

情報源と参考文献

世界理学療法連盟は、2019年の世界理学療法の日のための資料の作成と支援において、以下の理学療法士に心からの感謝を表します。: Felipe Reis ([@felipereisifjr](#)), Lisa Carlesso ([@LisaCarlesso](#)), Peter O'Sullivan ([@PeteOSullivanPT](#)), Jo Nijs([@PaininMotion](#))

インフォグラフィック1: 慢性疼痛とは何ですか?

慢性疼痛は世界的に重大な健康上の悩みです

1990年の障害生存年数（YLD数）の主なレベル3の原因は、腰痛、頭痛障害、および食事性鉄欠乏でしたが、2017年では男女共に腰痛、頭痛障害、および鬱病が主な原因でした。

[Global, regional, and national incidence, prevalence, and years lived with disability for 354 diseases and injuries for 195 countries and territories, 1990–2017: a systematic analysis for the Global Burden of Disease Study 2017](#)
Global Health Metrics | Volume 392, ISSUE 10159, P1789-1858, November 10, 2018

世界中で腰痛は他のどのコンディションよりも多くの障害を引き起こします

[The global burden of low back pain: estimates from the Global Burden of Disease 2010 study](#)

Damian Hoy, Lyn March, Peter Brooks, Fiona Blyth, Anthony Woolf, Christopher Bain, Gail Williams, Emma Smith, Theo Vos, Jan Barendregt, Chris Murray, Roy Burstein, Rachelle Buchbinder. *BMJ: Annals of the Rheumatic Diseases*, Volume 73, Issue 6

[The Lancet Series on low back pain](#)

痛みについての事実: 急性疼痛は、潜在的な組織損傷について警告し、通常、手術、出産、骨折、または外傷などの特定の事象の結果として突然起こります。

慢性疼痛は組織損傷の兆しとは無関係であるため、生物学的意義には合致しません。慢性疼痛は疾病状態と見なすことができ、数ヶ月または数年間持続します。

[Beyond Opioids: How Physical Therapy Can Transform Pain Management to Improve Health](#) p6.
An American Physical Therapy Association White Paper, June 1, 2018

慢性疼痛の定義

<https://www.csp.org.uk/conditions/chronic-pain>

<https://www.csp.org.uk/publications/physiotherapy-works-chronic-pain>

<https://www.nhsinform.scot/illnesses-and-conditions/brain-nerves-and-spinal-cord/chronic-pain>

理学療法は、長期（慢性）疼痛を伴った人々が自分のコンディションを管理し、活動を高め、生活の質を向上させるために必要なスキルを伸ばすことに役立ちます。

[Being active with chronic pain](#). Chartered Society of Physiotherapy

運動療法は慢性疼痛の治療に関するすべてのガイドラインに含まれています

Marienkevan Middelkoop, Sidney M. Rubinstein, Arianne P. Verhagen, Raymond W. Ostelo, Bart W. Koes, Maurits W. van Tulder. [Exercise therapy for chronic nonspecific low-back pain](#). *Best Practice & Research Clinical Rheumatology*, Volume 24, Issue 2, April 2010, Pages 193-204

- Chimenti RL, Frey-Law LA, Sluka KA. [A mechanism-based approach to physical therapist management of pain.](#) *Phys Ther.* 2018;
- Macedo LG, Smeets RJ, Maher CG, Latimer J, McAuley JH. [Graded activity and graded exposure for persistent nonspecific low back pain: a systematic review.](#) *Phys Ther.* 2010;90:860–879.
- Booth J, Moseley GL, Schiltenswolf M, Cashin A, Davies M, Hübscher M. [Exercise for chronic musculoskeletal pain: a biopsychosocial approach.](#) *Musculoskeletal Care.* 2017;15:413–421.
- Jordan, J. L., Holden, H. A., Mason, E. E. J., & Foster, N. E. (2010). [Interventions to improve adherence to exercise for chronic musculoskeletal pain in adults \(review\).](#) *Cochrane Collaboration*, 1, 1–62.
- Geneen L, Smith B, Clarke C, Martin D, Colvin LA, Moore RA. [Physical activity and exercise for chronic pain in adults: An overview of Cochrane reviews.](#) *Cochrane Database Syst Rev.* 2014;
- Hayden JA, van Tulder MW, Malmivaara A, Koes BW. [Exercise therapy for treatment of non-specific low back pain.](#) *Cochrane database Syst Rev.* 2005;
- Chimenti RL, Frey-Law LA, Sluka KA. [A mechanism-based approach to physical therapist management of pain.](#) *Phys Ther.* 2018;
- Sluka KA, O'Donnell JM, Danielson J, Rasmussen LA. [Regular physical activity prevents development of chronic pain and activation of central neurons.](#) *J Appl Physiol (1985).* 2013;114:725– 733.
- Grace P, Strand K, Galer E, et al. [Prior voluntary wheel running is protective for neuropathic-like pain.](#) *J Pain.* 2016;17(4 suppl):S90.
- O'Connor, S. R., Tully, M. A., Ryan, B., Bleakley, C. M., Baxter, G. D., Bradley, J. M. McDonough, S. M. (2015). [Walking exercise for chronic musculoskeletal pain: Systematic review and meta-analysis.](#) *Archives of Physical Medicine and Rehabilitation.* 96(4), 724–734.e3.
- Booth J, Moseley GL, Schiltenswolf M, Cashin A, Davies M, Hübscher M. [Exercise for chronic musculoskeletal pain: a biopsychosocial approach.](#) *Musculoskeletal Care.* 2017;15:413–421.

インフォグラフィック2：慢性的な痛み - 神話

このインフォグラフィックの作成に、以下の情報源が使用されました：

- <http://www.lowbackpaincommunication.com/> <https://www.csp.org.uk/conditions/back-pain/back-pain-myth-busters>
https://www.physio-pedia.com/Exercise_and_Activity_in_Pain_Management

X線、CTまたはMRI スキャンは時々役に立つかもしれませんが、椎間板変性、関節炎、椎間板ヘルニア・亀裂などの所見は無痛である人々が一般的であり、必ずしも痛みの理由ではありません。

- Brinjikii W, Diehn, FE, Jarvik, JG, Carr CM, Kallmes DF, Murad MH, Luetmer PH (2015) [MRI findings of disc degeneration are more prevalent in adults with low back pain than in asymptomatic controls: A systematic review and meta-analysis.](#) *AJNR AM J Neuroradiol*, 36(12): 2394 – 9. doi: 10.3174/ajnr.A449
- Berg L, Hellum C, Gjertsen Ø, Neckelmann G, Johnsen LG, Storheim K, Brox JI, Eide GE, Espeland A (2013) [Do more MRI findings imply worse disability or more intense low back pain? A cross-sectional study of candidates for lumbar disc prosthesis.](#) doi: 10.1007/s00256-013-1700-x
- Darlow B, Dean S, Perry M, Mathieson F, Baxter GD, Dowell A. [Easy to harm, hard to heal: patient views about the back.](#) *Spine* 2015; 40:842e50.
- Bunzli S, Smith A, Watkins R, Schutze R, O'Sullivan P. [What do people who score highly on the Tampa Scale of Kinesiophobia really believe? A mixed methods investigation in people with chronic non specific low back pain.](#) *Clin J Pain* 2015; 31:621e32.
- Geisser M, Roth R. [Knowledge of and agreement with chronic pain diagnosis: relation to affective distress, pain beliefs and coping, pain intensity and disability.](#) *J Occup Rehabil.* 1998;8:73–88
- Bunzli S, Watkins R, Smith A, Schutze R, O'Sullivan P. [Lives on hold: a qualitative synthesis exploring the experience of chronic low-back pain.](#) *Clin J Pain* 2013;29:907e16.

Teraguchi et al, (2013) [Prevalence and distribution of intervertebral disc degeneration over the entire spine in a population-based cohort: the Wakayama Spine Study.](#)

Videman et al, (2003) [Associations Between Back Pain History and Lumbar MRI Findings](#)

Cheung et al, (2009) [Prevalence and Pattern of Lumbar Magnetic Resonance Imaging Changes in a Population Study of One Thousand Forty-Three Individuals.](#)

Endcan et al, (2011) [Potential of MRI findings to refine case definition for mechanical low back pain in epidemiological studies: a systematic review.](#)

Brinjikji et al, (2015) [MRI Findings of Disc Degeneration are More Prevalent in Adults with Low Back Pain than in Asymptomatic Controls: A Systematic Review and Meta-Analysis](#)

Webster et al, (2010) [Relationship of early magnetic resonance imaging for work-related acute low back pain with disability and medical utilization outcomes.](#)

経験される痛みの程度は、多くの場合、傷害や組織損傷の悪い尺度となっています。たとえ活動に痛みを伴っても、危害を加えるという正確な兆候ではありません。理学療法士は、安全に動くためのプログラムの開発を支援することができます。

Belavy DL, Quittner MJ, Ridgers N, Ling Y, Connell D, Rantalainen T (2017) [Running exercise strengthens the intervertebral disc.](#) *Sci Rep*, 7:45975. doi: 10.1038/srep45975

Campbell A, Kemp-Smith K, O'Sullivan P, Straker L (2016) [Abdominal bracing increases ground reaction forces and reduces knee and hip flexion during landing.](#) *J Orthop Sports Phys Ther*, 46(4): 286-292. doi:10.2519/jospt.2016.5774

Smith BE, Hendrick P, Smith TO, et al [Should exercises be painful in the management of chronic musculoskeletal pain? A systematic review and meta-analysis.](#) *Br J Sports Med* (2017) doi: 10.1136/bjsports-2016-097383

Shiri et al (2013) [The role of obesity and physical activity in non-specific and radiating low back pain: The Young Finns study;](#) *Seminars In Arthritis and Rheumatism* June 2013, vol.42(6):640-650

Taylor et al (2014) [Incidence and risk factors for first-time incident low back pain: a systematic review and meta-analysis;](#) *The Spine Journal* October 2014, Vol.14(10):2299-2319

Manchikanti et al (2014) [Epidemiology of Low Back Pain In Adults.](#) *Neuromodulation: Technology at the Neural Interface*, Vol.17: 3–10.

George et al. (2012) [Predictors of Occurrence and Severity of First Time Low Back Pain Episodes: Findings from a Military Inception Cohort.](#) *PLoS ONE* 7(2): e30597

Wilkens et al (2013) [Prognostic Factors of Prolonged Disability in Patients with Low Back Pain and Lumbar Degeneration in Primary Care: A Cohort Study.](#) *Spine*. Jan 1;38(1):65-74

Campbell et al (2013) [Prognostic Indicators of Low Back Pain in Primary Care: Five-Year Prospective Study.](#) *The Journal of Pain*. August 2013. Vol.14(8):873-883

背部痛を伴うような体前屈・持ち上げ動作は苦痛かもしれませんが、体前屈・持ち上げ動作の可動性と強度を発達させることは重要です。ウェイトトレーニングを含む多くの種類の運動は大きな効果をもたらすことができます。

O'Sullivan PB, Caneiro JP, O'Keeffe M, Smith A, Dankaerts W, Fersum K, O'Sullivan K (2018) [Cognitive functional therapy: An integrated behavioural approach for the targeted management of disabling low back pain.](#) *Phys Ther*, 98(5): 408-423. doi: 10.1093/ptj/pzy022

Balagu, F. et al., 2012. [Non-specific low back pain.](#) *The Lancet*, 379(9814),

Pincus, T. et al., 2002. [A systematic review of psychological factors as predictors of chronicity/disability in prospective cohorts of low back pain](#). *Spine* (Phila Pa 1976), 27(5), pp.E109–2

O'Sullivan and Lin (2014) [Acute low back pain: Beyond drug therapies](#); *Pain Management Today*, Volume 1, Number 1.

Steele et al (2015) [A Review of the Clinical Value of Isolated Lumbar Extension Resistance Training for Chronic Low Back Pain](#); *American Academy of Physical Medicine and Rehabilitation* Volume 7, Issue 2, Pages 169–187.

Searle et al (2015) [Exercise interventions for the treatment of chronic low back pain: a systematic review and meta-analysis of randomised controlled trials](#); *Clinical Rehabilitation* 2015, Vol. 29(12) 1155 –1167.

Bjorn et al (2015) [Individualized Low-Load Motor Control Exercises and Education Versus a High-Load Lifting Exercise and Education to Improve Activity, Pain Intensity, and Physical Performance in Patients With Low Back Pain: A Randomized Controlled Trial](#); *Journal of Orthopaedic & Sports Physical Therapy*, Volume:45 Issue:2 Pages:77-85.

Pieber et al (2014) [Long-term effects of an outpatient rehabilitation program in patients with chronic recurrent low back pain](#); *Eur Spine J* 23:779–785.

Vincent et al (2014) [Resistance Exercise, Disability, and Pain Catastrophizing in Obese Adults with Back Pain](#); *Med Sci Sports Exerc.* 46(9): 1693–170.

Smith et al (2014) [An update of stabilisation exercises for low back pain: a systematic review with meta-analysis](#). *BMC Musculoskeletal Disorders* 15:416 DOI: 10.1186/1471-2474-15-4160

安静にしているよりも、再び動き始めたり仕事に復帰するほうが、回復と再発防止に優れています。2日間以上安静で体を動かさない方が有益であると示されたことは一度もありません。

Waddell, G., 1993. [Simple low back pain: rest or active exercise?](#) *Annals of the rheumatic diseases*, 52(5), p.317.

Wynne-Jones, G. et al., 2014. [Absence from work and return to work in people with back pain: a systematic review and meta-analysis](#). *Occupational and environmental medicine*, 71(6), pp.448–56.

Gloth MJ & Matesi AM. [Physical therapy and exercise in pain management](#). *Clinics in Geriatric Medicine*. 2001. 17(3): 525-535.

オピオイドだけに頼って痛みを緩和する方法は、身体的問題を覆い隠し、回復を遅らせ、または妨げ、最悪の場合、危険で致命的なものにさえなりかねません。

Bigal ME (2018) [Opioids vs nonopioids for chronic back, hip or knee pain](#). *JAMA*, 320(5); 507. Doi:10.1001/jama.2018.6949.

Juurlink DN (2017) [Rethinking “doing well” on chronic opioid therapy](#). *CMAJ*, 189(39): E1222-E1223. doi: 10.1503/cmaj170628

[Beyond Opioids: How Physical Therapy Can Transform Pain Management to Improve Health](#). An American Physical Therapy Association White Paper, June 1, 2018

手術および介入処置をすとしても、腰痛の管理においては非常に限られた役割しかありません。深刻な病気やけがによって引き起こされる腰痛は約1～5%だけのようです。

Nadine E Foster, Johannes R Anema, Dan Cherkin, Roger Chou, Steven P Cohen, Douglas P Gross, et al. [Prevention and treatment of low back pain: evidence, challenges, and promising directions](#). *The Lancet Series*, Low back pain | Volume 391, ISSUE 10137, P2368-2383, June 09, 2018

Maher C, Underwood M, Buchbinder R (2017) [Non-specific low back pain](#). *The Lancet*, 389(10070): 736-747. doi: 10.1016/S0140-6736(16)30970-9

痛みを大きく捉えると、回避行動、痛み、そして障害の悪循環に陥ってしまいます。理学療法士は痛みの正しい解釈を手助け、悪循環から抜け出す為に運動を取り入れ、そして、痛みを軽減させてくれます。

Samantha Bunzli, PT, PhD, Anne Smith, PT, PhD, Robert Schütze, MPsych (Clinical), Ivan Lin, PT, PhD, Peter O'Sullivan, PT, PhD. [Making Sense of Low Back Pain and Pain-Related Fear](#). *Journal of Orthopaedic & Sports Physical Therapy*, 2017 Volume:47 Issue:9 Pages:628–636 DOI: 10.2519/jospt.2017.7434

Picavet, H.S.J., Vlaeyen, J.W.S. & Schouten, J.S.A.G., 2002. [Pain catastrophizing and kinesiophobia: Predictors of chronic low back pain](#). *American Journal of Epidemiology*, 156(11), pp.1028–1034.

Swinkels-Meewisse, I.E.J. et al., 2006. [Acute low back pain: Pain-related fear and pain catastrophizing influence physical performance and perceived disability](#). *Pain*, 120(1-2), pp.36–43

O'Sullivan PB, Caneiro JP, O'Keeffe M, Smith A, Dankaerts W, Fersum K, O'Sullivan K (2018) [Cognitive functional therapy: An integrated behavioural approach for the targeted management of disabling low back pain](#). *Phys Ther*, 98(5): 408-423. doi: 10.1093/ptj/pzy022

O'Keeffe M, O'Sullivan PB, O'Sullivan K [Education can 'change the world': Can clinical education change the trajectory of individuals with back pain?](#) *Br J Sports Med*, Published Online First: 08 February 2019. doi: 10.1136/bjsports-2018-100190

インフォグラフィック 3: 痛みの管理

理学療法士は、痛みに関する教育、対処方法、問題解決、活動の促進、睡眠衛生、リラクゼーションなどのいくつかのツールを使用して、それぞれの痛みをコントロールできるように手助けします。

Chimenti RL, Frey-Law LA, Sluka KA. [A mechanism-based approach to physical therapist management of pain](#). *Phys Ther*. 2018;

Van Oosterwijck J, Meeus M, Paul L, et al. [Pain physiology education improves health status and endogenous pain inhibition in fibromyalgia: a double-blind randomized controlled trial](#). *Clin J Pain*. 2013;29:873–882.

Archer KR, Motzny N, Abraham CM, et al. [Cognitive-behavioral-based physio- cal therapy to improve surgical spine outcomes: a case series](#). *Phys Ther*. 2013;93:1130–1139.

自分の痛みにネガティブな人は、より強い痛みの度合いや障害の程度を申告しているようです。

Urquhart DM, Bell RJ, Cicuttini FM, Cui J, Forbes A, Davis SR. [Negative beliefs about low back pain are associated with high pain intensity and high level disability in community-based women](#). *BMC Musculoskelet Disord*. 2008;

Dahl J, Wilson KG, Nilsson A. [Acceptance and commitment therapy and the treatment of persons at risk for long-term disability resulting from stress and pain symptoms: A preliminary randomized trial](#). *Behav Ther*. 2004;

自分の痛みに前向きな人は、予後に良い影響を与える考え方を持っているようです。

Wertli MM, Held U, Lis A, Campello M, Weiser S. [Both positive and negative beliefs are important in patients with spine pain: findings from the Occupational and Industrial Orthopaedic Center registry](#). *Spine J*. 2018;

Veehof MM, Oskam MJ, Schreurs KMG, Bohlmeijer ET. [Acceptance-based interventions for the treatment of chronic pain: A systematic review and meta-analysis](#). *Pain*. 2011;

Benedetti F, Thoen W, Blanchard C, Vighetti S, Arduino C. [Pain as a reward: Changing the meaning of pain from negative to positive co-activates opioid and cannabinoid systems](#). *Pain*. 2013;

Risdon A, Eccleston C, Crombez G, McCracken L. [How can we learn to live with pain? A Q-methodological analysis of the diverse understandings of acceptance of chronic pain.](#) *Soc Sci Med.* 2003;

骨格筋に痛みがある人は、自分の体は（何度も）傷つきやすく、脆くできているという見方をしている事が多いようです。

Darlow B, Dean S, Perry M, Mathieson F, Baxter GD, Dowell A. [Easy to harm, hard to heal: patient views about the back.](#) *Spine* 2015;40:842e50.

Stenberg G, Fjellman-Wiklund A, Ahlgren C. [I am afraid to make the damage worse - fear of engaging in physical activity among patients with neck or back pain - a gender perspective.](#) *Scand J Caring Sci* 2014;28:146e54.

Bunzli S, Smith A, Watkins R, Schutze R, O'Sullivan P. [What do people who score highly on the Tampa Scale of Kinesiophobia really believe? A mixed methods investigation in people with chronic non specific low back pain.](#) *Clin J Pain* 2015;31:621e32.

自分の痛みは構造的な原因にあると考えている人は、より高いレベルの障害と見込みの低い回復に陥りやすいようです。

Darlow B, Dean S, Perry M, Mathieson F, Baxter GD, Dowell A. [Easy to harm, hard to heal: patient views about the back.](#) *Spine* 2015;40:842e50.

Bunzli S, Smith A, Watkins R, Schutze R, O'Sullivan P. [What do people who score highly on the Tampa Scale of Kinesiophobia really believe? A mixed methods investigation in people with chronic non specific low back pain.](#) *Clin J Pain* 2015;31:621e32.

Geisser M, Roth R. [Knowledge of and agreement with chronic pain diagnosis: relation to affective distress, pain beliefs and coping, pain intensity and disability.](#) *J Occup Rehabil.* 1998;8:73–88

Bunzli S, Watkins R, Smith A, Schutze R, O'Sullivan P. [Lives on hold: a qualitative synthesis exploring the experience of chronic low-back pain.](#) *Clin J Pain* 2013;29:907e16.

慢性的な痛みがあると、身体は簡単に痛みというアラームを引き起こすという事を理学療法士が教えてくれます。

また、あなたの痛みに対する不安を減らし、自信をつけるための長期的な方法を教えてくれます。痛みを避ける行動に取り組む事で、再び痛みのコントロールができるようになります。

Meeus JNM, Meeus M, Cagnie B, Roussel NA, Dolphens M, Van Oosterwijck J, et al. [A Modern Neuroscience Approach to Chronic Spinal Pain: Combining Pain Neuroscience Education With Cognition-Targeted Motor Control Training.](#) *Phys Ther.* 2014;94(5):730–8.

Gema BP, Enrique LG, Tomás GI, Virginia JP, Daniel PM. [Pain Neurophysiology Education and Therapeutic Exercise for Patients With Chronic Low Back Pain: A Single-Blind Randomized Controlled Trial.](#) *Arch Phys Med Rehabil.* 2017;

Watson JA, Ryan CG, Cooper L, Ellington D, Whittle R, Lavender M, et al. [Pain Neuroscience Education for Adults With Chronic Musculoskeletal Pain: A Mixed-Methods Systematic Review and Meta-Analysis.](#) *Journal of Pain.* 2019.

Wood L, Hendrick PA. [A systematic review and meta-analysis of pain neuroscience education for chronic low back pain: Short-and long-term outcomes of pain and disability.](#) *Eur J Pain.* 2019;23(2):234–49.

ポスター 1:慢性疼痛

世界中で腰痛は他のいかなる状態よりも不自由さを招く原因となります。

[The global burden of low back pain: estimates from the Global Burden of Disease 2010 study](#)

Damian Hoy, Lyn March, Peter Brooks, Fiona Blyth, Anthony Woolf, Christopher Bain, Gail Williams, Emma Smith, Theo Vos, Jan Barendregt, Chris Murray, Roy Burstein, Rachele Buchbinder. *BMJ: Annals of the Rheumatic Diseases*, Volume 73, Issue 6

[The Lancet Series on low back pain](#)

重篤な疾患もしくは外傷による腰痛は、腰痛全体のおよそ1-5%にしかすぎません。

Maher C, Underwood M, Buchbinder R (2017) [Non-specific low back pain](#). *The Lancet*, 389(10070): 736-747. doi: 10.1016/S0140-6736(16)30970-9

体幹を前屈したり、物を持ち上げたりする運動には、可動性や筋力を改善することが重要です。ウェイトトレーニングを含めて、運動療法の種類の多くが素晴らしい効果をもたらします。

O'Sullivan PB, Caneiro JP, O'Keeffe M, Smith A, Dankaerts W, Fersum K, O'Sullivan K (2018) [Cognitive functional therapy: An integrated behavioural approach for the targeted management of disabling low back pain](#). *Phys Ther*, 98(5): 408-423. doi: 10.1093/ptj/pzy022

Balagu, F. et al., 2012. [Non-specific low back pain](#). *The Lancet*, 379(9814),

Pincus, T. et al., 2002. [A systematic review of psychological factors as predictors of chronicity/disability in prospective cohorts of low back pain](#). *Spine (Phila Pa 1976)*, 27(5), pp.E109-2

O'Sullivan and Lin (2014) [Acute low back pain: Beyond drug therapies](#); *Pain Management Today*, Volume 1, Number 1.

Steele et al (2015) [A Review of the Clinical Value of Isolated Lumbar Extension Resistance Training for Chronic Low Back Pain](#); *American Academy of Physical Medicine and Rehabilitation* Volume 7, Issue 2, Pages 169-187.

Searle et al (2015) [Exercise interventions for the treatment of chronic low back pain: a systematic review and meta-analysis of randomised controlled trials](#); *Clinical Rehabilitation* 2015, Vol. 29(12) 1155 -1167.

Bjorn et al (2015) [Individualized Low-Load Motor Control Exercises and Education Versus a High-Load Lifting Exercise and Education to Improve Activity, Pain Intensity, and Physical Performance in Patients With Low Back Pain: A Randomized Controlled Trial](#); *Journal of Orthopaedic & Sports Physical Therapy*, Volume:45 Issue:2 Pages:77-85.

Pieber et al (2014) [Long-term effects of an outpatient rehabilitation program in patients with chronic recurrent low back pain](#); *Eur Spine J* 23:779-785.

Vincent et al (2014) [Resistance Exercise, Disability, and Pain Catastrophizing in Obese Adults with Back Pain](#); *Med Sci Sports Exerc*. 46(9): 1693-170.

Smith et al (2014) [An update of stabilisation exercises for low back pain: a systematic review with meta-analysis](#). *BMC Musculoskeletal Disorders* 15:416 DOI: 10.1186/1471-2474-15-4160

疼痛に関する事実：急性疼痛は潜在的な細胞のダメージを私たちに警告してくれます。具体的には外傷、出生時、骨折、精神的な外傷といった具体的な出来事の結果として、突然引き起こされるのが典型的です。慢性疼痛は細胞のダメージの脅威とは関係がなく、生物学的役割や目的を持ちません。慢性疼痛があると疾患に罹患していると判断してしまい、疼痛が何か月、何年もの間持続します。

[Beyond Opioids: How Physical Therapy Can Transform Pain Management to Improve Health](#) p6.

An American Physical Therapy Association White Paper, June 1, 2018

ポスター 2: 慢性疼痛と運動療法; 折り込みチラシ: 慢性疼痛のコントロール

以下の論文では、慢性疼痛における身体運動の役割とそれに対する理学療法を紹介しています。

定期的な運動プログラムは、慢性疼痛を持つ人々に有効です。

Chimenti RL, Frey-Law LA, Sluka KA. [A mechanism-based approach to physical therapist management of pain.](#) *Phys Ther.* 2018;

Sluka KA, O'Donnell JM, Danielson J, Rasmussen LA. [Regular physical activity prevents development of chronic pain and activation of central neurons.](#) *J Appl Physiol (1985).* 2013;114:725–733.

Grace P, Strand K, Galer E, et al. [Prior voluntary wheel running is protective for neuropathic-like pain.](#) *J Pain.* 2016;17(4 suppl):S90.

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理学療法士は慢性疼痛に対する身体運動を推奨しています。

Booth J, Moseley GL, Schiltenswolf M, Cashin A, Davies M, Hübscher M. [Exercise for chronic musculoskeletal pain: a biopsychosocial approach.](#) *Musculoskeletal Care.* 2017;15:413–421.

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理学療法士は慢性疼痛を抱えている患者個別の運動機能障害を評価する固有の技術を持っています。

Chimenti RL, Frey-Law LA, Sluka KA. [A mechanism-based approach to physical therapist management of pain.](#) *Phys Ther.* 2018

ポストカード: 慢性疼痛とオピオイドの危機

慢性疼痛に対するオピオイドの処方、オピオイドに関連した死亡者数の著しい増加、長期使用による依存・中毒・副作用の高いリスクと関連しています。

[The Coalition for Safe and Effective Pain Management \(CSEPM\): Reducing the Role of Opioids in Pain Management, Final Report June 2019](#), p4

Deyo R, Von Korff M, Duhkoop D. [Opioids for low back pain](#). *BMJ*. 2015;350(jan05 10):g6380-g6380. doi:10.1136/bmj.g6380.

2016年にオピオイド使用による患者は2700万人に及ぶと推定されています。

近年オピオイドの過剰使用による患者数は増加しており、一部では慢性の非癌性疼痛管理におけるオピオイド使用の増加によるものも含まれています。

2016年、アメリカ合衆国だけで、薬剤の過剰使用による死亡者数は63,632人と推定され、近年では21%増加しています。オピオイド処方に関連した死亡者数は著しく増加しました。

https://www.who.int/substance_abuse/information-sheet/en/

Side 2 の情報は、以下の文献から抜粋しています :

[Beyond Opioids: How Physical Therapy Can Transform Pain Management to Improve Health](#). An American Physical Therapy Association White Paper, June 1, 2018

添付資料

<https://www.knowpain.co.uk/>

<https://noijam.com/>

<https://www.painscience.com/>

<https://bodyinmind.org/>

<http://www.iasp-pain.org/>