

A week of physical inactivity has similar health costs to smoking a packet of cigarettes

Karim M Khan, Jennifer C Davis

Google knows everything, so we tried 'What is the health cost of a week of physical inactivity compared with the health cost of cigarette smoking?' 915 000 results provided no clear answer. PubMed, on the other hand, was concise. Two results but no help. What is your guess? Does a day of physical inactivity affect your health like just a couple of smokes (no big deal), or like a packet of 20? How much physical inactivity damages health as much as a carton of cigarettes?

PERSONAL HEALTHCARE UTILISATION ATTRIBUTABLE TO PHYSICAL INACTIVITY=US\$300 ANNUALLY

Given Google's lack of help, we reused some backs of envelopes. It is really not hard. The US population in 1999 was 272 million. The percentage inactive ranged from 29% to 48%, depending on your source. You could use both of these numbers for a sensitivity analysis, but let's be optimistic: 29%=79 million inactive Americans in 1999. These folks racked up \$24 billion in healthcare costs in 1999.¹ So, the annual per person cost of physical inactivity was US\$300. Easy.

PERSONAL HEALTHCARE UTILISATION ATTRIBUTABLE TO SMOKING=US\$1600–1800 ANNUALLY

What does *JAMA* tell us about US data for smoking?^{2,3} In 1998, smoking-attributable personal healthcare medical expenditures were \$75.5 billion. For each of the

approximately 46.5 million adult smokers in 1999, these costs represent \$1623 in excess medical expenditures.^{2,3} More helpful than Google. This cost is supported by a different source; in 1999, smokers in California incurred direct costs of \$1799 (54% of \$3331). We ignore the indirect costs of smoking for this discussion—the loss of productivity associated with premature deaths. The important ratio is that a smoker's attributable healthcare cost of US\$1600–1800 is five to six times that of an inactive person, all things being equal. Quick common sense check—smoking inflicts greater healthcare costs than being sedentary for 24 hours.⁴ This makes sense. All good so far.

COMPARING THE HEALTHCARE BURDEN OF PHYSICAL INACTIVITY WITH THAT OF SMOKING

So there we have it—physical inactivity is only a fifth or a sixth as bad as smoking. Or 17–20% of what a smoker suffers with every cigarette. Good news really! Be inactive with impunity! The average smoker consumes 16 cigarettes a day.⁵ Dividing 16 smokes by 5 or 6 equals 3 cigarettes a day. Thus, physical inactivity costs mirror a convenient packet of 20 in a week. To reiterate, we propose that a week of physical inactivity is like one packet of 20 cigarettes with respect to personal health costs. But back-of-the-envelope calculations are just that—a starting-point to launch a discussion. We look forward to detailed analyses by expert economists. And what about a website where one can confess to recent days of inactivity and see a phial fill up with an appropriate dose of black 'tar'—right in front of our eyes!

IN THIS ISSUE: CRICKET CONTROVERSY

Let's move from the rather mundane dollars and cents to the controversy of 'chucking' in cricket ('throwing' to those not enamoured with the game). Our South African colleagues reveal (*see page 420*) why this has been such a heated debate.⁶ As is often the case, science can explain why different people see different things. And if you are a cricket lover, take time to check out the newly published *Bob Woolmer's Art and Science of Cricket* (Struik Publishers). The title words—both Art and Science—abound in this beautifully integrated tome. More details on the BJSM Blog (<http://blogs.bmj.com/bjism/>).

SPOT THE MCL INJURY THAT ACCOMPANIES PATELLAR DISLOCATION

Patellar dislocation can be challenging to manage—and outcomes can be poor. From Dublin comes the discovery that among 80 MRI-proven patellar dislocations, 50% had associated acute medial collateral ligament (MCL) injuries, and of those, half were grade II or III (*see page 411*). Important for physicians, physiotherapists, surgeons and radiologists to know! Immediately applicable impact—exactly BJSM's goal!⁷

OUT OF ROOM, BUT THERE'S MORE!

Thanks to our Editors for last month's shoulder issue—great feedback already. The theme continues (*see page 407*) with more insight into shoulder impingement in tennis from experts in Brazil.⁸ And for clinicians wrestling with return to play decisions in players with a hamstring injury, see the clinical predictors that were useful in an Australian football cohort (*see page 415*).⁹ Next month—a different type of football takes centre stage! But in the meantime, let's be role models of physical activity for our patients.¹⁰

Provenance and peer review Not commissioned; not externally peer reviewed.

The reference list is published online only at <http://bjism.bmj.com/content/44/6>

Accepted 30 March 2010

Br J Sports Med 2010;**44**:395.

doi:10.1136/bjism.2010.074047

The University of British Columbia, Vancouver, Canada

Correspondence to Dr Karim M Khan, The University of British Columbia, UBC, Centre for Hip Health and Mobility, Suite 320-5950 University Blvd, Vancouver V6T 1Z3, Canada; karim.khan@ubc.ca