress reduced and my capacity to function improved'

The 10 back facts – Number 8

MYTH: Repeated spinal loading results in 'wear and tear' and tissue damage.

FA

The 10 back facts – Number 8

MYTH: Repeated spinal loading results in 'wear and tear' and tissue damage.

- Poor sleep, being sedentary, stress, loneliness etc. have a common output…
  low-grade inflammation.

- Repetitive, healthy use of a structure is good for it… **it gets stronger** (this may be the case even if there is pain)

- A **biopsychosocial** approach encompasses all aspects of a person who has pain.
  '*Beliefs drive behaviour*'

The 10 back facts – Number 9

MYTH: Pain flare-ups are a sign of tissue damage and require rest

The 10 back facts – Number 9

MYTH: Pain flare-ups are a sign of tissue damage and require rest

Scary

Slipping back into old ways
(beliefs, worries, protective movement patterns, avoiding painful activities)

The 10 back facts – Number 9

MYTH: Pain flare-ups are a sign of tissue damage and require rest

We have a population that is conditioned to think if '*it hurts we have to stop, there is something damaged*'

'I've twinged my back, but its not even a thing'

With a twinge I exercise the area

Move the painful bit in a repetitive gentle way

The 10 back facts – Number 10

MYTH: Treatments such as strong medications, injections and surgery are effective, and necessary, to treat LBP.

FA

The 10 back facts – Number 10

MYTH: Treatments such as strong medications, injections and surgery are effective, and necessary, to treat LBP.

'Why would you do a surgery if it doesn't work'

'Trying to make public more *skeptical*, meaning not *cynical*, but meaning *scientific*'

The 10 back facts – Number 10

MYTH: Treatments such as strong medications, injections and surgery are effective, and necessary, to treat LBP.

'It tells us about the complexity of back pain, it's a lot more to do with other factors in some cases than just structure'

'Everyone 100% experiences the pain'
(pain is 100% real, all the time)

The 10 back facts – Number 10

MYTH: Treatments such as strong medications, injections and surgery are effective, and necessary, to treat LBP.

'Outcomes are much worse for surgery in a workers compensation environment'

'If you give a structural, physical solution to a psychosocial problem you're not going to get a good result'

Take home summary

- All pain is 100% real, 100% of the time… but
- Lots of different biopsychosocial factors contribute to a person's experience of pain
- In other words, pain happens as a result of many interacting, multidimensional factors
- Damage/injury may be one factor, but it's rarely a key driver in persistent pain
    - Even if you 'can see it' on a scan or you've been told it is a key driver
- It can be helpful to reframe your structures as sensitized or irritated, and that they need more love and loading… (sometimes that may be despite/through pain)

While your structures may be sensitized to pain <u>at the moment</u>, they're unlikely to be sensitized to damage, and certainly not immune to getting healthier/stronger.

- It might not be an easy journey, but with a good coach, you can get back to living – *'your system is a beautiful bioplastic ecosystem… until the day you die'*
- Do things that are fun, healthy, and bring you joy – and don't give up!

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Resources

http://kevinwernli.com/givingbackresources

Resources page: