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**Com podem fer que millorin els
pacients amb dolor persistent?**

Antoni Morral PT, PhD.
Grup TraDoP. CAMFiC.
Facultat de Ciències de la Salut Blanquerna.(URL)

www.camfic.cat



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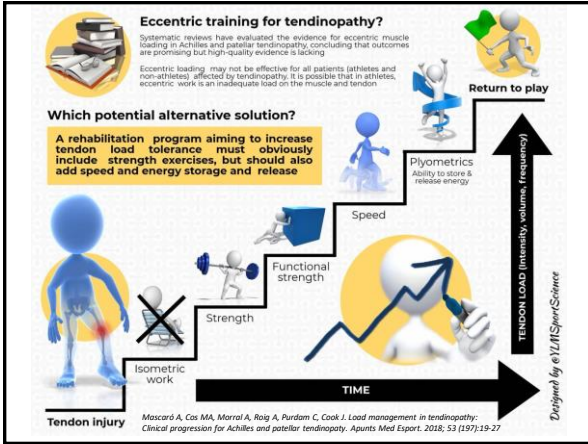
**No tinc cap conflicte
d'interès econòmic o científic.**





Health professionals have an educational role

**Excess load on the tendon:
Intensity, volume and / or frequency**



PATERNALISME

El pacient és responsable del seu procés de rehabilitació


WAKE UP !

El dolor crònic afecta entre el 20 - 40 % de la població general i és la principal causa de discapacitat a tot el món.

L'atenció primària és sovint el primer punt de contacte d'una persona amb dolor crònic.

Entre el 22% i el 50% de les consultes d'un metge de família estan relacionades amb el dolor.

Smith BH, Fors EA, Korwisi B, Barke A, Cameron P, Colvin L, Rief W, Treede RD; IASP Taskforce for the Classification of Chronic Pain. The IASP classification of chronic pain for ICD-11: applicability in primary care. Pain. 2019 Jan;160(1):83-87.



La majoria de pacients són gestionats en entorns comunitaris o d'atenció primària. Un 0,3% - 2% dels pacients amb dolor crònic són referits a clíniques especialitzades de dolor.


Entre el 7% al 35% es deriva a altres especialistes en atenció secundària, per exemple, un cirurgià ortopèdic o un reumatòleg, i un 26% a un fisioterapeuta.

Smith BH, Fors EA, Korwisi B, Barke A, Cameron P, Colvin L, Rief W, Treede RD; IASP Taskforce for the Classification of Chronic Pain. The IASP classification of chronic pain for ICD-11: applicability in primary care. Pain. 2019 Jan;160(1):83-87.



Hi ha molt de DOLOR PERSISTENT

DOLOR NOCICEPTIU DOLOR PRIMARI
DOLOR NOCICLÀSTIC DOLOR CRÒNIC
DOLOR NEUROPÀTIC DOLOR SECUNDARI
ALODÍNIA DOLOR AGUT CAUSALGIA
HIPERALGÈSIA SENSIBILITZACIÓ PERIFÈRICA
SENSIBILITZACIÓ CENTRAL



NIH National Library of Medicine
National Center for Biotechnology Information

PubMed.gov "persistent pain" [ti]

Advanced Create alert Create RSS

Save Email Send to Sorted by: Most relevant

MY NCBI FILTERS 843 results

RESULTS BY YEAR

1 Clinical outcomes of ultrasound-guided hip joint in persistent pain after hip arthroscopy.
Gao G, Fu Q, Wu R, Liu R, Cui L, Xu Y, Chin Med J (Engl). 2022 Oct 7. doi: 10.1097/CM9.00000000000027
PMID: 36201638 No abstract available.



NIH National Center for Biotechnology Information

PubMed.gov "persistent pain" [ti]


Advanced Create alert Create RSS

Save Email Send to Sorted by: Most relevant

MY NCBI FILTERS 843 results

RESULTS BY YEAR

1 XI. Note on the Frequent Great Disparity between Fall Subsequent Persistent Pain and Irremediable Helpless Advanced Years.
Allis OH. Ann Surg. 1903 Mar;37(3):388-92. PMID: 17861260 Free PMC article. No abstract available.



iasp-pain.org/Education/Content.aspx?ItemNumber=1608

IASP Working together for pain relief

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IASP Terminology

The following pain terminology is updated from "Part III: Pain Terms, A Current List with Definitions and Notes on Usage" (pp 209-214) Classification of Chronic Pain, Second Edition, IASP Task Force on Taxonomy, edited by H. Merskey and N. Bogduk, IASP Press, Seattle, ©1994.

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Pain Terms

Pain	Interdisciplinary Treatment*	Nociceptive Stimulus*
Allodynia†	Multidisciplinary Treatment*	Nociceptor*
Analgesia	Multimodal Treatment*	Nociceptive Pain†
Anesthesia	Neuralgia	Nocuous Stimulus
Dolorosa	Neuritis	Pain Threshold†
Causalgia	Neuropathic Pain†	Pain Tolerance Level†
Dysesthesia	Central Neuropathic Pain	Paresthesia
Hyperalgesia†	Peripheral Neuropathic Pain†	Sensitization*
Hyperesthesia	Neuropathy*	Central Sensitization†
Hypersensitivity	Nociception*	Peripheral Sensitization†
Hypoalgesia	Nociceptive Neuron*	Unimodal Treatment*
Hypoesthesia	Nociceptive Pain†	

Note: An asterisk (*) indicates that the term is either newly introduced or the definition or accompanying note has been revised since the 1994 publication.



Narrative Review

PAIN

The IASP classification of chronic pain for ICD-11: chronic primary pain

Michael Nicholas¹, Johan W.S. Vlaeyen^{2,3,4,5,6,7,8,9,10}, Winfried Rief¹¹, Antonia Barke¹², Qasim Aziz¹³, Rafael Benoit¹⁴, Milton Cohen¹⁵, Stefan Evers¹⁶, Maria Adèle Giamberardino¹⁷, Andreas Goebel¹⁸, Beatrijs Korwisi¹⁹, Serge Perrot²⁰, Peter Svensson²¹, Shuu-Jiun Wang^{22,23}, Rolf-Detlef Treede^{24,25}, The IASP Taskforce for the Classification of Chronic Pain

Abstract

This article describes a proposal for the new diagnosis of chronic primary pain (CPP) in ICD-11. Chronic primary pain is chosen when pain has persisted for more than 3 months and is associated with significant emotional distress and/or functional disability, and the pain is not better accounted for by another condition. As with all pain, the article assumes a biopsychosocial framework for understanding CPP, which means all subtypes of the diagnosis are considered to be multifactorial in nature, with biological, psychological, and social factors contributing to each. Unlike the perspectives found in DSM-5 and ICD-10, the diagnosis of CPP is considered to be appropriate independently of identified biological or psychological contributors, unless another diagnosis would better account for the presenting symptoms. Such other diagnoses are called "chronic secondary pain" where pain may at least initially be considered as a symptom associated with a preexisting disease. This goal is to create a classification that is useful in clinical practice.

Nicholas M, Vlaeyen JWS, Rief W, Barke A, Aziz Q, Benoit R, Cohen M, Evers S, Giamberardino MA, Goebel A, Korwisi B, Perrot S, Svensson P, Wang SJ, Treede RD; IASP Taskforce for the Classification of Chronic Pain. The IASP classification of chronic pain for ICD-11: chronic primary pain. Pain. 2019 Jan;160(1):28-37.

Chronic primary pain

La definició vol eliminar:

- Dicotomia obsoleta de “físic” versus “psicològic”
- Definir alguna cosa pel que esta absent.
- Utilitzar termes com “no específic”.

Nicholas M, Vlaeyen JWS, Rief W, Barke A, Aziz Q, Benoliel R, Cohen M, Evers S, Giamberardino MA, Goebel A, Korwisi B, Perrot S, Svensson P, Wang SJ, Treede RD; IASP Taskforce for the Classification of Chronic Pain. The IASP classification of chronic pain for ICD-11: chronic primary pain. Pain. 2019 Jan;160(1):28-37.

Dolor Pélvico Crónico
Definición

Dolor que **se percibe** en estructuras y órganos relacionados con la pelvis. En **ausencia** de patología aparente o infección, el fenómeno de dolor puede ser etiquetado como síndrome de dolor pélvico crónico.

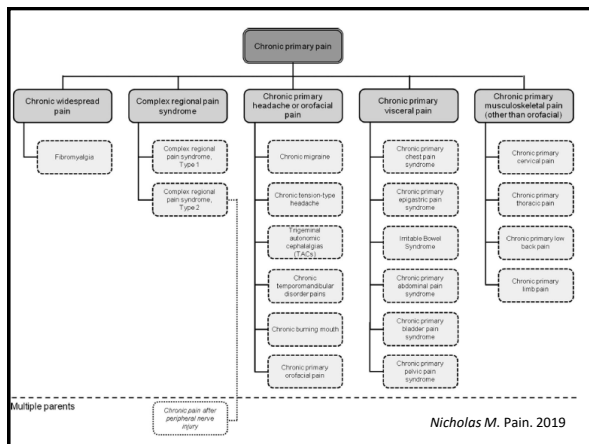
Engeler D, Baranowski AP, Borovicka J, Cottrell A, Dinis-Oliveira P, Elnel S, Hughes J, Messelink EJ, Van Ophoven A, Reisman Y, et al 2014 Guidelines on chronic pelvic pain. Arnhem, European Association of Urology.

Chronic primary pain

El dolor primari crònic es defineix com el dolor en una o més regions anatòmiques que:

- (1) persisteix o es repeteix durant més de 3 mesos
- (2) s'associa amb un malestar emocional important (per exemple, ansietat, ira, frustració o estat d'ànim deprimit) i/o significativa discapacitat funcional (interferència en les activitats de la vida diària i participació en rols socials),
- (3) i els símptomes no són millor explicats per un altre diagnòstic.

Nicholas M, Vlaeyen JWS, Rief W, Barke A, Aziz Q, Benoliel R, Cohen M, Evers S, Giamberardino MA, Goebel A, Korwisi B, Perrot S, Svensson P, Wang SJ, Treede RD; IASP Taskforce for the Classification of Chronic Pain. The IASP classification of chronic pain for ICD-11: chronic primary pain. Pain. 2019 Jan;160(1):28-37.



Dolor

Una experiencia sensorial y emocional desagradable asociada con daño tisular **real o potencial**, o descrita en términos de dicho daño.


Pain

An unpleasant sensory and emotional experience associated with **actual or potential** tissue damage, or described in terms of such damage.

IASP Subcommittee on Taxonomy. Pain terms: a list with definitions and notes on usage. Recommended by the IASP Subcommittee on Taxonomy. Pain 1979;6:249–52.

Symptom perceptions elicited by nails. The left panel exemplifies somatic amplification; reprinted from Fisher JP, Haccan DT, O'Connor N, Minerva BR. *Alld* 1995;12:70, with permission from BMJ Publishing Group Ltd. The right panel exemplifies somatic desensitification; reprinted with permission from Associated Press, Wide World Photos. 1/16/05.

Dimsdale JE, Dantzer R. A biological substrate for somatoform disorders: importance of pathophysiology. *Psychosom Med.* 2007 Dec;69(9):850-4. Review.



Nociceptive pain
Pain that arises from actual damage to non-neural tissue and is due to the activation of nociceptors.

Dolor nociceptivo
Dolor que surge del daño real a tejido no neural y se debe a la activación de nociceptores.



Neuropathic pain
Pain caused by a lesion or disease of the somatosensory nervous system.

Dolor neuropático
Dolor causado por una lesión o enfermedad del sistema nervioso somatosensorial.

(e.g. stroke, vasculitis, diabetes mellitus, trigeminal neurálgia, postherpetic neurálgia...)



El dolor neuropático está producido por un trastorno de las vías sensitivas del sistema nervioso central o periférico. Afecta a un 3-7 % de la población.

Zhu B et al. Intra-Venous Lidocaine to Relieve Neuropathic Pain: A Systematic Review and Meta-Analysis. Front Neurol. 2019 Sep 18;10:954.



El 14 de diciembre de 2017 fue aceptado por la IASP un nuevo término: «dolor nociplástico»

Nociplastic pain
Dolor que surge de la nocicepción alterada a pesar de que no hay evidencia clara de daño tisular real que provoque la activación de los nociceptores periféricos o evidencia de enfermedad o lesión del sistema somatosensorial que causa el dolor.



Dolor
Una experiencia sensorial y emocional desagradable asociada o similar a la asociada con daño tisular real o potencial.

Pain
An unpleasant sensory and emotional experience associated with, or resembling that associated with, actual or potential tissue damage.

Raja SN et al. The revised International Association for the Study of Pain definition of pain: concepts, challenges, and compromises. Pain. 2020 Sep 1;161(9):1976-1982



Dolor 2020
Una experiencia sensorial y emocional desagradable asociada **o similar a la asociada** con daño tisular real o potencial.

Dolor 1979
Una experiencia sensorial y emocional desagradable asociada con daño tisular real o potencial, o descrita en términos de dicho daño.

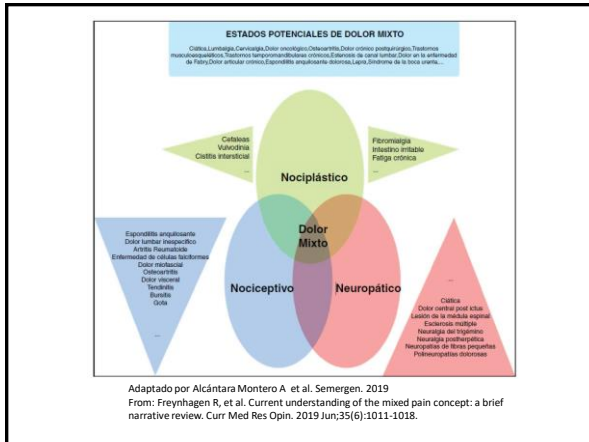
Raja SN et al. The revised International Association for the Study of Pain definition of pain: concepts, challenges, and compromises. Pain. 2020 Sep 1;161(9):1976-1982

NOTAS

- El dolor es una experiencia personal influenciada en diferentes grados por factores biológicos, psicológicos y sociales.
- El dolor y la nocicepción son fenómenos diferentes. El dolor no puede ser inferido solamente por la actividad de las neuronas sensoriales.
- Las personas aprenden el concepto de dolor a través de las experiencias de vida.
- Si una persona manifiesta una experiencia dolorosa, ésta debe ser respetada.
- Aunque el dolor usualmente cumple una función adaptativa, puede tener efectos adversos sobre la funcionalidad y el bienestar social y psicológico.
- Una de las maneras para expresar dolor es por la descripción verbal; la incapacidad para comunicarse no niega la posibilidad de que un humano o animal experimente dolor.

International Association for the Study of Pain
IASP
Working together for pain relief

**Nociceptive pain
Neuropathic pain
Nociplastic pain**



“Scientific and medical definitions are tools. Even when we recognize them as imperfect or provisional, awaiting replacement by an improved version, they perform work that cannot be accomplished by less precise instruments.”

David B. Morris 2003

Morris DB. The challenges of pain and suffering In: Jensen TS, Wilson PR, Rice ASC, editors. *Clinical Pain Management: Chronic Pain*. London: Arnold, 2003. pp. 3–14.

Tratamiento no farmacológico (2016)

Los pilares en el tratamiento no farmacológico del dolor crónico son la actividad física y la educación del paciente en neurociencia del dolor.

ABORDATGE DEL DOLOR CRÒNIC NO ONCOLÒGIC

CatSalut
Generalitat de Catalunya
Departament de Salut


http://catsalut.gencat.cat/web/content/minisite/catsalut/catsalut_territori/barcelona/produccio_cientifica/2016/document-abordatge-DCNO-marc-2016.pdf
(Tractament amb exercici físic pàg.8)



Mecanismos de respuesta (protección) ante una amenaza

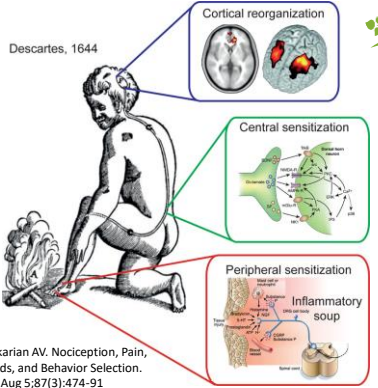
- Sistema nervioso simpático
- Sistema motor
- Sistema endocrino
- Sistema nervioso parasimpático
- Sistema inmune
- Dolor (la parte consciente de un sistema de protección muy amplio)

~~Cartesian model of pain~~



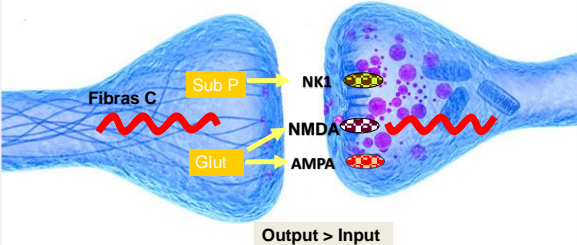
Rene Descartes 1596-1650

Descartes, 1644




Baliki MN, Apkarian AV. Nociception, Pain, Negative Moods, and Behavior Selection. *Neuron*. 2015 Aug 5;87(3):474-91

Sensibilización central "Wind-Up"



Output > Input


1965

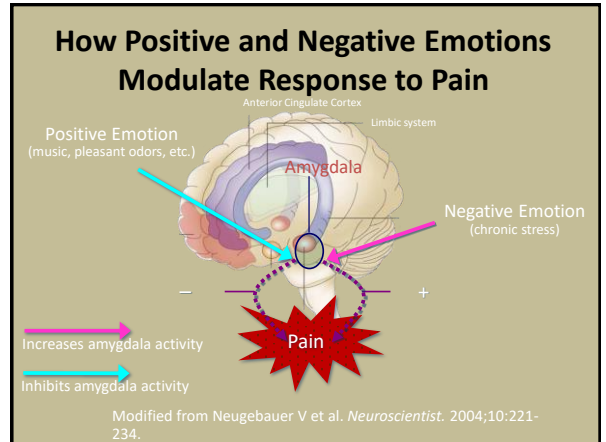
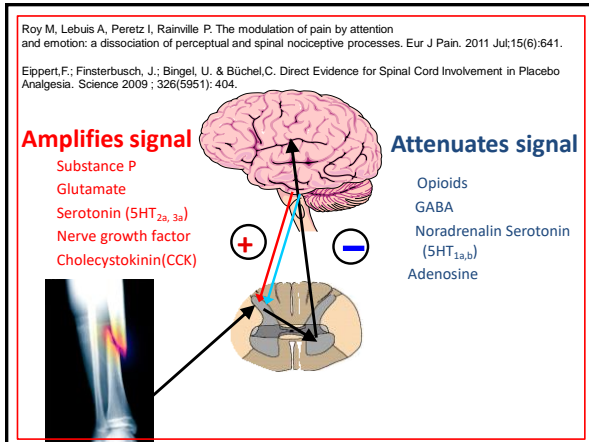
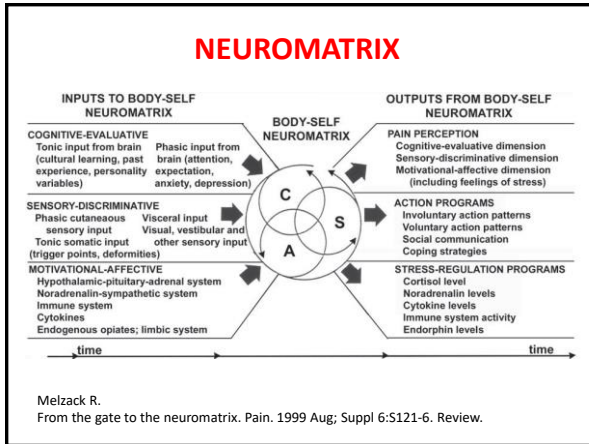




Ronald Melzack Patrick Wall

Melzack and Wall proposed that the Cartesian model of pain be replaced with the **"gate control theory of pain"**



Melzack R, Wall PD. *Science* 1965;150:971-9.





DOLOR ≠ NOCICEPCIÓN

- La relación entre nocicepción y dolor es variable.
- Dolor: parte de un sistema sofisticado para protegernos de la amenaza.

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La experiencia del dolor depende del contexto:

- Información previa.
- Expectativas.
- Consecuencias.
- Creencias.
- Esperanza.
- Miedos.
- Distracción.
- Etc....

Tang NK, Salkovskis PM, Hodges A. *Effects of mood on pain responses and pain tolerance: an experimental study in chronic back pain patients.* Pain. 2008 Aug 31; 138(2): 392-401.

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Todo el entorno puede modificar la respuesta a una pregunta

¿Cuán peligrosa es esta situación?

El valor de la amenaza.
El cerebro responde a esa pregunta



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DOLOR ≠ NOCICEPCIÓN ≠ LESIÓN

van Wilgen CP, Keizer D. The sensitization model to explain how chronic pain exists without tissue damage. Pain Manag Nurs. 2012 Mar;13(1):60-5.

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“La fisiología del dolor puede ser fácilmente entendida por cualquier persona normal.


Comprender la fisiología del dolor cambia el modo de pensar sobre él, reduce su significado amenazante y ayuda a su tratamiento.”

David Buttlar & Lorimer Moseley

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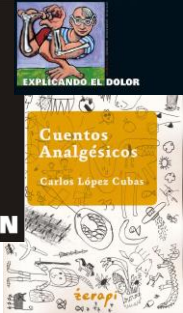
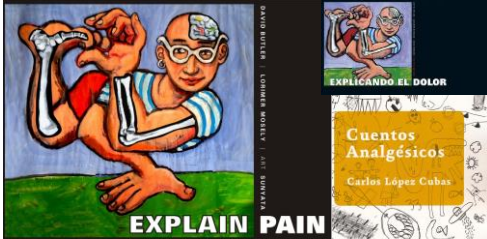
El hombre es un animal simbólico

“La característica principal del hombre es su capacidad de simbolización y que la mejor forma para entenderlo es el estudio de los símbolos que crea en su vida en sociedad”



Ernst Cassirer (1874-1945)

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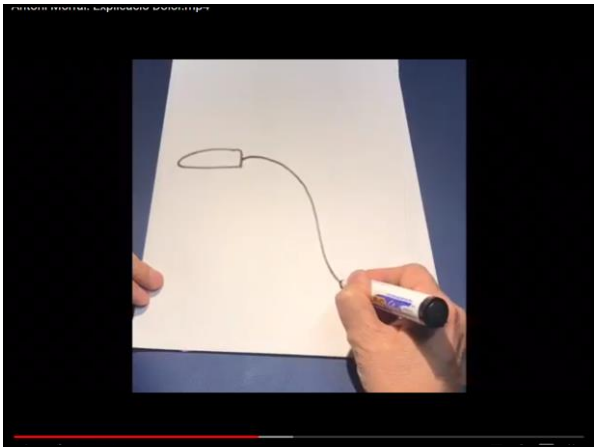
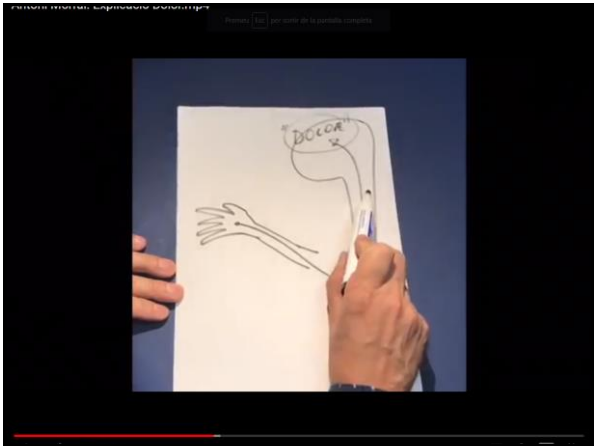
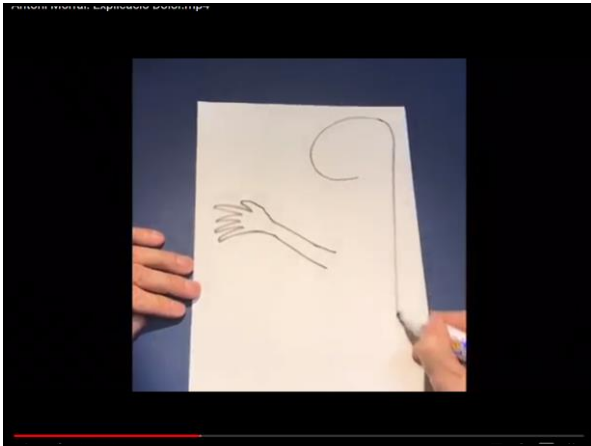


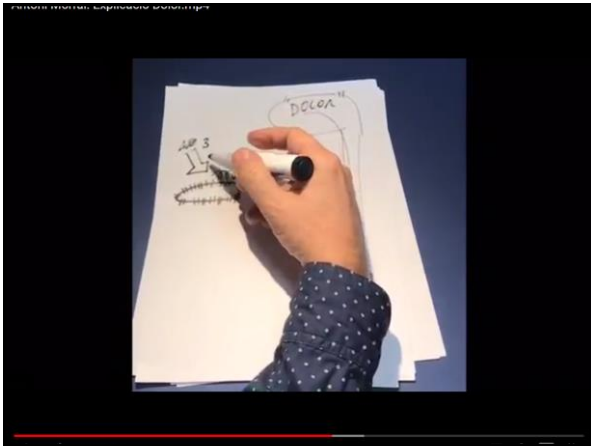
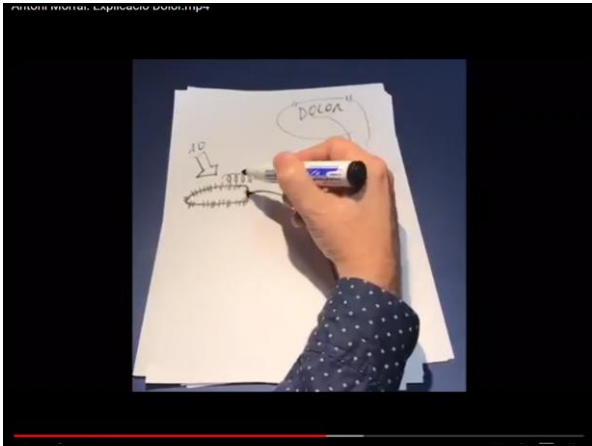
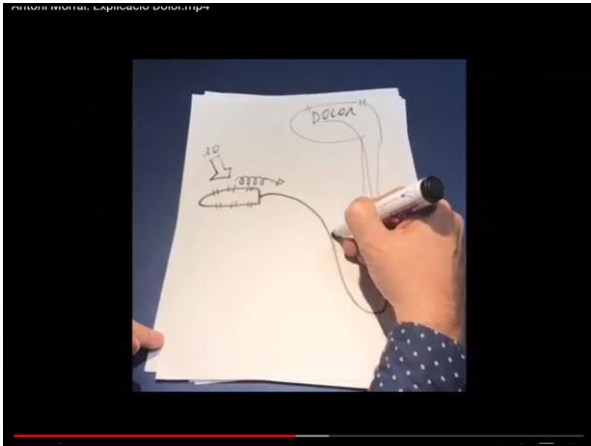
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¿Cuáles has leído ya?
ARTUROGOICOCHEA.COM

Arturo Goicoechea





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**KNOW
PAIN
KNOW
GAIN**

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Beneficis generals de l'exercici físic

The diagram illustrates the interconnected benefits of physical exercise. A central figure of a person on a bicycle is labeled "Exercise".

- Immune system** (gear icon) ↔ Exercise
- Nervous system** (brain icon) ↔ Exercise
- Cardiometabolic tissues** (heart, adipose, endocrine, liver icons) ↔ Exercise
- Bone** (bone icon) ↔ Exercise
- Gut** (intestine icon) ↔ Exercise
- Skeletal muscle** (muscle icon) ↔ Exercise

Exercise leads to:

- Cardiovascular disease
- Cognitive decline
- Obesity
- Cancer
- T2DM
- Healthspan
- Longevity
- Resilience

Chow LS et al. Exerkines in health, resilience and disease. Nat Rev Endocrinol. 2022 Mar 18.

Dolor i exercici terapèutic

L'exercici redueix la sensibilització en pacients amb dolor múscul-esquelètic.

- Activant el sistema cannabinoide.
- Alliberant opioïdes endògens i beta-endorfines.
- Activant els mecanismes de modulació descendent.

Tan L, Cicuttini FM, Fairley J, Romero L, Estee M, Hussain SM, Urruhart DM. Does aerobic exercise effect pain sensitisation in individuals with musculoskeletal pain? A systematic review. *BMC Musculoskelet Disord.* 2022 Feb 3;23(1):113.

Revisions sistemàtiques & Metaanàlisis

PubMed.gov

Filters applied: Meta-Analysis, Systematic Review. Clear all

Search criteria: ("chronic pain" OR "persistent pain" OR "low back pain" OR "nociplastic pain" OR "musculoskeletal pain" OR "neuropatic pain" OR osteoarthritis) AND (exercise) [ti]

Lumbàlgia crònica i exercici

249 assaigs clínics. 24.486 persones

Cochrane Library
Cochrane Database of Systematic Reviews

Exercise therapy for chronic low back pain (Review)

Hayden JA, Ellis J, Ogilvie R, Malmivaara A, van Tulder MW

- Evidència moderada
- L'exercici (enfortir musculatura o l'exercici aeròbic) és més efectiu que cap tractament o l'atenció habitual per un metge de família per disminuir el dolor a curt, mig i llarg termini.

Hayden JA, Ellis J, Ogilvie R, Malmivaara A, van Tulder MW. Exercise therapy for chronic low back pain. *Cochrane Database Syst Rev.* 2021 Sep 28;9(9):CD009790.

Lumbàlgia crònica: Guies.

Clinical Practice Guidelines

Interventions for the Management of Acute and Chronic Low Back Pain: Revision 2021

Clinical Practice Guidelines Linked to the International Classification of Functioning, Disability and Health From the Academy of Orthopaedic Physical Therapy of the American Physical Therapy Association

George SZ, Fritz JM, Siffes SP, Schneider MJ, et al. Interventions for the Management of Acute and Chronic Low Back Pain: Revision 2021. *J Orthop Sports Phys Ther.* 2021 Nov;51(11):CPG1-CPG60.

- L' exercici és recomana àmpliament per reduir dolor i discapacitat.
- No hi ha evidència clara de superioritat d'un tipus d'exercici sobre un altre quan es quan es comparen directament els protocols.
- Oferir també educació en neurociència del dolor.

Dolor crònic i exercici aeròbic

Journal of Pain Medicine and Health, Volume 14, Number 3, June 2012

Aerobic Physical Exercise for Pain Intensity, Aerobic Capacity, and Quality of Life in Patients With Chronic Pain: A Systematic Review and Meta-Analysis

Renard R, Garcia-Corcos, Lide A, Sanchez-Montoya, Jorge E, Diaz-Aranda, and Laly T, Ordoñez-Alba

EBSC Musculoskeletal Disorders

Does aerobic exercise effect pain sensitisation in individuals with musculoskeletal pain? A systematic review

91 RCT en dolor crònic primari (la majoria en dones amb FM i persones amb dolor cervical crònic)

- L'exercici aeròbic és una opció terapèutica per tractar el dolor crònic.
- Hi ha una relació directe entre la millora de la resistència / capacitat aeròbica dels pacients i la millora de la seva qualitat de vida.
- L'exercici aeròbic (caminar o anar en bicicleta) redueix la sensibilització al dolor en persones amb dolor múscul-esquelètic.
- Són necessaris més estudis per demostrar una extrapolació d'aquests resultats a variables com la funcionalitat o la qualitat de vida.

Dolor crònic primari i exercici: Guies.

National Institute for Health and Care Excellence

Chronic pain (primary and secondary) in over 16s: assessment of all chronic pain and management of chronic primary pain

Evidence review for exercise for chronic primary pain

NICE guideline NG193

91 RCT en dolor crònic primari (la majoria en dones amb FM i persones amb dolor cervical crònic)

La pràctica de qualsevol activitat física té importants beneficis per a la salut pública a curt i a llarg termini, en persones amb dolor primari crònic, especialment si són inactives o sedentàries.

- Cardiovascular/aeròbic/condicionament
- Resistència/anaeròbica/força
- Flexibilitat incloent estiraments
- Propioceptiu que inclou l'equilibri i la consciència del moviment.

Elecció individualitzada segons capacitats, necessitats, preferències. Es recomana supervisat (falta evidència en exercici no supervisat)

És important continuar l'activitat física més enllà del final d'un programa d'exercici formal.

National Guideline Centre (UK). Evidence review for exercise for chronic primary pain: Chronic pain (primary and secondary) in over 16s: assessment of all chronic pain and management of chronic primary pain: Evidence review E. London: NICE; 2021 Apr.



Dolor neuropàtic i exercici

Revisió sistemàtica i consens d'experts:
21 RCT i 8 revisions sistemàtiques.

L'exercici és eficaç per disminuir la intensitat del dolor neuropàtic.

Els exercicis recomanats (no excloents) són:
estiraments musculars,
exercicis d'enfortiment muscular / resistència,
exercici aeròbic,
entrenament de control motor / estabilització i exercicis ment-cos (Tai Chi i yoga)

Exercise for Neuropathic Pain: A Systematic Review and Expert Consensus

Zhang YH, Hu HY, et al. Exercise for Neuropathic Pain: A Systematic Review and Expert Consensus. Front Med (Lausanne). 2021 Nov 24;8:756940

Prescripció d'exercici

TABLE 1 Summary of the exercise prescriptions recommended by this review

FIBROMYALGIA	
Type of exercise	Global exercises were more researched and presented better results, such as: Aerobic exercises; Muscle strengthening; Combined exercises (balance + motor control exercises OR relaxation + stretching exercises OR aerobic + strengthening + stretching exercises); Tai Chi. No difference between land and pool-based aerobic exercise.
Supervision	Supervised
Duration of the session	50 to 60 min
Weekly frequency	2 to 3 times a week
Duration of treatment	13 to 24 weeks
Intensity	
Aerobic exercises	40% to 80% HRmax, or Perceived exertion between 9 to 15 on RPE
Muscle strengthening	45 to 50% of 1RM
Muscle stretching	Until moderate discomfort

Ferro Moura Franco K, Lenoir D, et al. Prescription of exercises for the treatment of chronic pain along the continuum of nociplastic pain: A systematic review with meta-analysis. Eur J Pain. 2021 Jan;25(1):51-70.

**Nada es veneno, todo es veneno:
la diferencia está en la dosis.**

Paracelso 1493-1541

Prescripció d'exercici

Individual graded running programme

Return to play

Plyometrics. Ability to store and release energy

Speed

Functional strength

Strength

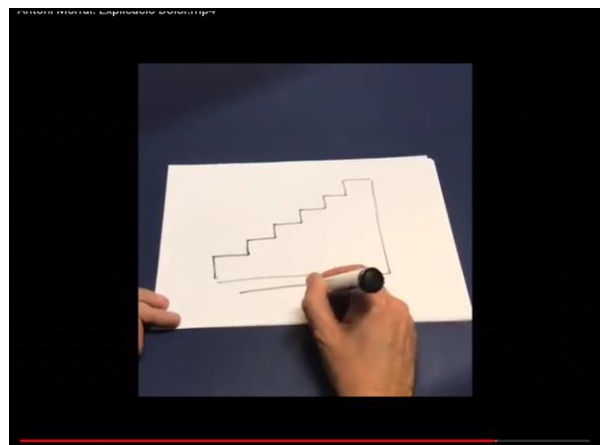
Isometric work

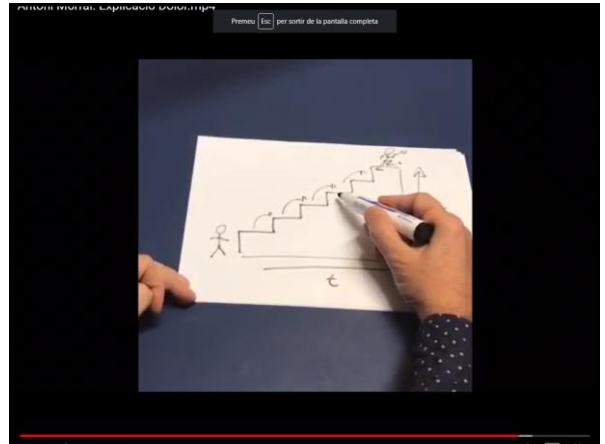
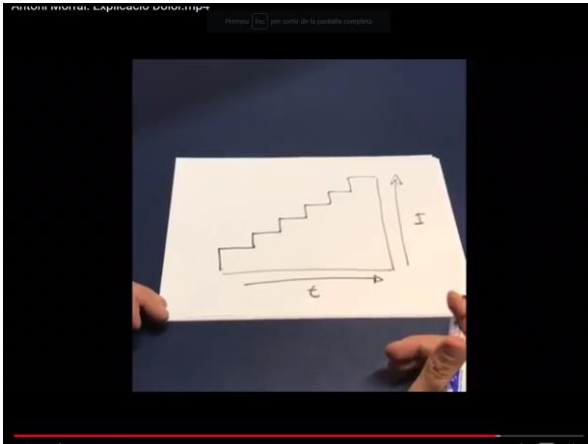
Tendon load:
•Intensity
•Volume
•Frequency

Tendon injury

Time

Mascaró A, Cos MA, Morral A, Roig A, Purdam C, Cook J. Load management in tendinopathy: Clinical progression for Achilles and patellar tendinopathy. Apunts Med Esport. 2018; 53 (197):19-27





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La adaptación es la respuesta positiva de un organismo o tejido para beneficiar su función.

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Combinar exercici amb educació en neurociència del dolor

PAIN
Systematic Review and Meta-Analysis
Short-term impact of combining pain neuroscience education with exercise for chronic musculoskeletal pain: a systematic review and meta-analysis
Benjamin Guadri¹, Adrian Poon², Matthew G. Jones^{3,4}, John Booth⁵, Clara Perrenon^{6,7,8}, Simon J. Summers^{9,10}

5 RCT. n= 5460

La combinació de educació en neurociència del dolor i exercici va donar lloc a majors millores en el dolor, la kinesiofòbia i la catastrofització del dolor en comparació amb l'exercici sol.

Siddall B, Ram A, Jones MD, Summers SJ. Short-term impact of combining pain neuroscience education with exercise for chronic musculoskeletal pain: a systematic review and meta-analysis. Pain. 2022 Jan 1;163(1):e20-e30.

Saracoglu I, Akin E, Aydin Dincer GB. Efficacy of adding pain neuroscience education to a multimodal treatment in fibromyalgia: A systematic review and meta-analysis. Int J Rheum Dis. 2022 Jan 21.

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Per què milloren els nostres pacients?

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Intervenciones Complejas:
Un reto para la investigación experimental

Craig P, Dieppe P, Macintyre S, Michie S, Nazareth I, Petticrew M. MRC Developing and evaluating complex interventions. 2019;1–39. Available from: www.mrc.ac.uk/complexinterventionsguidance

Annals of Internal Medicine | ACADEMIA AND CLINIC

Extending the CONSORT Statement to Randomized Trials of Nonpharmacologic Treatment: Explanation and Elaboration

Isabelle Boutron, MD, PhD; David Moher, PhD; Douglas G. Altman, DSc; Kenneth F. Schulz, PhD, MBA; and Philippe Ravaut, MD, PhD, for the CONSORT Group*

Adequate reporting of randomized, controlled trials (RCTs) is necessary to allow accurate critical appraisal of the validity and applicability of the results. The CONSORT (Consolidated Standards of Reporting Trials) Statement, a 22-item checklist and flow diagram, is intended to address the problem by improving the reporting of RCTs. However, some specific issues that apply to trials of nonpharmacologic treatments (for example, surgery, technical interventions, devices, rehabilitation, psychotherapy, and behavioral interventions) are not specifically addressed in the CONSORT Statement. Furthermore, considerable evidence suggests that the reporting of nonpharmacologic trials still needs improvement. Therefore, the CONSORT group developed an extension of the CONSORT Statement for trials assessing nonpharmacologic treatments. A consensus meeting of 33 experts was organized in Paris, France, in February 2006, to develop an extension of the CONSORT Statement for trials of nonpharmacologic treatments. The participants extended 11 items from the CONSORT Statement, added 1 item, and developed a modified flow diagram. To allow adequate understanding and implementation of the CONSORT extension, the CONSORT group developed this elaboration and explanation document from a review of the literature to provide examples of adequate reporting. This extension, in conjunction with the main CONSORT Statement and other CONSORT extensions, should help to improve the reporting of RCTs performed in this field.

Ann Intern Med. 2008;148:295-309.
For author affiliations, see end of text.
*For contributors to the CONSORT Extension for Nonpharmacologic Treatment Interventions, see the Appendix (available at www.annals.org).

Boutron I, Moher D, Altman DG, Schulz KF, Ravaut P; CONSORT Group. Extending the CONSORT statement to randomized trials of nonpharmacologic treatment: explanation and elaboration. *Ann Intern Med.* 2008 Feb 19;148(4):295-309.

Sports Medicine
<https://doi.org/10.1007/s40279-021-01526-6>

SYSTEMATIC REVIEW

Attempting to Separate Placebo Effects from Exercise in Chronic Pain: A Systematic Review and Meta-analysis

Clint T. Miller¹, Patrick J. Owen², Christian A. Than³, Jake Ball⁴, Kate Sadler⁵, Alessandro Piedimonte⁶, Fabrizio Benedetti^{1,6}, Daniel L. Belavy^{1,6}

Accepted: 20 July 2021
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Abstract
Background Pain is the most disabling characteristic of musculoskeletal disorders, and while exercise is promoted as an important treatment modality for chronic musculoskeletal conditions, the relative contribution of the specific effects of exercise training, placebo effects and non-specific effects such as natural history are not clear. The aim of this systematic review and meta-analysis was to investigate the effectiveness of exercise training versus placebo comparators for reducing musculoskeletal pain.

Miller CT, Owen PJ, Than CA, Ball J, Sadler K, Piedimonte A, Benedetti F, Belavy DL. Attempting to Separate Placebo Effects from Exercise in Chronic Pain: A Systematic Review and Meta-analysis. *Sports Med.* 2022 Apr;52(4):789-816.

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“Exercise training does not appear to be more effective than placebo interventions for reducing pain intensity in individuals with chronic pain.”

Miller CT, Owen PJ, Than CA, Ball J, Sadler K, Piedimonte A, Benedetti F, Belavy DL. Attempting to Separate Placebo Effects from Exercise in Chronic Pain: A Systematic Review and Meta-analysis. *Sports Med.* 2022 Apr;52(4):789-816.

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Forest plot for the meta-analysis investigating the effectiveness of exercise training versus placebo comparators for reducing musculoskeletal pain.

Study	INT			CON			Hedges' g with 95% CI	Weight (%)
	N	Mean	SD	N	Mean	SD		
Cheing et al. (2002) [69]	16	5.67	3.63	15	7.07	5.97	-0.28 [-0.97, 0.41]	24.99
Costa et al. (2009) [85]	77	5.80	2.60	75	4.60	2.80	0.37 [0.05, 0.69]	27.01
Khayambashi et al. (2012) [80]	14	6.70	2.40	14	1.40	1.90	2.38 [1.43, 3.33]	23.01
Senecan et al. (2004) [80]	20	6.20	1.81	20	4.05	0.91	1.47 [0.78, 2.16]	25.00
Overall							0.94 [-0.17, 2.06]	

Heterogeneity: $I^2 = 1.18$, $I^2 = 92.44\%$, $H^2 = 13.22$
 Test of $\theta = 0$: $I^2(3) = 27.80$, $p < 0.001$
 Test of $\theta = 0$: $Z = 1.86$, $p = 0.068$

Random-effects REML model

Miller CT, Owen PJ, Than CA, Ball J, Sadler K, Piedimonte A, Benedetti F, Belavy DL. Attempting to Separate Placebo Effects from Exercise in Chronic Pain: A Systematic Review and Meta-analysis. *Sports Med.* 2022 Apr;52(4):789-816.

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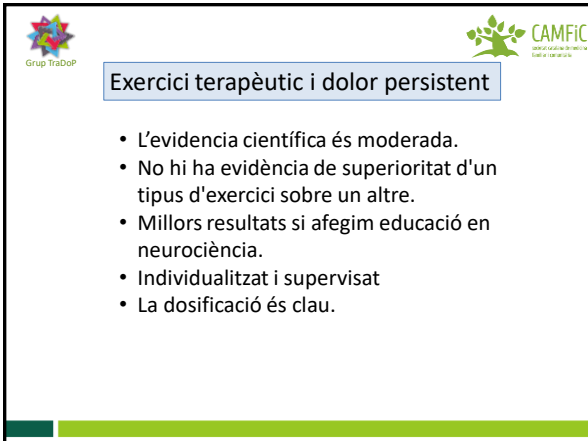
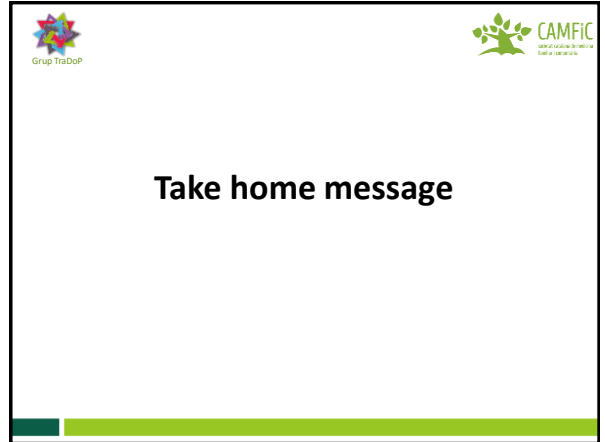
“The relative effect of exercise training, contextual factors and non-specific effects remains unknown.”

Miller CT, Owen PJ, Than CA, Ball J, Sadler K, Piedimonte A, Benedetti F, Belavy DL. Attempting to Separate Placebo Effects from Exercise in Chronic Pain: A Systematic Review and Meta-analysis. *Sports Med.* 2022 Apr;52(4):789-816.

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“When considered together, exercise training and the associated clinical encounter was more effective than no treatment and standard medical care for reducing pain intensity in people with chronic primary musculoskeletal pain.”

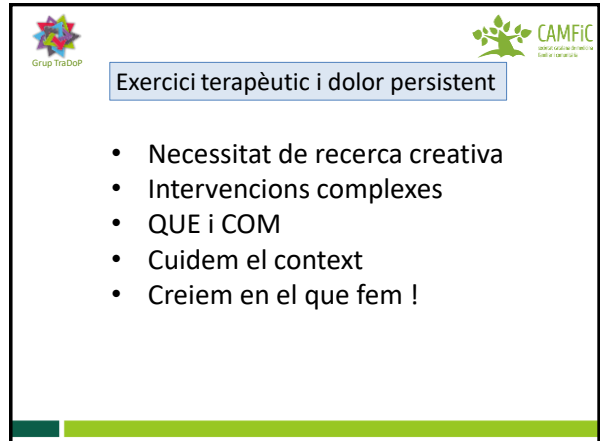
Miller CT, Owen PJ, Than CA, Ball J, Sadler K, Piedimonte A, Benedetti F, Belavy DL. Attempting to Separate Placebo Effects from Exercise in Chronic Pain: A Systematic Review and Meta-analysis. *Sports Med.* 2022 Apr;52(4):789-816.



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Exercici terapèutic i dolor persistent


- L'evidència científica és moderada.
- No hi ha evidència de superioritat d'un tipus d'exercici sobre un altre.
- Millors resultats si afegim educació en neurociència.
- Individualitzat i supervisat
- La dosificació és clau.



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Exercici terapèutic i dolor persistent

- Necessitat de recerca creativa
- Intervencions complexes
- QUE i COM
- Cuidem el context
- Creiem en el que fem !



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DOLOR ≠ NOCICEPCIÓN ≠ LESIÓN

van Wilgen CP, Keizer D. The sensitization model to explain how chronic pain exists without tissue damage. Pain Manag Nurs. 2012 Mar;13(1):60-5.



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...i aixecar els ulls a les estrelles
sabent que cal buscar-ho tot a terra.



Joan Margarit. (1938-2021)