

# Tobacco in Australia

## Facts & Issues

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### Relevant news and research

#### 3.13 Musculoskeletal diseases

*Last updated September 2019*

##### Research:

Marques, EA, Elbejjani, M, Frank-Wilson, A, Gudnason, V, Sigurdsson, G, Lang, T et al (2019). Cigarette smoking is associated with lower quadriceps cross-sectional area and attenuation in older adults. *Nicotine Tob Res*. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/31091312>

Oudkerk, SF, Mohamed Hoesein, FAA, Oner, FC, Verlaan, JJ, de Jong, PA, Kuperus, JS et al (2019). Diffuse idiopathic skeletal hyperostosis in smokers is associated with Restrictive Spirometry Pattern: an analysis in the COPDGene cohort. *J Rheumatol*. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/31043539>

Tu, TH, Kuo, CH, Huang, WC, Fay, LY, Cheng, H, & Wu, JC. (2019). Effects of smoking on cervical disc arthroplasty. *J Neurosurg Spine*, 30(2), 168-174. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/31066538>

No authors listed. Tobacco Use, Tobacco Cessation, and Musculoskeletal Health. (2018). *Orthop Nurs*, 2018. 37(5), 285-286. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/30247410>

Al-Bashaireh, AM, Haddad, LG, Weaver, M, Kelly, DL, Chengguo, X, Yoon, S. The Effect of Tobacco Smoking on Musculoskeletal Health: A Systematic Review. *J Environ Public Health*. 2018 Jul 11;2018:4184190. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/30112011>

Zhang H, Wan W, Liu J, Dai S, Zou Y, et al. Smoking quantity determines disease activity and function in chinese patients with ankylosing spondylitis. *Clin Rheumatol*, 2018. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/29589132>

Marques EA, Elbejjani M, Gudnason V, Sigurdsson G, Lang T, et al. Cigarette smoking and hip volumetric bone mineral density and cortical volume loss in older adults: The ages-reykjavik study. *Bone*, 2018; 108:186-92. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/29331300>

Dulger S, Aykurt Karlibel I, Kasapoglu Aksoy M, Altan L, Sengoren Dikis O, et al. How does smoking cessation affect disease activity, function loss, and quality of life in smokers with ankylosing

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## Facts & Issues

---

spondylitis? J Clin Rheumatol, 2018. Available from:

<https://www.ncbi.nlm.nih.gov/pubmed/29994796>

Crosby NE, Nosrati NN, Merrell G, and Hasting H, 2nd. Relationship between smoking and outcomes after cubital tunnel release. J Hand Microsurg, 2018; 10(1):12-5. Available from:

<https://www.ncbi.nlm.nih.gov/pubmed/29706730>

Chen Z, Li X, Pan F, Wu D, and Li H. A retrospective study: Does cigarette smoking induce cervical disc degeneration? Int J Surg, 2018; 53:269-73. Available from:

<https://www.ncbi.nlm.nih.gov/pubmed/29649666>

Bedno SA, Nelson DA, Kurina LM, and Choi YS. Gender differences in the associations of body mass index, physical fitness and tobacco use with lower extremity musculoskeletal injuries among new us army soldiers. Inj Prev, 2018. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/29572263>

Wells DB, Holt AM, Smith RA, Brolin TJ, Azar FM, et al. Tobacco use predicts a more difficult episode of care after anatomic total shoulder arthroplasty. J Shoulder Elbow Surg, 2017. Available from:

<https://www.ncbi.nlm.nih.gov/pubmed/28747276>

Sayeed A, Alshamrani FMM, Amrayn AY, and Alharbi A. Shoulder pain in smokers could be a life changer. BMJ Case Rep, 2017; 2017. Available from:

<http://www.ncbi.nlm.nih.gov/pubmed/28611144>

Jakoi AM, Pannu G, D'Oro A, Buser Z, Pham MH, et al. The clinical correlations between diabetes, cigarette smoking and obesity on intervertebral degenerative disc disease of the lumbar spine. Asian Spine J, 2017; 11(3):337-47. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/28670401>

Haugen IK, Magnusson K, Turkiewicz A, and Englund M. The prevalence, incidence, and progression of hand osteoarthritis in relation to body mass index, smoking, and alcohol consumption. J Rheumatol, 2017. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/28711879>

Fusaro M, Gallieni M, Aghi A, Iervasi G, Rizzo MA, et al. Cigarette smoking is associated with decreased bone gla-protein (bpg) levels in hemodialysis patients. Curr Vasc Pharmacol, 2017. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/28933309>

Australian Institute of Health and Welfare. The burden of musculoskeletal conditions in australia: A detailed analysis of the Australian burden of disease study 2011. Australian Burden of Disease Study series no. 13, BOD 14 Canberra: AIHW, 2017. Available from:

<https://www.aihw.gov.au/reports/burden-of-disease/burden-of-musculoskeletal-conditions-in-austra/contents/table-of-contents>.

tobaccoinaustralia.org.au

# Tobacco in Australia

## Facts & Issues

---

Zhao S, Challoner B, Khattak M, Moots RJ, and Goodson NJ. Increasing smoking intensity is associated with increased disease activity in axial spondyloarthritis. Rheumatol Int, 2016. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/27815702>

Weber T, Boggero IA, Carlson CR, Bertoli E, Okeson JP, et al. Smoking and posttraumatic stress disorder symptomatology in orofacial pain. J Dent Res, 2016; 95(10):1161-8. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/27486084>

Solbakken SM, Meyer HE, Stigum H, Sogaard AJ, Holvik K, et al. Excess mortality following hip fracture: Impact of self-perceived health, smoking, and body mass index. A norepos study. Osteoporos Int, 2016. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/27714442>

Salvi AE, Chelnokov AN, and Roda S. Smoking effects in a distal tibia fracture treated with external fixation. Orthop Nurs, 2016; 35(6):426-8. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/27851683>

Rhee MH, Lee DR, and Kim LJ. Differences in abdominal muscle activation during coughing between smokers and nonsmokers. J Phys Ther Sci, 2016; 28(4):1147-9. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/27190443>

Rhee MH and Kim LJ. Differences in the activation of abdominal muscles during trunk extension between smokers and non-smokers. J Back Musculoskelet Rehabil, 2016. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/27197707>

O'Connor S, Gornik HL, Froehlich JB, Gu X, Gray BH, et al. Smoking and adverse outcomes in fibromuscular dysplasia: U.S. Registry report. J Am Coll Cardiol, 2016; 67(14):1750-1. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/27056782>

Novikov DA, Swensen SJ, Buza JA, 3rd, Gidumal RH, and Strauss EJ. The effect of smoking on acl reconstruction: A systematic review. Phys Sportsmed, 2016; 44(4):335-41. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/27456300>

Neves CD, Lacerda AC, Lage VK, Lima LP, Tossige-Gomes R, et al. Oxidative stress and skeletal muscle dysfunction are present in healthy smokers. Braz J Med Biol Res, 2016; 49(11):e5512. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/27783809>

Jones GT, Ratz T, Dean LE, Macfarlane GJ, and Atzeni F. In axial spondyloarthritis, never smokers, ex-smokers and current smokers show a gradient of increasing disease severity - results from the scotland registry for ankylosing spondylitis (sirias). Arthritis Care Res (Hoboken), 2016. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/27899002>

tobaccoinaustralia.org.au

# Tobacco in Australia

## Facts & Issues

---

Hatta T, Werthel JD, Wagner ER, Itoi E, Steinmann SP, et al. Effect of smoking on complications following primary shoulder arthroplasty. J Shoulder Elbow Surg, 2016. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/27810265>

Dahlin E, Dahlin E, Andersson GS, Thomsen NO, Bjorkman A, et al. Outcome of simple decompression of the compressed ulnar nerve at the elbow - influence of smoking, gender, and electrophysiological findings. J Plast Surg Hand Surg, 2016:1-7. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/27454051>

Bahrami G, Vaeth M, Kirkevang LL, Wenzel A, and Isidor F. The impact of smoking on marginal bone loss in a 10-year prospective longitudinal study. Community Dent Oral Epidemiol, 2016. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/27649930>

Michienzi AE, Anderson CP, Vang S, and Ward CM. Lateral epicondylitis and tobacco use: A case-control study. Iowa Orthop J, 2015; 35:114-8. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/26361452>

Edman K, Ohrn K, Nordstrom B, Holmlund A, and Hellberg D. Trends over 30 years in the prevalence and severity of alveolar bone loss and the influence of smoking and socio-economic factors - based on epidemiological surveys in sweden 1983-2013. Int J Dent Hyg, 2015. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/26215672>

Degens H, Gayan-Ramirez G, and van Hees HW. Smoking-induced skeletal muscle dysfunction: From evidence to mechanisms. Am J Respir Crit Care Med, 2015. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/25581779>

Rom O, Kaisari S, Aizenbud D, and Reznick A. Involvement of e3 ubiquitin ligases in cigarette smoke associated muscle catabolism. Free Radic Biol Med, 2014; 75 Suppl 1:S5. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/26461398>

Prakash P, Rath S, Mukherjee M, Malik A, Boruah D, et al. Comparative evaluation of the marginal gingival epithelium in smokers and nonsmokers: A histomorphometric and immunohistochemical study. Int J Periodontics Restorative Dent, 2014; 34(6):781-6. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/25411733>

Kooij KW, Wit FW, Bisschop PH, Schouten J, Stolte IG, et al. Low bone mineral density in patients with well-suppressed hiv infection is largely explained by body weight, smoking and prior advanced hiv disease. J Infect Dis, 2014. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/25180239>

tobaccoinaustralia.org.au

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## Facts & Issues

Felson DT and Zhang Y. Smoking and osteoarthritis: A review of the evidence and its implications. Osteoarthritis Cartilage, 2014. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/25454371>

Emaus N, Wilsgaard T, and Ahmed LA. Impacts of body mass index, physical activity, and smoking on femoral bone loss: The tromso study. J Bone Miner Res, 2014; 29(9):2080-9. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/24676861>

Breitling LP. Smoking as an effect modifier of the association of calcium intake with bone mineral density. J Clin Endocrinol Metab, 2014; jc20142190. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/25387257>

Bon J, Kahloon R, Zhang Y, Xue J, Fuhrman CR, et al. Autoreactivity to glucose regulated protein 78 links emphysema and osteoporosis in smokers. PLoS ONE, 2014; 9(9):e105066. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/25216103>

Ropponen A, Korhonen T, Svedberg P, Koskenvuo M, Silventoinen K, et al. Persistent smoking as a predictor of disability pension due to musculoskeletal diagnoses: A 23 year prospective study of finnish twins. Prev Med, 2013; 57(6):889-93. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/24145202>

Gill TK and Hill CL. Smoking and osteoarthritis. Int J Rheum Dis, 2013; 16(6):766-7. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/24112876>

Baumgarten KM, Gerlach D, Galatz LM, Teefey SA, Middleton WD, et al. Cigarette smoking increases the risk for rotator cuff tears. Clinical Orthopaedics and Related Research, 2010; 468(6):1534-41. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/19283436>

### *3.13.1 Bone density, osteoporosis and the risk of fractures*

Battle, CE. (2019). Smoking status and outcomes in patients with rib fractures. *Eur J Trauma Emerg Surg*. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/31435699>

Amiri, S, & Behnezhad, S. (2019). Systematic review and meta-analysis of the association between smoking and the incidence of frailty. *Neuropsychiatr*. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/31300971>

Hernigou, J, & Schuind, F. (2019). Tobacco and bone fractures: A review of the facts and issues that every orthopaedic surgeon should know. *Bone Joint Res*, 8(6), 255-265. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/31346454>

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## Facts & Issues

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Trevisan, C, Alessi, A, Girotti, G, Zanforlini, BM, Bertocco, A, Mazzochin, M et al (2019). The Impact of Smoking on Bone Metabolism, Bone Mineral Density and Vertebral Fractures in Postmenopausal Women. *J Clin Densitom*. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/31350204>

van Dort, MJ, Driessen, JHM, Geusens, P, Romme, E, Smeenk, F, Wouters, EFM, & van den Bergh, JP W. (2019). Vertebral bone attenuation in Hounsfield Units and prevalent vertebral fractures are associated with the short-term risk of vertebral fractures in current and ex-smokers with and without COPD: a 3-year chest CT follow-up study. *Osteoporos Int*. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/31161317>

Grigorian, A, Lekawa, M, Dolich, M, Schubl, SD, Doben, AR, Kuza, CM et al (2019). Smoking is associated with an improved short-term outcome in patients with rib fractures. *Eur J Trauma Emerg Surg*. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/31115615>

Johnsen, MB, Pihl, K, Nissen, N, Sorensen, RR, Jorgensen, U, Englund, M, & Thorlund, JB. (2019). The association between smoking and knee osteoarthritis in a cohort of Danish patients undergoing knee arthroscopy. *BMC Musculoskelet Disord*, 20(1), 141. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/30935365>

Gonzalez, J, Rodriguez-Fraile, M, Rivera, P., Restituto, P, Colina, I, Calleja, MLD et al. Trabecular bone score in active or former smokers with and without COPD. *PLoS One*, 14(2), e0209777. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/30707701>

Al-Bashaireh, AM, Haddad, LG, Weaver, M, Chengguo, X, Kelly, DL, & Yoon, S. The Effect of Tobacco Smoking on Bone Mass: An Overview of Pathophysiologic Mechanisms. *J Osteoporos*, 2018, 1206235. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/30631414>

Ghadimi, R, Hosseini, SR, Asefi, S, Bijani, A, Heidari, B, & Babaei, M. Influence of Smoking on Bone Mineral Density in Elderly Men. *Int J Prev Med*. 2018 Dec 24;9:111. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/30687462>

van Dort, MJ, Driessen, JHM, Romme, E, Geusens, P, Willems, PC, Smeenk, F et al. Thoracic kyphosis on chest CT scans is associated with incident vertebral fractures in smokers. *J Bone Miner Res*, 2019. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/30690782>

Aspera-Werz, RH, Ehnert, S, Heid, D, Zhu, S, Chen, T, Braun, B et al. Nicotine and Cotinine Inhibit Catalase and Glutathione Reductase Activity Contributing to the Impaired Osteogenesis of SCP-1 Cells Exposed to Cigarette Smoke. *Oxid Med Cell Longev*, 2018, 3172480. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/30533170>

tobaccoinaustralia.org.au

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---

Sikora, M, Baranowska-Bosiacka, I, Rebacz-Marion, E, Olszowski, T, & Chlubek, D. The influence of the place of residence, smoking and alcohol consumption on bone mineral content in the facial skeleton. J Trace Elem Med Biol, 2019. 51, 115-122. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/30466919>

Johnson, JE, Troy, KL. Moderate-to-heavy smoking in women is potentially associated with compromised cortical porosity and stiffness at the distal radius. Arch Osteoporos. 2018 Aug 23;13(1):89. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/30140970>

Nguyen, VH. Smoking Status on Bone Health and Osteoporosis Prevalence. Osong Public Health Res Perspect. 2018 Aug;9(4):213-214. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/30159228>

Strozyk D, Gress TM, and Breitling LP. Smoking and bone mineral density: Comprehensive analyses of the third national health and nutrition examination survey (nhanes iii). Arch Osteoporos, 2018; 13(1):16. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/29502242>

Pham TT, Nguyen DN, Dutkiewicz E, Center JR, Eisman JA, et al. A profiling analysis of contributions of cigarette smoking, dietary calcium intakes, and physical activity to fragility fracture in the elderly. Sci Rep, 2018; 8(1):10374. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/29991706>

Guo R, Wu L, and Fu Q. Is there causal relationship of smoking and alcohol consumption with bone mineral density? A mendelian randomization study. Calcif Tissue Int, 2018. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/30008090>

Bon J, Zhang Y, Leader JK, Fuhrman C, Perera S, et al. Radiographic emphysema, circulating bone biomarkers, and progressive bone mineral density loss in smokers. Ann Am Thorac Soc, 2018. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/29328885>

Wen Z, Lin Z, Yan W, and Zhang J. Influence of cigarette smoking on osteonecrosis of the femoral head (onfh): A systematic review and meta-analysis. Hip Int, 2017:0. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/28574127>

Pompe E, Bartstra J, Verhaar HJ, de Koning HJ, van der Aalst CM, et al. Bone density loss on computed tomography at 3-year follow-up in current compared to former male smokers. Eur J Radiol, 2017; 89:177-81. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/28267536>

Namli Kalem M. The relationship between postmenopausal women's sclerostin levels and their bone density, age, body mass index, hormonal status, and smoking and consumption of coffee and dairy

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# Tobacco in Australia

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products. Arch Gynecol Obstet, 2017; 296(1):135. Available from:

<http://www.ncbi.nlm.nih.gov/pubmed/28510095>

Carrillo-Vega MF, Garcia-Pena C, Gutierrez-Robledo LM, and Perez-Zepeda MU. Vitamin d deficiency in older adults and its associated factors: A cross-sectional analysis of the mexican health and aging study. Arch Osteoporos, 2017; 12(1):8. Available from:

<http://www.ncbi.nlm.nih.gov/pubmed/28028727>

Sanel S, Sezgin G, Sariman N, Ugutmen E, and Solakoglu C. Bilateral non-traumatic hip fractures in a heavy smoker copd patient on inhaled steroids. Arch Osteoporos, 2016; 11(1):8. Available from:

<http://www.ncbi.nlm.nih.gov/pubmed/26781126>

Pompe E, de Jong PA, van Rikxoort EM, Gallardo Estrella L, de Jong WU, et al. Smokers with emphysema and small airway disease on computed tomography have lower bone density. Int J Chron Obstruct Pulmon Dis, 2016; 11:1207-16. Available from:

<http://www.ncbi.nlm.nih.gov/pubmed/27354779>

Curtis EM, Harvey NC, D'Angelo S, Cooper CS, Ward KA, et al. Bone mineral content and areal density, but not bone area, predict an incident fracture risk: A comparative study in a uk prospective cohort. Arch Osteoporos, 2016; 11(1):39. Available from:

<http://www.ncbi.nlm.nih.gov/pubmed/27915448>

Thorin MH, Wihlborg A, Akesson K, and Gerdhem P. Smoking, smoking cessation, and fracture risk in elderly women followed for 10 years. Osteoporos Int, 2015. Available from:

<http://www.ncbi.nlm.nih.gov/pubmed/26302684>

Teng GG, Pan A, Yuan JM, and Koh WP. Cigarette smoking and risk of incident gout in the singapore chinese health study. Arthritis Care Res (Hoboken), 2015. Available from:

<http://www.ncbi.nlm.nih.gov/pubmed/26714165>

Shen GS, Li Y, Zhao G, Zhou HB, Xie ZG, et al. Cigarette smoking and risk of hip fracture in women: A meta-analysis of prospective cohort studies. Injury, 2015. Available from:

<http://www.ncbi.nlm.nih.gov/pubmed/25956674>

No authors listed. Male smokers at higher risk than females for osteoporosis, fractures, in *Medical News Today* 2015. Available from: <http://www.medicalnewstoday.com/releases/290545.php?tw>.

Jaramillo JD, Wilson C, Stinson DJ, Lynch DA, Bowler RP, et al. Reduced bone density and vertebral fractures in smokers: Men and copd patients at increased risk. Ann Am Thorac Soc, 2015. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/25719895>

tobaccoinaustralia.org.au



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Dube CE, Liu SH, Driban JB, McAlindon TE, Eaton CB, et al. The relationship between smoking and knee osteoarthritis in the osteoarthritis initiative. Osteoarthritis Cartilage, 2015. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/26432984>

Cusano NE. Skeletal effects of smoking. Curr Osteoporos Rep, 2015. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/26205852>

Erratum: Reduced bone density and vertebral fractures in smokers. Men and copd patients at increased risk. Ann Am Thorac Soc, 2015; 12(7):1112. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/26203620>

Scolaro JA, Schenker ML, Yannascoli S, Baldwin K, Mehta S, et al. Cigarette smoking increases complications following fracture: A systematic review. J Bone Joint Surg Am, 2014; 96(8):674-81. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/24740664>

Miller S. How smoking can hinder fracture healing. Emerg Nurse, 2014; 22(4):28-30; quiz 1. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/24984741>

de Jong WU, de Jong PA, Vliegenthart R, Isgum I, Lammers JW, et al. Association of chronic obstructive pulmonary disease and smoking status with bone density and vertebral fractures in male lung cancer screening participants. J Bone Miner Res, 2014; 29(10):2224-9. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/24715549>

Abrahamsen B, Brask-Lindemann D, Rubin KH, and Schwarz P. A review of lifestyle, smoking and other modifiable risk factors for osteoporotic fractures. Bonekey Rep, 2014; 3:574. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/25228987>

The link between smoking, osteoporosis and fracture risk. Bonekey Rep, 2013; 2:485. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/24422168>

Hui M, Doherty M, and Zhang W. Does smoking protect against osteoarthritis? Meta-analysis of observational studies. Annals of the Rheumatic Diseases, 2011; [Epub ahead of print]. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/21474488>

Al-Mukhtar SA. The effect of cigarette smoking on bone healing in elderly individuals with colle's fracture. Tobacco Use Insights, 2010; 3:17-22. Available from: <http://www.la-press.com/the-effect-of-cigarette-smoking-on-bone-healing-in-elderly-individuals-article-a2225>

Davies-Tuck M, Wluka A, Forbes A, Wang Y, English D, et al. Smoking is associated with increased cartilage loss and persistence of bone marrow lesions over 2 years in community-based individuals.

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Rheumatology (Oxford), 2009; 48(10):1227–31. Available from: [http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Citation&list\\_uids=19696062](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&dopt=Citation&list_uids=19696062)

Nelson H, Nevitt M, Scott J, Stone K, and Cummings S. Smoking, alcohol, and neuromuscular and physical function of older women. Study of osteoporotic fractures research group. Journal of the American Medical Association, 1994; 272:1825-31. Available from: <http://jama.ama-assn.org/content/272/23/1825.short>

### *3.13.2 Delayed bone union*

Kim JH and Patel S. Is it worth discriminating against patients who smoke? A systematic literature review on the effects of tobacco use in foot and ankle surgery. J Foot Ankle Surg, 2017; 56(3):594-9. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/28476393>

Bazarov I, Peace RA, Lagaay PM, Patel SB, Lyon LL, et al. Early protected weightbearing after ankle fractures in patients with diabetes mellitus. J Foot Ankle Surg, 2017; 56(1):30-3. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/27989343>

Pearson RG, Clement RG, Edwards KL, and Scammell BE. Do smokers have greater risk of delayed and non-union after fracture, osteotomy and arthrodesis? A systematic review with meta-analysis. BMJ Open, 2016; 6(11):e010303. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/28186922>

Krause F, Younger AS, Baumhauer JF, Daniels TR, Glazebrook M, et al. Clinical outcomes of nonunions of hindfoot and ankle fusions. J Bone Joint Surg Am, 2016; 98(23):2006-16. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/27926682>

Kolkesen Sahin O, Cina Aksoy M, and Avunduk MC. Effects of resveratrol and cigarette smoking on bone healing: Histomorphometric evaluation. Turk J Med Sci, 2016; 46(4):1203-8. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/27513426>

### *3.13.3 Back pain*

Kawada, T. Risk factors for low back pain with special reference to current smoking. Spine J, 2019. 19(2), 372. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/30660241>

Parreira, P, Maher, CG, Steffens, D, Hancock, M, & Ferreira, ML. Risk factors for low back pain with special reference to current smoking. Spine J, 2019. 19(2), 373. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/30660242>

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Takaki, H, Ieiri, I, Shibuta, H, Onozuka, D, & Hagihara, A. The association of tobacco use with prescription of muscle relaxants, benzodiazepines, and opioid analgesics for non-cancer pain. *Am J Addict*, 2019. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/30623502>

Ngo K, Pohl P, Leme AS, Lee J, Di P, et al. Adamts5 deficiency protects mice from chronic tobacco smoking-induced intervertebral disc degeneration. *Spine (Phila Pa 1976)*, 2017. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/28570296>

Jazini E, Glassman SD, Bisson EF, Potts EA, and Carreon LY. Do former smokers exhibit a distinct profile before and after lumbar spine surgery? *Spine (Phila Pa 1976)*, 2017. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/28632644>

Han C, Kuang MJ, Ma JX, and Ma XL. Prevalence of modic changes in the lumbar vertebrae and their associations with workload, smoking and weight in northern china. *Sci Rep*, 2017; 7:46341. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/28402320>

Grisdela P, Jr., Buser Z, D'Oro A, Paholpak P, Liu JC, et al. Trends analysis of surgical procedures for cervical degenerative disc disease and myelopathy in patients with tobacco use disorder. *Eur Spine J*, 2017. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/28488093>

Green KT, Wilson SM, Dennis PA, Runnals JJ, Williams RA, et al. Cigarette smoking and musculoskeletal pain severity among male and female afghanistan/iraq era veterans. *Pain Med*, 2017. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/28340108>

Mantyselka P, Ali-Sisto T, Kautiainen H, Niskanen L, Viinamaki H, et al. The association between musculoskeletal pain and circulating ornithine: A population-based study. *Pain Med*, 2016. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/28034972>

Green BN, Johnson CD, Snodgrass J, Smith M, and Dunn AS. Association between smoking and back pain in a cross-section of adult americans. *Cureus*, 2016; 8(9):e806. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/27790393>

Bryan CJ, Wolfe AL, Morrow CE, Stephenson JA, Haskell J, et al. Associations among back and extremity pain with alcohol, tobacco, and caffeine use among us air force pararescuemen. *J Spec Oper Med*, 2015; 15(3):66-71. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/26360356>

Green BN and Johnson CD. Establishing a theoretical basis for research in musculoskeletal epidemiology: A proposal for the use of biopsychosocial theory in investigations of back pain and

tobaccoinaustralia.org.au

# Tobacco in Australia

## Facts & Issues

smoking. *J Chiropr Humanit*, 2013; 20(1):1-8. Available from:  
<http://www.ncbi.nlm.nih.gov/pubmed/25067926>

Shiri R, Karppinen J, Leino-Arjas P, Solovieva S, and Viikari-Juntura E. The association between smoking and low back pain: A meta-analysis. *American Journal of Medicine*, 2010; 123(1):87 e7–35 Available from: <http://aje.oxfordjournals.org/cgi/content/full/171/2/135>

Alkherayf F and Agbi C. Cigarette smoking and chronic low back pain in the adult population. *Clinical and Investigative Medicine*, 2009; 32(5):e360–7. Available from:  
<http://cimonline.ca/index.php/cim/article/view/6924>

### 3.13.4 Other musculoskeletal problems

Chan, SM, Cerni, C, Passey, S, Seow, HJ, Bernardo, I, Poel, CV et al. (2019). Cigarette Smoking Exacerbates Skeletal Muscle Injury Without Compromising its Regenerative Capacity. *Am J Respir Cell Mol Biol*. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/31461300>

Hulkkonen, S, Auvinen, J, Miettunen, J, Karppinen, J, & Ryhanen, J. (2019). Smoking as risk factor for carpal tunnel syndrome: A birth cohort study. *Muscle Nerve*. Available from:  
<https://www.ncbi.nlm.nih.gov/pubmed/31271456>

Hulkkonen, S, Auvinen, J, Miettunen, J, Karppinen, J, & Ryhanen, J. (2019). Smoking is associated with ulnar nerve entrapment: a birth cohort study. *Sci Rep*, 9(1), 9450. Available from:  
<https://www.ncbi.nlm.nih.gov/pubmed/31263183>

Muller, PT, Barbosa, GW, O'Donnell, DE, & Neder, JA. (2019). Cardiopulmonary and Muscular Interactions: Potential Implications for Exercise (In)tolerance in Symptomatic Smokers Without Chronic Obstructive Pulmonary Disease. *Front Physiol*, 10, 859. Available from:  
<https://www.ncbi.nlm.nih.gov/pubmed/31354517>

Silva, GRD, Rech, RS, Vidor, D, & Santos, KWD. (2019). Influence of Masticatory Behavior on Muscle Compensations During the Oral Phase of Swallowing of Smokers. *Int Arch Otorhinolaryngol*, 23(3), e317-e321. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/31360252>

Yamada, K, Wakaizumi, K, Kubota, Y, Matsudaira, K, & Shibata, M. (2019). Smoking is associated with greater pain intensity and pain-related occupational disability in Japanese workers. *J Anesth*, 33(4), 523-530. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/31278448>

Aspera-Werz, RH, Chen, T, Ehnert, S, Zhu, S, Frohlich, T, & Nussler, AK. (2019). Cigarette Smoke Induces the Risk of Metabolic Bone Diseases: Transforming Growth Factor Beta Signaling Impairment

tobaccoinaustralia.org.au

# Tobacco in Australia

## Facts & Issues

---

via Dysfunctional Primary Cilia Affects Migration, Proliferation, and Differentiation of Human Mesenchymal Stem Cells. *Int J Mol Sci*, 20(12). Available from: <https://www.ncbi.nlm.nih.gov/pubmed/31207955>

Khan, JS, Hah, JM, & Mackey, SC. (2019). Effects of smoking on patients with chronic pain: a propensity-weighted analysis on the Collaborative Health Outcomes Information Registry. *Pain*. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/31149975>

Lee, N, & Choi, CJ. (2019). Smoking and Diabetes as Predictive Factors of Accelerated Loss of Muscle Mass in Middle-Aged and Older Women: A Six-Year Retrospective Cohort Study. *J Womens Health (Larchmt)*. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/31120314>

Fonseca, J, Nellessen, AG, & Pitta, F. (2019). Muscle Dysfunction in Smokers and Patients With Mild COPD: A SYSTEMATIC REVIEW. *J Cardiopulm Rehabil Prev*. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/30870243>

De Vita, MJ, Maisto, SA, Ansell, EB, Zale, EL, & Ditre, JW. Pack-years of tobacco cigarette smoking as a predictor of spontaneous pain reporting and experimental pain reactivity. *Exp Clin Psychopharmacol*, 2019. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/30714754>

Kim, SK, & Choe, JY. Association between smoking and serum uric acid in Korean population: Data from the seventh Korea national health and nutrition examination survey 2016. *Medicine (Baltimore)*, 2019. 98(7), e14507. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/30762781>

Dobrowolski, P, Januszewicz, M, Witowicz, H, Warchol-Celinska, E, Klisiewicz, A, Skrzypczynska-Banasik, U et al. Prevalence of smoking and clinical characteristics in fibromuscular dysplasia. The ARCADIA-POL study. *Blood Press*, 2018; 1-8. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/30560699>

Astur, DC, Sbampato, IN, Arliani, GG, Franciozi, C, Debieux, P, & Cohen, M. Association of Tobacco Dependence, Alcoholism and Anabolic Steroids with Meniscal Ligamentous Injuries. *Acta Orthop Bras*, 2018. 26(4), 236-239. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/30210251>

Hooten, W. M. (2018). The Effects of Smoking on Spinal Cord Stimulation Outcomes: Another Reason to Quit. *Reg Anesth Pain Med*, 43(7), 687-688. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/30234840>

Mekhail, N, Azer, G, Saweris, Y, Mehanny, DS, Costandi, S, & Mao, G. (2018). The Impact of Tobacco Cigarette Smoking on Spinal Cord Stimulation Effectiveness in Chronic Spine-Related Pain Patients.

tobaccoinaustralia.org.au

# Tobacco in Australia

## Facts & Issues

---

Reg Anesth Pain Med, 43(7), 768-775. Available from:

<https://www.ncbi.nlm.nih.gov/pubmed/30192304>

Saunders L, Newman S, Aust R, and Krause JS. Qualitative study of barriers and facilitators to cigarette smoking after spinal cord injury. Rehabil Psychol, 2018. Available from:

<https://www.ncbi.nlm.nih.gov/pubmed/30024201>

Jee Y, Jeon C, Sull JW, Go E, and Cho SK. Association between smoking and gout: A meta-analysis.

Clin Rheumatol, 2018. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/29696438>

Park JS, Scott AT, Cooper MT, and Brigido SA. Effects of smoking on clinical foot and ankle practice. Foot Ankle Spec, 2017; 10(3):232-4. Available from:

<http://www.ncbi.nlm.nih.gov/pubmed/28511625>

Maher A, Leigh W, Brick M, Young S, Millar J, et al. Gender, ethnicity and smoking affect pain and function in patients with rotator cuff tears. ANZ J Surg, 2017. Available from:

<https://www.ncbi.nlm.nih.gov/pubmed/28702950>

Magnusson K, Mathiessen A, Hammer HB, Kvien TK, Slatkowsky-Christensen B, et al. Smoking and alcohol use are associated with structural and inflammatory hand osteoarthritis features. Scand J Rheumatol, 2017;1-8. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/28145147>

Katyayan PA and Katyayan MK. Effect of smoking status and nicotine dependence on pain intensity and outcome of treatment in indian patients with temporomandibular disorders: A longitudinal cohort study. J Indian Prosthodont Soc, 2017; 17(2):156-66. Available from:

<http://www.ncbi.nlm.nih.gov/pubmed/28584417>

Fanning N, Merriman TR, Dalbeth N, and Stamp LK. An association of smoking with serum urate and gout: A health paradox. Semin Arthritis Rheum, 2017. Available from:

<https://www.ncbi.nlm.nih.gov/pubmed/29398126>

Bedno SA, Jackson R, Feng X, Walton IL, Boivin MR, et al. Meta-analysis of cigarette smoking and musculoskeletal injuries in military training. Med Sci Sports Exerc, 2017. Available from:

<http://www.ncbi.nlm.nih.gov/pubmed/28614193>

Zhang Y, Zeng C, Wei J, Li H, Yang T, et al. Associations of cigarette smoking, betel quid chewing and alcohol consumption with high-sensitivity c-reactive protein in early radiographic knee osteoarthritis: A cross-sectional study. BMJ Open, 2016; 6(3):e010763. Available from:

<http://www.ncbi.nlm.nih.gov/pubmed/26969644>

tobaccoinaustralia.org.au

# Tobacco in Australia

## Facts & Issues

---

Suzuki T, Iwamoto T, Ochi K, Mito K, Nakamura T, et al. Cigarette smoking is associated with cubital tunnel syndrome. *Muscle Nerve*, 2016. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/27571367>

Psaila M and Ranson C. Risk factors for lower leg, ankle and foot injuries during basic military training in the maltese armed forces. *Phys Ther Sport*, 2016; 24:7-12. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/28038317>

Poudel DR, Karmacharya P, and Donato A. Risk of acute gout among active smokers: Data from nationwide inpatient sample. *Clin Rheumatol*, 2016. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/27658418>

Kang K, Shin JS, Lee J, Lee YJ, Kim MR, et al. Association between direct and indirect smoking and osteoarthritis prevalence in koreans: A cross-sectional study. *BMJ Open*, 2016; 6(2):e010062. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/26892791>

Gungor HR, Agladioglu K, Akkaya N, Akkaya S, Ok N, et al. The effects of smoking on ultrasonographic thickness and elastosonographic strain ratio measurements of distal femoral cartilage. *Int J Environ Res Public Health*, 2016; 13(4). Available from: <http://www.ncbi.nlm.nih.gov/pubmed/27110800>

Deibert CP, Gandhoke GS, Paschel EE, and Gerszten PC. A longitudinal cohort investigation of the development of symptomatic adjacent level compression fractures following balloon-assisted kyphoplasty in a series of 726 patients. *Pain Physician*, 2016; 19(8):E1167-E1172. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/27906947>

Clement ND, Goudie EB, Brooksbank AJ, Chesser TJ, and Robinson CM. Smoking status and the disabilities of the arm shoulder and hand score are early predictors of symptomatic nonunion of displaced midshaft fractures of the clavicle. *Bone Joint J*, 2016; 98-B(1):125-30. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/26733525>

Blackwell R, Schmitt LC, Flanigan DC, and Magnussen RA. Smoking increases the risk of early meniscus repair failure. *Knee Surg Sports Traumatol Arthrosc*, 2016. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/26831856>

Agladioglu K, Akkaya N, Gungor HR, Akkaya S, Ok N, et al. Effects of cigarette smoking on elastographic strain ratio measurements of patellar and achilles tendons. *J Ultrasound Med*, 2016; 35(11):2431-8. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/27663657>

Wendling D and Prati C. Smoking and spondyloarthritis: A bad connection. *Rheumatol Int*, 2015. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/26462673>

tobaccoinaustralia.org.au



# Tobacco in Australia

## Facts & Issues

---

. Schmelzer AC, Salt E, Wiggins A, Crofford LJ, Bush H, et al. Role of stress and smoking as modifiable risk factors for non-persistent and persistent back pain in women. Clin J Pain, 2015. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/25882868>

Sakellariou GT, Anastasilakis AD, Kenanidis E, Potoupnis M, Tsiridis E, et al. The effect of smoking on clinical and radiographic variables, and acute phase reactants in patients with ankylosing spondylitis. Rheumatol Int, 2015. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/26474866>

Nishii T, Kono AK, Nishio M, Kyotani K, Nishiyama K, et al. Dynamic blood oxygen level-dependent mr imaging of muscle: Comparison of postocclusive reactive hyperemia in young smokers and nonsmokers. Magn Reson Med Sci, 2015. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/25994035>

Lubowitz JH. Editorial commentary: Smoking is hazardous to shoulder health. Arthroscopy, 2015; 31(8):1606. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/26239792>

Krause JS, Cao Y, and Saunders LL. Changes in cigarette smoking after traumatic spinal cord injury. Rehabil Psychol, 2015. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/26371500>

Krause JS, Cao Y, Clark JM, Davis JF, and Saunders LL. Preinjury cigarette smoking among those with traumatic spinal cord injury. Rehabil Psychol, 2015. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/26322416>

Kojima G, Iliffe S, and Walters K. Smoking as a predictor of frailty: A systematic review. BMC Geriatr, 2015; 15:131. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/26489757>

Kim HC, Lamichhane DK, Jung DY, Kim HR, Choi EH, et al. Association of active and passive smoking with occupational injury in manual workers: A cross-sectional study of the 2011 korean working conditions survey. Ind Health, 2015. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/26051290>

Huang W, Qian Y, Zheng K, Yu L, and Yu X. Is smoking a risk factor for lumbar disc herniation? Eur Spine J, 2015. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/26160690>

Elmasry S, Asfour S, de Rivero Vaccari JP, and Travascio F. Effects of tobacco smoking on the degeneration of the intervertebral disc: A finite element study. PLoS ONE, 2015; 10(8):e0136137. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/26301590>

tobaccoinaustralia.org.au

# Tobacco in Australia

## Facts & Issues

---

Bishop JY, Santiago-Torres JE, Rimmke N, and Flanigan DC. Smoking predisposes to rotator cuff pathology and shoulder dysfunction: A systematic review. *Arthroscopy*, 2015. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/25801046>

Videm V, Cortes A, Thomas R, and Brown MA. Current smoking is associated with incident ankylosing spondylitis - the hunt population-based norwegian health study. *J Rheumatol*, 2014; 41(10):2041-8. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/25128509>

Trone DW, Cipriani DJ, Raman R, Wingard DL, Shaffer RA, et al. Self-reported smoking and musculoskeletal overuse injury among male and female u.S. Marine corps recruits. *Mil Med*, 2014; 179(7):735-43. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/25003858>

Stephens BF, Murphy GA, and Mihalko WM. The effects of nutritional deficiencies, smoking, and systemic disease on orthopaedic outcomes. *Instr Course Lect*, 2014; 63:393-9. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/24720324>

Steffl M, Bohannon RW, Petr M, Kohlikova E, and Holmerova I. Relation between cigarette smoking and sarcopenia - meta analysis. *Physiol Res*, 2014. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/25536323>

Schmidt TP, Pennington DL, Durazzo TC, and Meyerhoff DJ. Postural stability in cigarette smokers and during abstinence from alcohol. *Alcohol Clin Exp Res*, 2014; 38(6):1753-60. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/24721012>

Ospelt C, Camici GG, Engler A, Kolling C, Voetseder A, et al. Smoking induces transcription of the heat shock protein system in the joints. *Ann Rheum Dis*, 2014; 73(7):1423-6. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/24550170>

Kumar N, Khan M, Singh N, and Singh S. Impact of smoking on speed and coordination of upper limb movement. *Addict Health*, 2014; 6(3-4):155-8. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/25984283>

Hojgaard P, Glintborg B, Hetland ML, Hansen TH, Lage-Hansen PR, et al. Association between tobacco smoking and response to tumour necrosis factor alpha inhibitor treatment in psoriatic arthritis: Results from the danbio registry. *Ann Rheum Dis*, 2014. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/25063827>

Al-Obaidi S, Al-Sayegh N, and Nadar M. Smoking impact on grip strength and fatigue resistance: Implications for exercise and hand therapy practice. *J Phys Act Health*, 2014; 11(5):1025-31. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/25234783>

tobaccoinaustralia.org.au

# Tobacco in Australia

## Facts & Issues

Luca A, Mannion A, and Grob D. Should smoking habit dictate the fusion technique? *European Spine Journal*, 2010; 20(4):629–34. Available from: <http://www.springerlink.com/content/42nx4p40390121t8/fulltext.html>

### News reports:

#### *3.13.1 Bone density, osteoporosis and the risk of fractures*

No authors listed. Male smokers at higher risk than females for osteoporosis, fractures, in *Medical News Today* 2015. Available from: <http://www.medicalnewstoday.com/releases/290545.php?tw>.

#### *3.13.3 Back pain*

Rahhal N. Smokers are nearly 50% more likely to need spinal surgery to relieve excruciating back pain, in *Daily Mail Australia* 2018. Available from: <http://www.dailymail.co.uk/health/article-5247481/Smokers-nearly-50-percent-risk-PAIN.html#comments>.

Australian Institute of Health and Welfare. Back problems. 2017. Last update: Viewed 10 Jan 2017. Available from: <https://www.aihw.gov.au/reports/arthritis-other-musculoskeletal-conditions/back-problems/what-are-back-problems>.

listed Na. Smoking cigarettes can be a chronic pain in your neck, in *Science Daily* 2016. Available from: <https://www.sciencedaily.com/releases/2016/02/160218062227.htm>.

No authors listed. Study identifies low back pain risk factors in *Medical News Today* 2015 Available from: <http://www.medicalnewstoday.com/releases/291451.php?tw><http://www.medicalnewstoday.com/releases/291451.php?tw>.

Davies M. Smokers are three times more likely to suffer from back pain - but quitting can ease symptoms. *Daily Mail*, 2014. Available from: <http://www.dailymail.co.uk/health/article-2820125/Smokers-three-times-likely-suffer-pain-quitting-ease-symptoms.html>

#### *3.13.4 Other musculoskeletal problems*

Australian Institute of Health and Welfare. Osteoarthritis. 2017. Last update: Viewed 10 Jan 17. Available from: <https://www.aihw.gov.au/reports/arthritis-other-musculoskeletal-conditions/osteoarthritis/contents/what-is-osteoarthritis>.

tobaccoinaustralia.org.au