

Dr Paul Annett

www.orthosports.com.au

29-31 Dora Street, Hurstville



ORTHOSPORTS
ORTHOPAEDIC & SPORTS MEDICINE SERVICE

Dr Paul Annett
Sport & Exercise Medicine Physician

Exercise Prescription (Part 1)

Dr Paul Annett
MBBS FACSEP
Sports and Exercise
Medicine Physician



ORTHOSPORTS
ORTHOPAEDIC & SPORTS MEDICINE SERVICE

Dr Paul Annett
Sport & Exercise Medicine Physician

Physical (In)activity in Australia

THURSDAY AUGUST 17 2017 11

To Walsh (left) and Charlotte Ingram know the physical and mental health benefits of exercise. Picture: Sam Rutty

You need to move it or the blues hit

EXCLUSIVE
ROSE SHEWAN

MORE than half of Australians have not exercised in three months — putting their physical and mental health at risk, alarming new research says. And doctors are warning that inactivity is as dangerous to health as smoking.

Data from health insurer Medibank shows 53 per cent of the national population is now depressed, up from 31 per cent seven years ago, while 25.4 per cent of people now suffer from stress, compared with 22.8 per cent previously.

Cases of anxiety have risen from 11.6 per cent in 2010 to 18.7 per cent now — almost one in five people.

But, despite the research also showing that exercise can reduce depression, anxiety and stress, 51 per cent of people said they had not exercised in the past three months.

The study showed that people who engaged in group exercise activity were half as likely to suffer depression — just 7 per cent. Mental health issues also rise as community connection is lost, with and 2-in-3 Aussies now suffering from social isolation.

Those who connect to their community by exercising with others are less likely to be affected by depression,

anxiety and stress. There are strong links between mental health condition and low activity, particularly depression, anxiety and stress levels, Medibank chief medical officer Dr Linda Swan said.

Dr Swan said simply walking to the bus or gardening could be enough to ward off the negative health effects of inactivity — a problem that was not isolated to those who were overweight.

"Just being inactive is bad for you and it's really concerning to find out that more than half of people haven't exercised in the past three months. It's a real sign we don't have enough focus on this from a public health concern," she said.

"The research around effects of inactivity is becoming more compelling and there is a growing sense that being inactive is as bad for you as smoking."

Good Friends to Walsh and Charlotte Ingram both enjoy yoga to keep up their physical and mental health. "It's good for the body and good for the mind," Ms Ingram, of Double Bay, said. "I do it every day, sometimes in the mornings or sometimes after work. It's a fantastic way to unwind."

In a bid to get people moving, Medibank's new Free + Active program will offer hundreds of free exercise events over the next five years, starting with 40 new park runs across the nation.

18.7% are anxious

15.3% are depressed

51% have not exercised in three months

25.4% are stressed

Percentage of Australian population. Source: Medibank research

50% of Australians have NOT exercised in the last 3 months

80% Canadians (Australians) don't meet activity guideline criteria!

(And 90% of Americans)

What is going on????
Why is it important???



ORTHOSPORTS
ORTHOPAEDIC & SPORTS MEDICINE SERVICE

Dr Paul Annett
Sport & Exercise Medicine Physician

Show of Hands

**Who accumulated the
guideline dose of
physical activity
yesterday?**



Aims of This Talk

1. To make you all believers in the substantial health benefits of exercise



2. To have the skills to safely prescribe exercise to your patients



What is Exercise

- Physical activity (PA)
 - Using your muscles to move your body, so that you use up energy (eg gardening, vacuuming)
- Exercise
 - A type of PA which is planned, structured and involves some repetition of movement (eg brisk walking, dancing, cycling)
- Physical Fitness
 - A set of skills to do specific PA (eg for tennis)
- Sport
 - A form of delivery of physical activity and exercise
- **WHO suggest that physical inactivity (PI) is a disease
4th leading overall cause of mortality and morbidity
worldwide**



Why Exercise???

- **Multiple Health Benefits**

- **PHYSICAL**

- Cardiovascular disease, obesity, diabetes, breast and bowel cancer, asthma, joint disorders, muscular strength, bone strength, immune function

- **PSYCHOLOGICAL/COGNITIVE**

- Reduction in depression, anxiety, improved sense of well-being, sleep, Alzheimer's disease

- **COMMUNITY**

- Social, reduced public health costs, inspiring others



POP QUIZ - Which kills more people in the US?

Smoker

Diabetes

Obesity

Low
fitness



What about combining them?



Smokadiabesity / low fitness

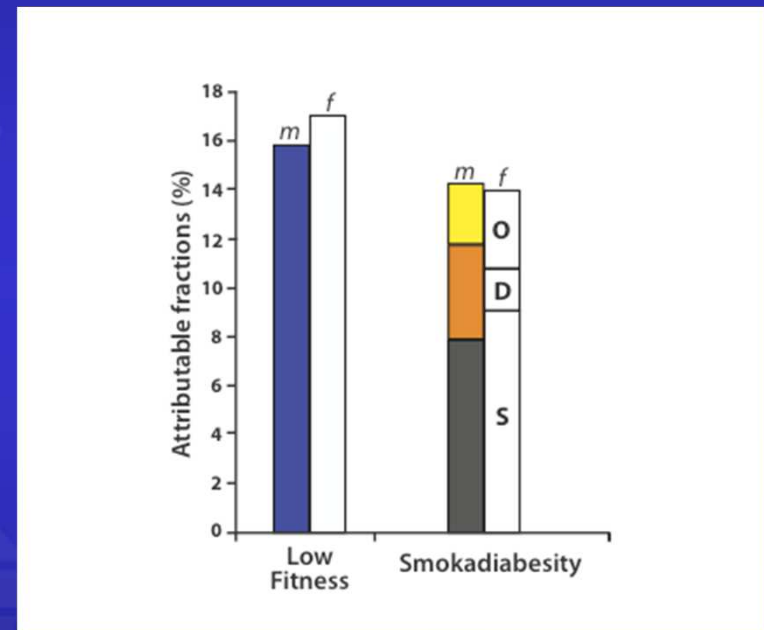
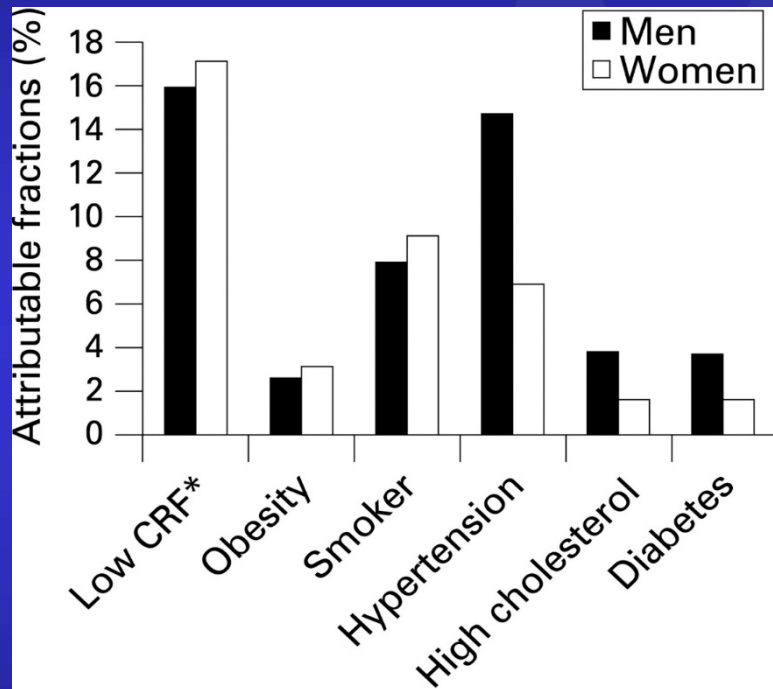
Which kills more Americans?

Smokadiab/low fitness

- a) 75/25?
- b) 60/40?
- c) 50/50?



LOW FITNESS 50:50



Attributable fractions (%) for all-cause deaths in 40 842 (3333 deaths) men and 12 943 (491 deaths) women in the Aerobics Center Longitudinal Study.

Health Benefits of Exercise - facts

#1 Exercise is more effective than medication for the treatment of stroke and as effective for the secondary prevention of coronary heart disease and diabetes. (Naci H, BMJ 2013)

#2 A 150 min of moderate-to-vigorous physical activity (MVPA) accumulated per week can reduce the risk of most major chronic diseases by 25–50%.

#3 A 15 min of MVPA per day (or 75 min/week) is associated with a ~15% relative mortality risk reduction, and benefits increase with the dose.



historical Research

Physical activity prescription: a critical opportunity to address a modifiable risk factor for the prevention and management of chronic disease: a position statement by the Canadian Academy of Sport and Exercise Medicine

Jane S Thornton,¹ Pierre Frémont,² Karim Khan,³ Paul Poirier,⁴ Jonathon Fowles,⁵ Greg D Wells,⁶ Renata J Frankovich⁷

- Study of London Bus drivers and conductors
 - Compared to more active conductors, drivers were more likely to:
 - Suffer a heart attack
 - Die younger
 - Gain weight (and increase their belt size)



ORTHOSPORTS

ORTHOPAEDIC & SPORTS MEDICINE SERVICE

Morris JN. Occupation and coronary heart disease. *Arch Intern Med* 1959; 104: 903-907

Dr Paul Annett

Sport & Exercise Medicine Physician

Exercise as Medicine

- ‘If exercise was a pill it would be a best seller’
- This begs the question:
- WHY AREN'T WE DOING THIS????

1. Personally

2. Professionally – (see next slide)



Barriers to Exercise Prescription

‘The practitioner’

- The ‘too hard basket’
- Undervaluing importance
- Lack of skills/knowledge
- Lack of time
- Not an exerciser



Exercise Prescription

Where to start

- What are your needs, goals, motivation?
 - Not dying as soon!
 - Better health
 - Better aerobic fitness
 - Strength gains
 - Appearance
- Stages of Change model
 - Pre-contemplation, Contemplation, Preparation, Action, Maintenance, Termination



Group Activity

How would you help motivate a person you care about to adopt physical activity behaviour (guidelines)



- Top 4 reasons why you should prescribe exercise/physical activity.....



4 Top Reasons to exercise

- #4 Reduces cancer risk – Colon (50%), Breast, Lung (up to 30%), Prostate
- #3 Health Cost of 1 day inactivity = smoking 3 cigarettes.
1 week inactivity = smoking 1 pack of cigarettes
- #2 Improves brain function (dementia)
- #1 Low fitness kills most Americans
- ‘SMOKADIABESITY’



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?' There were 915 000 results but no clear answer. PubMed, on

approximately 46.5 million adult smokers in 1999, these costs represent \$1628 in excess medical expenditures.²⁸ More helpful than Google. This cost is supported by a different source: in 1999, smokers in

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/bjsm/>).

Practical Steps for Exercise Prescription

- **Ask** about physical activity (PA) at every consultation (2-3mins).
 - On average how many days /wk do you engage in PA
 - On those days how long do you exercise for
- A **written prescription** building towards accumulating 150 min/week is crucial—it takes just 30 s to do this.
- Encourage the patient to **measure** (eg, pedometer and smart phone) and record their PA (paper and mobile app).
- **Refer** on as appropriate—consider appropriate physicians, physiotherapists, clinical exercise physiologists, certified fitness instructors.
- **Follow-up** with the patient to chart progress, set goals, solve problems, and identify and use social support.



Practical steps for exercise prescription – 10 steps

Practical steps for immediate exercise prescription in general practice

- Ask about physical activity at every consultation; consider it a vital sign
- Apply the “6As” to guide counselling—assess, advise, agree, assist, arrange, and assess again
- A written (“green”) prescription is crucial—it takes just 30 seconds
- Display a poster with the physical activity guidelines prominently in the waiting room
- Consider categorising patients into frailty levels. There is no need to medicalise physical activity for most people
- Refer on—consider appropriate physicians, physiotherapists, clinical exercise physiologists, and certified fitness instructors
- Know your local resources for activity—the people and the places
- Remember that walking is free; find tips at: www.everybodywalk.org
- Follow up the patient to chart progress, set goals, solve problems, and identify and use social support
- Lobby to make low cost, evidence based, cognitive and behavioural interventions widely available for referral by healthcare providers

BMJ

BMJ 2011;343:d4141 doi: 10.1136/bmj.d4141

Page 1 of 2

EDITORIALS

Prescribing exercise in primary care

Ten practical steps on how to do it

Karim M Khan *professor*¹, Richard Weiler *specialist in sport and exercise medicine*², Steven N Blair *professor*³

¹Department of Family Practice, University of British Columbia, Vancouver, BC, Canada; ²STC, Sport and Musculoskeletal Medicine Clinic,



ORTHOSPORTS

ORTHOPAEDIC & SPORTS MEDICINE SERVICE

Dr Paul Annett
Sport & Exercise Medicine Physician

Exercise Prescription

- Most guidelines (WHO/ACSM/Etc) suggest:
- Aim for **30 mins 5X/week** (most days).
- Can be accumulated/non-consecutive (3X10mins)
- Any change in intensity will improve cardiovascular fitness
- ‘Can I afford to be inactive 23.5 hours per day’
- WHO MET THESE GUIDELINES LAST WEEK???

Limiting our daily sitting/lying to just 23.5 hours: too ambitious?

Karim Khan

Thank you to *BJSM* guest editor Steven Blair¹ and all our January and February authors (<http://bjsm.bmj.com/content/>) up the freeway embankment, stepping over the steel barriers, dashing hopefully across breaks in eight lanes of Hummers



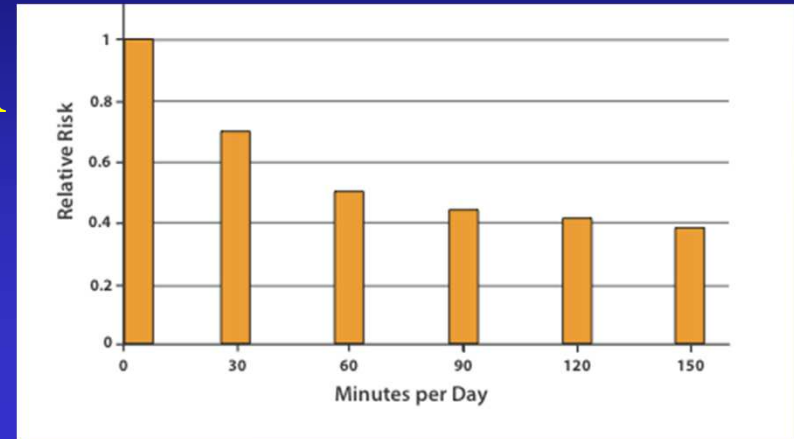
ORTHOSPORTS

ORTHOPAEDIC & SPORTS MEDICINE SERVICE

Dr Paul Annett
Sport & Exercise Medicine Physician

Secrets for your own health

- #1 60 minutes > 30 mins ALL issues
`1 pill or 2`



Why not: Brush teeth 3-4 times weekly...Showering 'most days of the week'

#2 The fit vs fat argument...

- Low fitness kills skinny people. Fit overweight people don't die
- Exercise for health, not for skinny jeans



What Exercise?

- It doesn't have to be torture!!
- The options are endless
 - Walk, run, swim, bike, park, dog, kids, gym, weights, teams, dance, aerobics, pilates, yoga, etc, etc, etc
- Patient specific
 - What do you LIKE to do??



Barriers to Physical Inactivity

‘The patient’

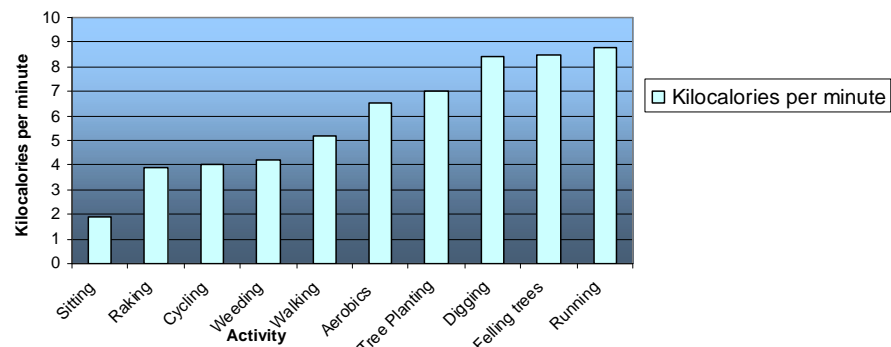
- ‘The Excuses’
 - Too busy
 - Too embarrassed
 - Don’t know how
 - Hate gyms
 - Too much of a spectator
 - Too big a hurdle
 - Don’t enjoy it
 - Etc, Etc, Etc
- ‘The motivator’
- See 4 top reasons...



Green Gym



Calories used in different activities



Adapted from btecv Green Gym publications (DOH) 2003
Courtesy Dr John O'Riordan/ICGP National Taskforce on Obesity

An Exercise Template

- This is very individual – however.....
- Monitor steps daily. 5000 minimum. Aim for 10,000
- Aerobic exercise (walk, swim, bike +/- stationary) 3-4X/week for 30-60 mins
 - Variety is important
- Strength session 1-2 X/wk. 30-60mins.
 - Supervision essential
- Strength/flexibility session. Pilates/yoga. 1X/wk.60 mins
- Recovery day



Safety

- For generally healthy individuals, moderate exercise is safe. If inactive, begin with lower intensity and progress in duration and intensity over time.
- Progression towards recommended volumes of moderate-to-vigorous physical activity (MVPA) can be prescribed to patients with chronic disease. If inactive initially, a normal clinical evaluation is recommended. If already active, medical clearance is recommended before engaging in vigorous activities.
- Initiation of high-intensity physical activity, such as high-intensity interval training, should be preceded by establishing a 'base fitness level' over several weeks through regular MVPA.



Take home messages

- Low fitness kills 8 times as many people as obesity!
- Low fitness kills 2 x as many people as smoking!
- If all inactive persons were getting 150 mins of PA per week = 16 lives saved per 100 persons
- If all smokers were nonsmokers = 8 lives saved per 100 persons.
- WE JUST CANNOT AFFORD NOT TO DO THIS AND PASS THIS INFORMATION ON!!!!

