

Prevention of MSDs: easy when your plow is a pencil...

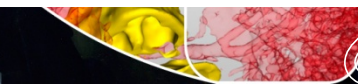
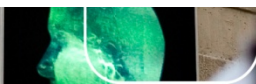
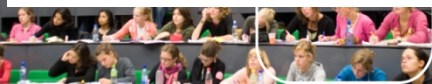
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Prevention occupational diseases & Optimizing work participation

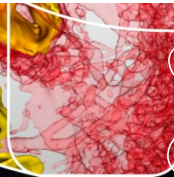


Prevention? Disease first approach!

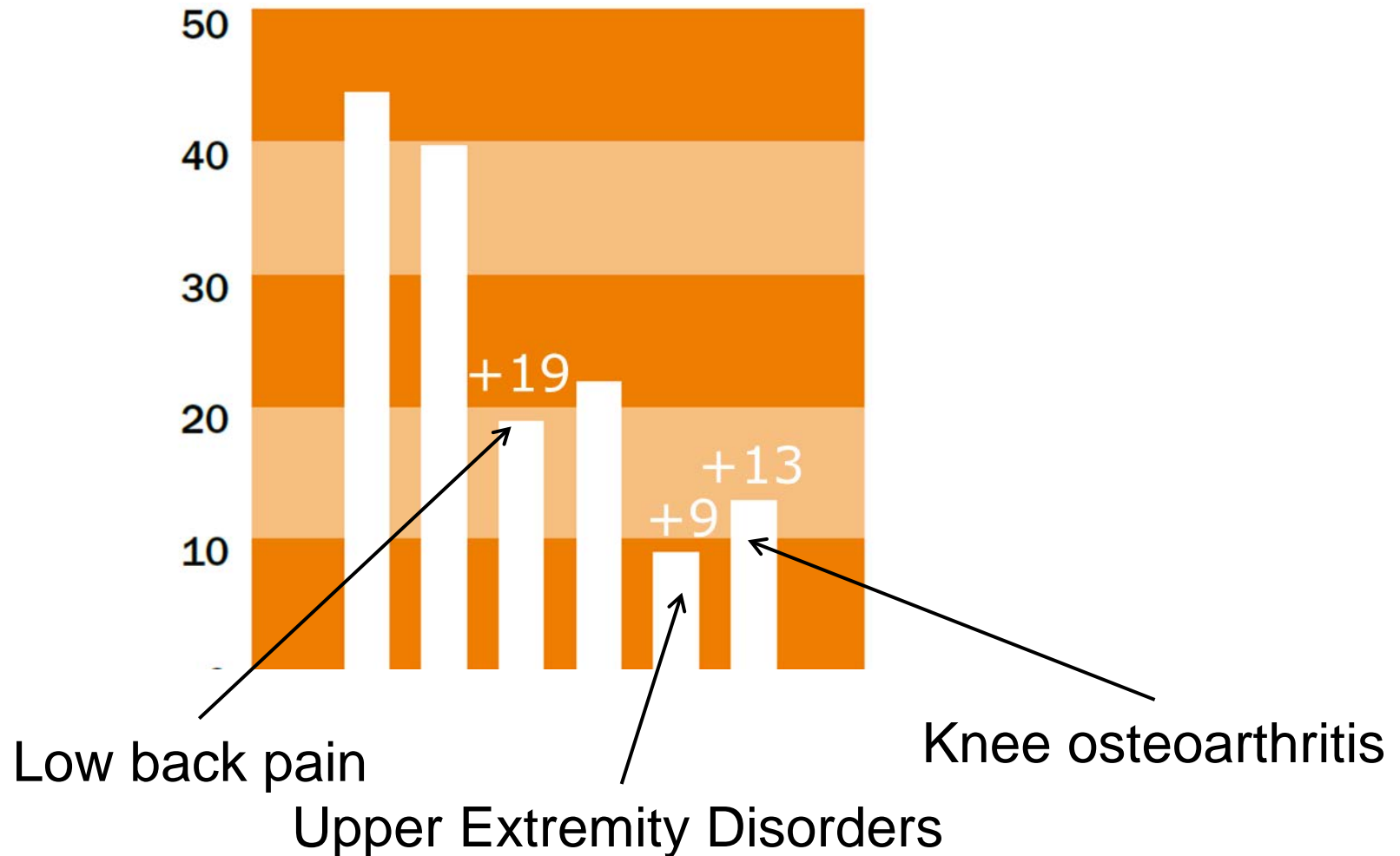
Dame Carol Black's Review of the health of Britain's working age population

Working for a healthier tomorrow

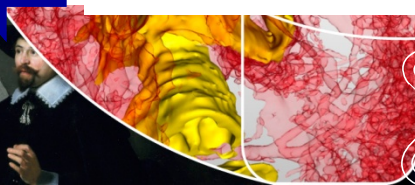
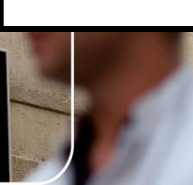
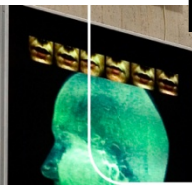
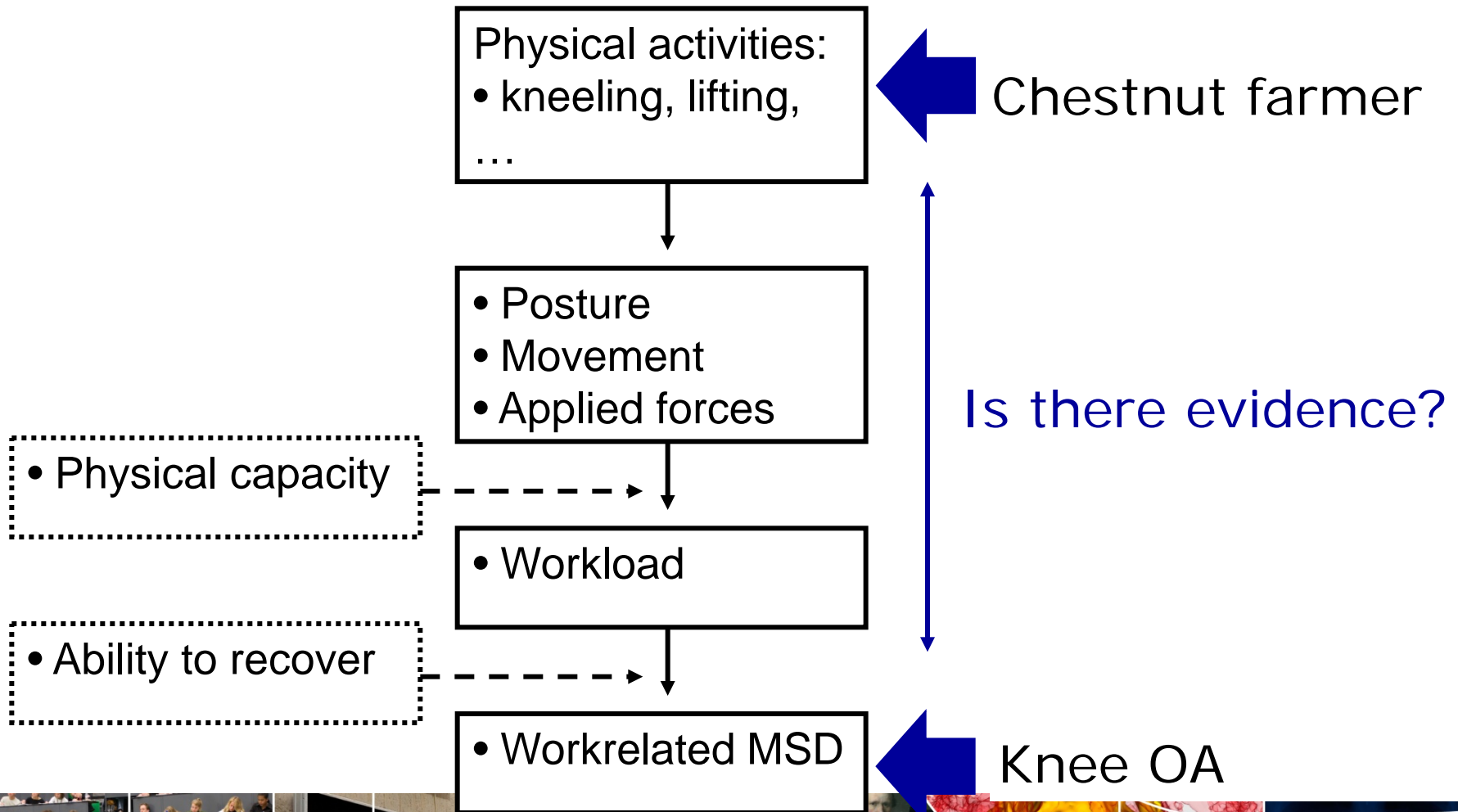
Many common diseases are directly linked to lifestyle factors, but these are generally not the conditions that keep people out of work. Instead, common mental health problems and **musculoskeletal disorders** are the **major causes of sickness absence and worklessness** due to ill-health. This is compounded by **a lack of appropriate and timely diagnosis and intervention.**

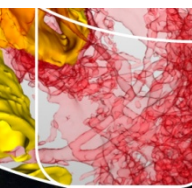
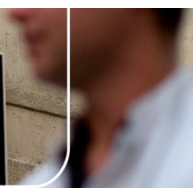
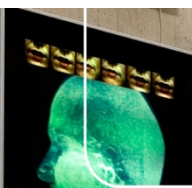
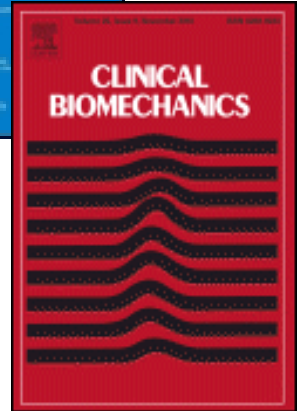
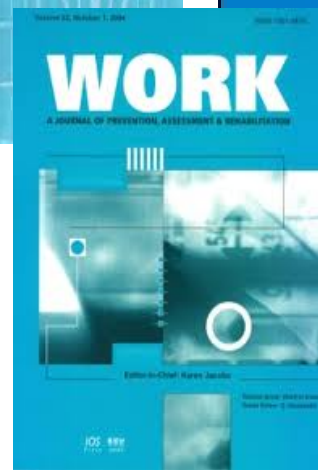
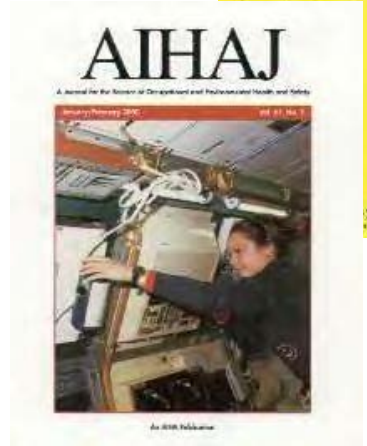
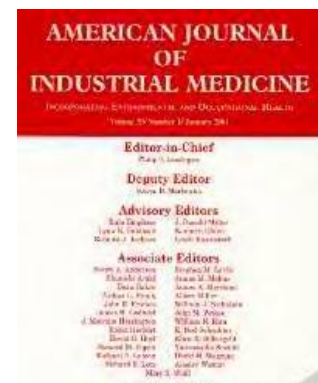
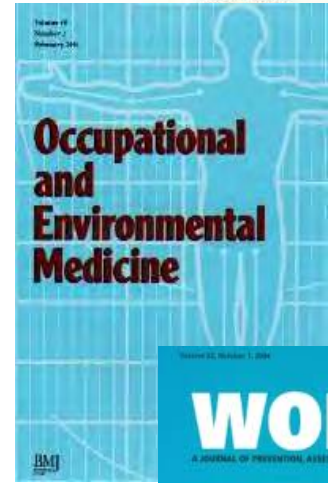


Same disease: more sick leave days



Simple cause-effect model





Study or Subgroup	log[Odds Ratio]	SE	no kneeling		kneeling		Odds Ratio	IV, Fixed, 95% CI
			Total	Total	Weight	IV, Fixed, 95% CI		
1.1.1 kneeling only; adj. for age gender								
Dawson 2003f	1.43031	0.6106	37	37	1.6%	4.18 [1.26, 13.83]		
Elsner 1996f	0.78846	0.76347	13	160	1.0%	2.20 [0.49, 9.82]		
Elsner 1996m	0.78846	0.40752	31	179	3.6%	2.20 [0.99, 4.89]		
Lau 2000f	-0.10536	0.19724	118	866	15.4%	0.90 [0.61, 1.32]		
Lau 2000m	0.33647	0.26781	29	303	8.4%	1.40 [0.83, 2.37]		

Yes, kneeling or squatting is a risk factor for knee OA even after taking into account age, gender, Body Mass Index and injuries

1.1.4 kneeling or squatting; age gender bmi

Klussmann 2010f	0.92426	0.31714	109	388	6.0%	2.52 [1.35, 4.69]
Klussmann 2010m	0.90422	0.28563	94	272	7.4%	2.47 [1.41, 4.32]
Seidler 2008m	0.87547	0.38626	79	353	4.0%	2.40 [1.13, 5.12]
Subtotal (95% CI)			282	1013	17.3%	2.47 [1.72, 3.56]

Heterogeneity: $\text{Chi}^2 = 0.01$, $\text{df} = 2$ ($P = 1.00$); $I^2 = 0\%$
 Test for overall effect: $Z = 4.86$ ($P < 0.00001$)

1.1.5 kneeling or squatting; age gender bmi injuries

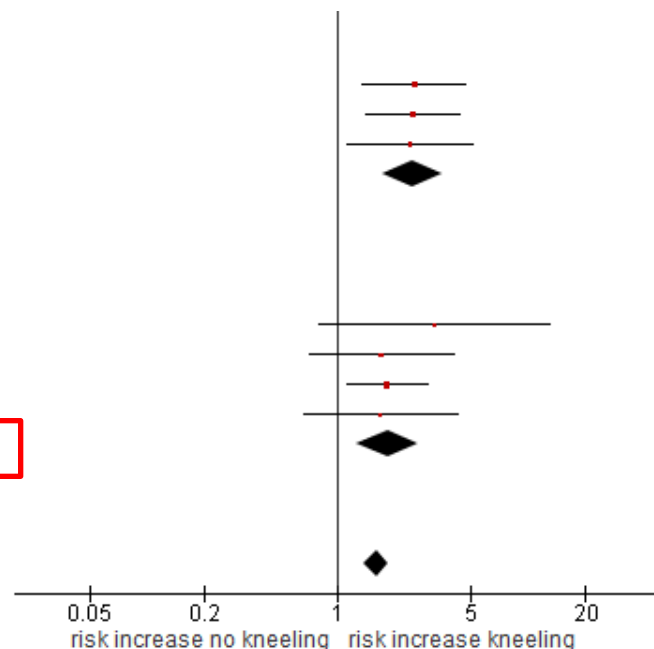
Coggon 2000f	1.16315	0.71125	14	514	1.2%	3.20 [0.79, 12.90]
Coggon 2000m	0.53063	0.44464	75	215	3.0%	1.70 [0.71, 4.06]
Manninen 2002f	0.59333	0.24935	184	201	9.6%	1.81 [1.11, 2.95]
Manninen 2002m	0.51879	0.47691	70	54	2.6%	1.69 [0.66, 4.29]
Subtotal (95% CI)			343	984	16.5%	1.84 [1.27, 2.68]

Heterogeneity: $\text{Chi}^2 = 0.68$, $\text{df} = 3$ ($P = 0.88$); $I^2 = 0\%$
 Test for overall effect: $Z = 3.20$ ($P = 0.001$)

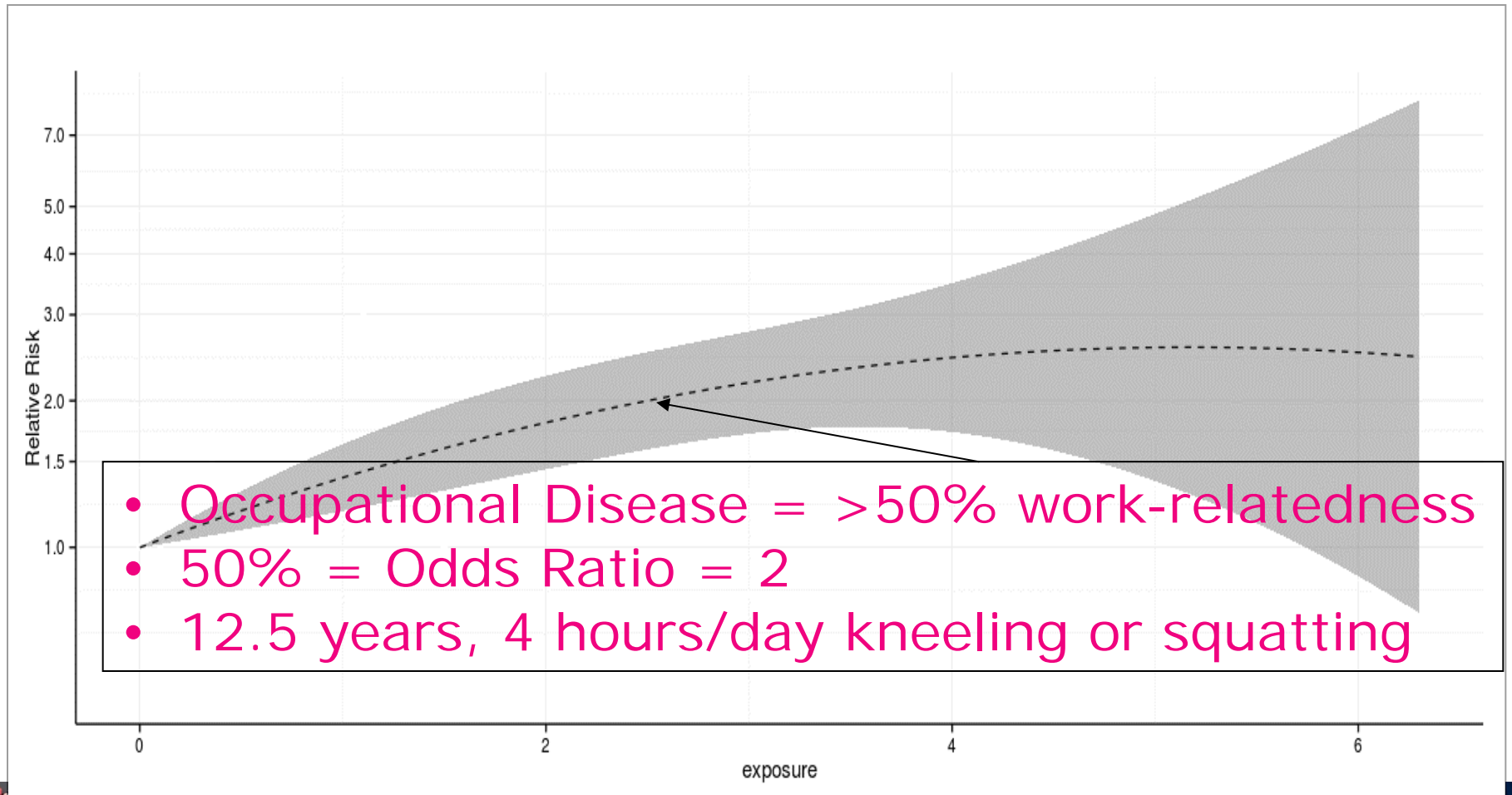
Total (95% CI)			987	4111	100.0%	1.60 [1.37, 1.86]
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Heterogeneity: $\text{Chi}^2 = 31.51$, $\text{df} = 16$ ($P = 0.01$); $I^2 = 49\%$
 Test for overall effect: $Z = 6.03$ ($P < 0.00001$)

Test for subgroup differences: $\text{Chi}^2 = 17.77$, $\text{df} = 4$ ($P = 0.001$), $I^2 = 77.5\%$



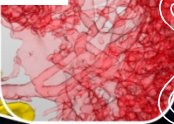
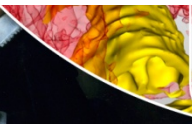
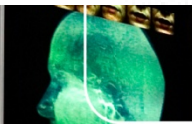
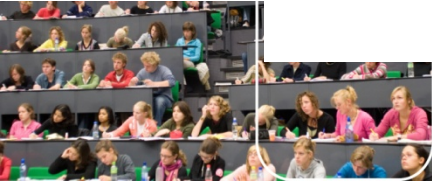
How much kneeling or squatting?



Mischke et al. Occupational exposure to knee loading and the risk of osteoarthritis of the knee, meniscal knee lesions and pre-patellar bursitis, *Scandinavian Journal of Work, Environment & Health* 2015



"I'll have an ounce of prevention."



Examples of disease specific unhealthy exposures

Disease	Exposure
Knee osteoarthritis	Kneeling or squatting for ≥ 4 hr working day during 12.5 years

Subacromial pain syndrome	Working with one hand up or above shoulder height for ≥ 1 hr working day
	...
Lumbar disc herniation	<i>Professional driving or whole body vibration does NOT seem to be a risk factor</i>
	...
Non-specific low back pain	Lifting or carrying of loads of >15 kg during at least 10% of an 8 hr working day

Sorry only in Dutch ☹️: www.beroepsziekten.nl/registratierichtlijnen/aandoeningen-bewegingsapparaat



Transparant & International peer review



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Safety and Health at Work

journal homepage: www.e-shaw.org



Review Article

Occupational Exposure to Knee Loading and the Risk of Osteoarthritis of the Knee: A Systematic Review and a Dose-Response Meta-Analysis

Jos Verbeek^{1,*}, Christina Mischke¹, Rachel Robinson¹, Sharea Ijaz¹, Paul Kuijer², Arthur Kievit³, Anneli Ojajarvi¹, Kaisa Neuvonen¹

¹Finnish Institute of Occupational Health, Cochrane Work Review Group, Neulaniementie 4, Kuopio, Finland

²Academic Medical Center, Coronel Institute of Occupational Health, Netherlands Center for Occupational Diseases, Amsterdam, The Netherlands

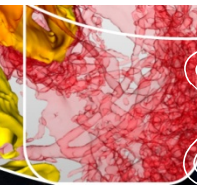
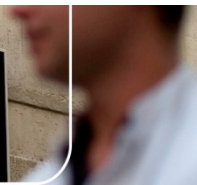
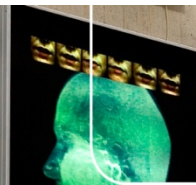
³Academic Medical Center, Orthopaedic Research Center Amsterdam, Amsterdam, The Netherlands

Criteria for determining the work-relatedness of

Nonspecific low-back pain

Work-related risk factors for specific shoulder disorders: a systematic review and meta-analysis

Henk F van der Molen,^{1,2,3} Chiara Foresti,⁴ Joost G Daams,^{1,2,3} Monique H W Frings-Dresen,^{1,2,3} P Paul F M Kuijer^{1,2,3}



Gut feeling versus hard data

Annals of
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ABOUT

ARTICLES

REVIEW

An Evidence-Based Multidisciplinary Practice Guideline to Reduce the Workload due to Lifting for Preventing Work-Related Low Back Pain

P Paul FM Kuijer, Jos HAM Verbeek, Bart Visser, Leo AM Elders, Nico Van Roden, Marion ER Van den Wittenboer, Marian Lebbink, Alex Burdorf and Carel TJ Hulshof

Freely available at aoemj.biomedcentral.com/articles/10.1186/2052-4374-26-16, and thanks to the Dutch Ministry of Social Affairs and Employment

How about our chestnut farmer?

Annals of Agricultural and Environmental Medicine 2017, Vol 24, No 1, 148–150

www.aem.pl

ORIGINAL ARTICLE

Knee osteoarthritis in a chestnut farmer – Case Report

Stefano Mattioli¹, Francesca Graziosi¹, Stefania Curti¹, Roberta Bonfiglioli¹, Antonio Argentino^{1,2}, Francesco Saverio Violante¹

¹ Department of Medical and Surgical Sciences, University of Bologna, Italy

² School of Occupational Medicine, Italy

Mattioli S, Graziosi F, Curti S, Bonfiglioli R, Argentino A, Violante F.S. Knee osteoarthritis in a chestnut farmer – Case Report. Ann Agric Environ Med. 2017; 24(1): 148–150. doi: 10.5604/12321966.1233903

Conclusion. Considering the lack of major individual risk factors for knee OA, it is reasonable to suppose that five decades of exposure to biomechanical overload as a chestnut farmer was a relevant risk factor for the onset of the disease.

Key words

knee osteoarthritis, chestnut farmer, agricultural workers' diseases, occupational exposure, biomechanical overload



Prevention: skate on thick ice!



- Use a clinically based diagnosis and not only self-reported complaints
- Establish whether work matters: the disease first approach!
- One message for all - clinicians, health & safety professionals, employers and workers about healthy work exposures

