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SEMLI
Sport, Exercise Medicine and Lifestyle Institute

Sport, Exercise Medicine and Lifestyle Institute (SEMLI)

University of Pretoria

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SEMLI Main Research Areas (1-5 years)

1. **Prevention, management and rehabilitation of patients with *Non-Communicable Diseases (NCD's) of lifestyle* through patient-centred, comprehensive, lifestyle interventions that include promotion of physical activity and participation in recreational sport**
2. **Prevention and management of *medical complications and illness in sports*, including all physically active individuals participating in recreational sports**
3. **Prevention, management and rehabilitation of *musculoskeletal and other injuries in sports*, including all physically active individuals participating in recreational sports**
4. **Enhancing *excellence in sports performance***
5. **Focus on *sport and physical activity in society* – including medico-legal, economics, governance, management, ethics, and education**

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SEMLI facilities

- Extensive clinical services platform
  - Sport and Exercise Medicine
  - Biokinetics
  - Physiotherapy
  - Sports Nutrition
  - Sports Psychology
  - Sports Orthopedics
  - Internal Medicine
  - Radiology
  - Sports Science
  - Full Biomechanics laboratory
- High Performance Centre (athlete residence facility)
- Indoor Sports Centre
- Training and rehabilitation gymnasia
- SA Cricket Center of excellence
- TuksSport High school
- Extensive sports facilities

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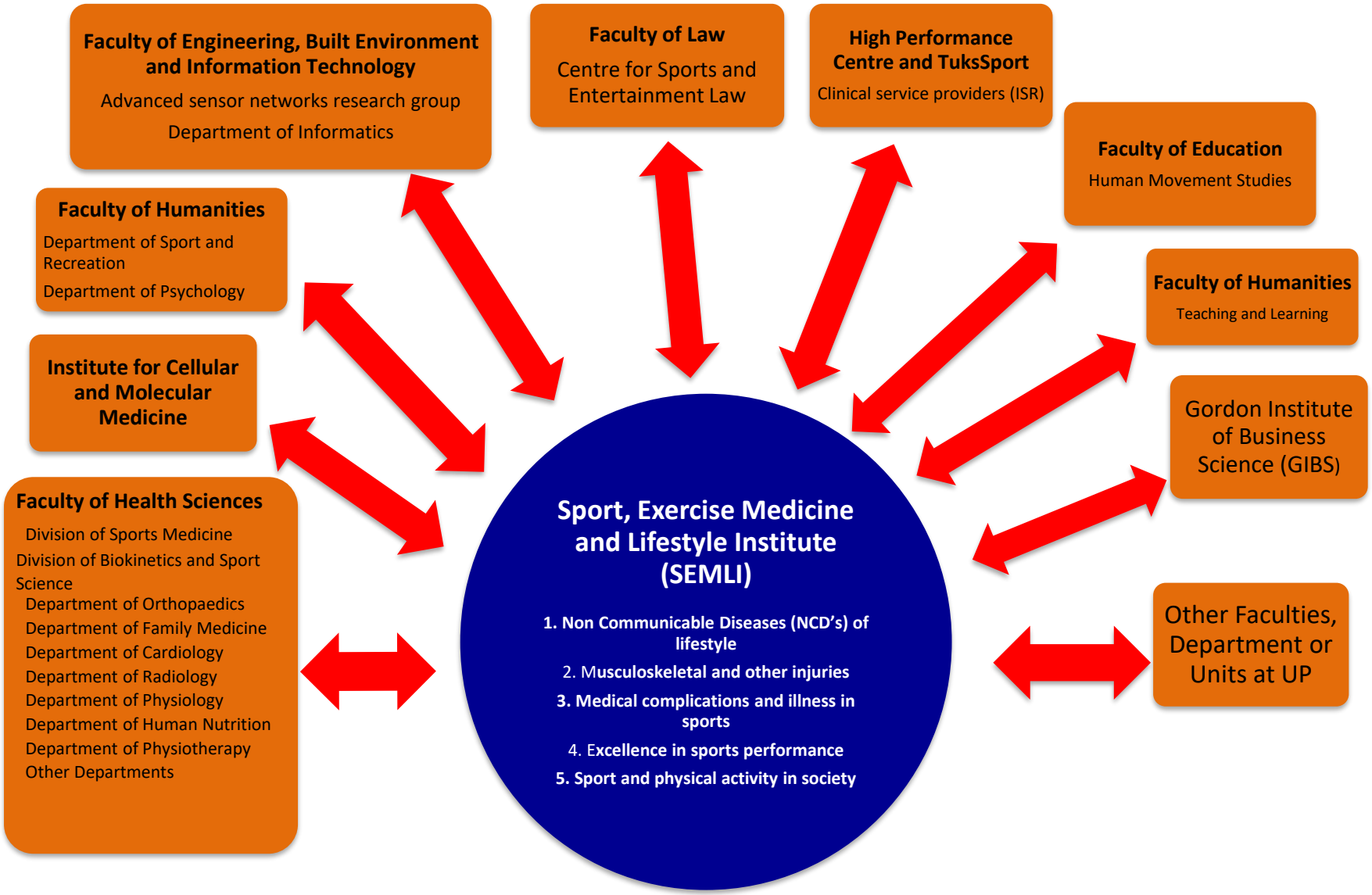
Interfaculty collaboration of SEMLI at UP



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The drug every doctor should prescribe to every patient, every day!

Prof Martin Schwellnus

Professor of Sport and Exercise Medicine

Sport, Exercise Medicine and Lifestyle Institute (SEMLI) and Section Sports Medicine, Department of Orthopedics, Faculty of Health Sciences, University of Pretoria

Director: IOC Research Centre of South Africa, University of Pretoria, South Africa

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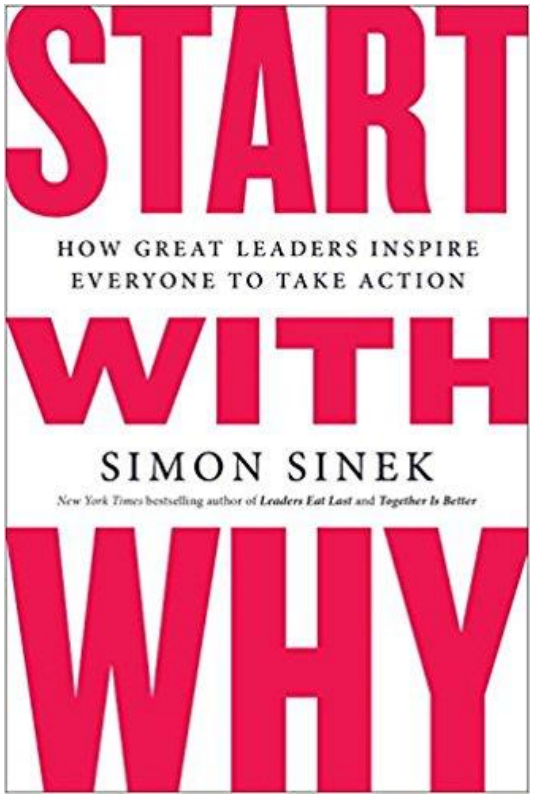
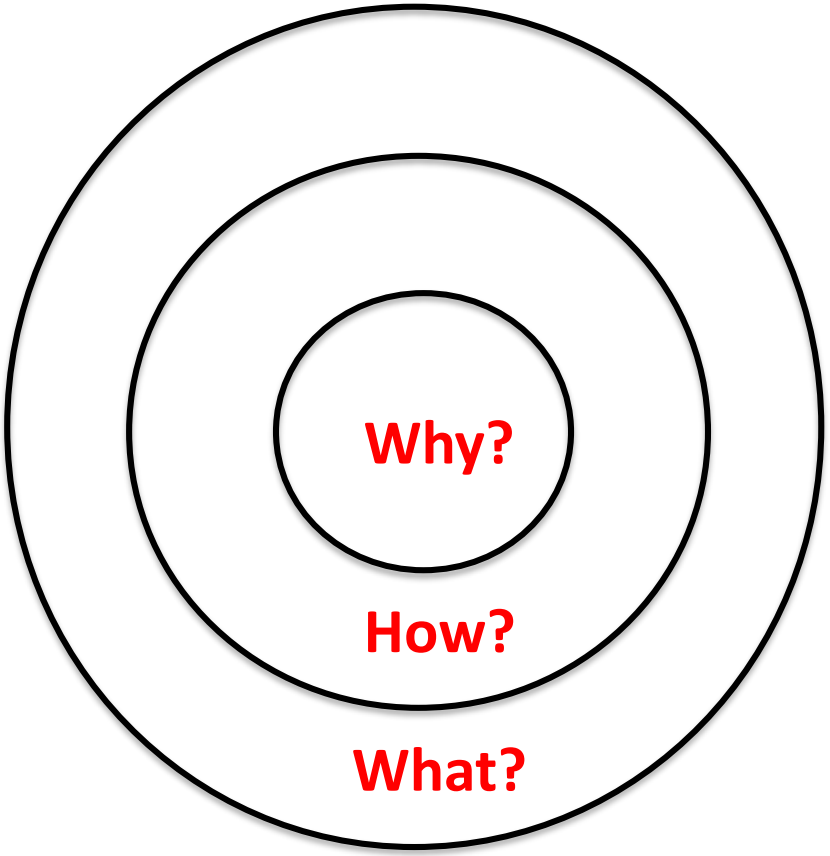
"The drug everyone should take! Why, How, What?"





Simon Sinek (Book in 2009)

"Start with Why: How great leaders inspire everyone to take action"

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Starting with the "Why"

Every person knows What they do daily / weekly

- Your work, habits, eating, sleeping, and function

Some people know How they do things differently to others (or from the day before)

- The activities / habits / things you do that set you apart from others or what you did previously

Few people know Why they do things differently

- The purpose, cause or belief that inspires you do things differently

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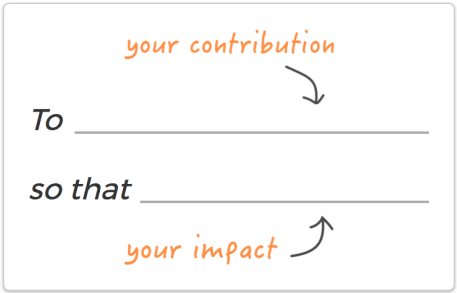
Lets start with generating a "Why Statement"?

A "Why" statement clearly expresses your unique *contribution, decision and action* and it's *impact*

- The ***impact*** is the difference you want to make in your life
- The ***contribution*** is the primary decision and action that you take towards making this impact
- These two components provide a filter through which you can make decisions, every day, to act with purpose



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The purpose of this morning is to

generate a "Why" statement that will make the biggest impact on our health and for the health of those around us (family, friends, patients, employees _ _ _ _)

your contribution

To _____

so that _____

your impact

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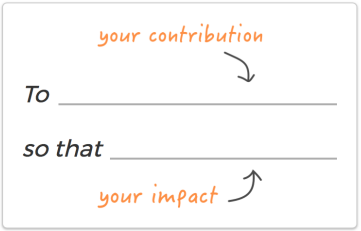
What is your "Why" statement today ...

When I leave this room today I am going to _____ ? _____

for my health and for the health of my patients



"The drug everyone should take!"

Why

should I consider prescribing a "drug" for every patient?

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My story!

- 1984 during my medical internship at the Helen Joseph hospital (J G Strijdom)
- Mrs J (a 67 year old patient) with repeated admissions to hospital
- Severe shortness of breath due to chronic lung disease (COPD) from smoking – respiratory failure
- Each admission - stabilised, optimal medication, discharged after a few days with home oxygen
- One night at 2am _ _ _ _ _ _ ?

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My story!

- A few weeks later Mrs J died – following longstanding chronic suffering
- The cause of death was **chronic obstructive pulmonary disease** as a result of smoking (one of the non-communicable disease of lifestyle)
- It is a disease that is preventable
- My focus in medicine started changing from "curative" to "preventive" medicine
- Decided to further my career in Sport and Exercise Medicine

My story! – many years later

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Responsibility of sport and exercise medicine in preventing and managing chronic disease: applying our knowledge and skill is overdue

Gordon O Matheson,[1] Martin Klügl,[1] Jiri Dvorak,[2,3] Lars Engebretsen,[4] Willem H Meeuwisse,[5] Martin Schwellnus,[6] Steven N Blair,[7] Willem van Mechelen,[8] Wayne Derman,[6] Mats Börjesson,[9,10] Fredrik Bendiksen,[11] Richard Weiler[12]

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[2]Schulthess Clinic, Zurich, Switzerland
[3]FIFA Medical Assessment & Research Center (F-MARC), Zurich, Switzerland
[4]Orthopaedic Center, Ullevål University Hospital, University of Oslo, Norway
[5]Sport Injury Prevention Research Centre, University of Calgary, Calgary, Alberta, Canada
[6]UCT Research Unit for Exercise Science & Sports Medicine, Department of Human Biology University of Cape Town, Newlands, South Africa
[7]Departments of Exercise Science and Epidemiology & Biostatistics, Arnold School of Public Health, University of South Carolina, Columbia, South Carolina, USA
[8]Department of Public and Occupational Health and EMGO Institute for Health & Care Research, VU University Medical Center, Amsterdam, The Netherlands
[9]Astrands Laboratory, The Swedish School of Sports and Health Sciences and Karolinska University Hospital, Stockholm, Sweden
[10]Department of Acute and Cardiovascular Medicine, Sahlgrenska University Hospital/Ostra, Goteborg, Sweden
[11]Oslo Sports Trauma Research Center, Norwegian School of Sport Sciences, Oslo, Norway
[12]Sport & Exercise Medicine, Homerton University Hospital NHS Trust, London, UK

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Accepted 25 August 2011

ABSTRACT

Background The rapidly increasing burden of chronic disease is difficult to reconcile with the large, compelling body of literature that demonstrates the substantial preventive and therapeutic benefits of comprehensive lifestyle intervention, including physical activity, smoking cessation and healthy diet. Physical inactivity is now the

Recommendation A clinical discipline within medicine is needed to adopt disease prevention as its own reason for existence. Sport and exercise medicine is well positioned to champion the cause of prevention by promoting physical activity.

Conclusion This article puts forward a strong case for the immediate, increased involvement of clinical sport and exercise medicine in the prevention and treatment of chronic disease and offers specific recommendations for how this may begin.

INTRODUCTION

Clinical sport and exercise medicine has grown remarkably over the past three decades with high-quality scientific meetings, excellent clinical training programmes, codes of conduct,[1] clinical guidelines and a robust research literature.[2] During its nascence, sports medicine was the harbinger of a new approach to medicine with the hope that the knowledge and skills gleaned from the care of athletes would be translated to the general population for the purpose of improving physical function, health and vitality and countering the rapidly increasing prevalence of chronic diseases. By and large, this has not yet occurred.

The reasons for the disparity between what we know regarding the health benefits of physi-

PHYSICAL ACTIVITY, EXERCISE AND CHRONIC DISEASE

Physical activity, exercise and health

Physical activity has numerous positive effects on health.[10–12] Regular, moderate-intensity physical activity reduces morbidity and lowers mortality through effects that are primary (reducing the development of disease),[13–18] secondary (early detection and treatment to minimise morbidity)[19–21] and tertiary (reduction of disease-related complications and restoration of function).[22–24] The available data indicate widespread generalisability across other countries, cultures, gender, age and ethnicity.[25 26]

Physical activity is the most effective single therapy among a suite of comprehensive lifestyle interventions that include nutrition, therapeutic education and psychosocial intervention. Even physical activity such as walking or cycling for transportation are important determinants of longevity.[27] The impact of physical activity is

2011

Part of an international

Prevention and management of non-communicable disease: the IOC consensus statement, Lausanne 2013

Editor's choice
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Gordon O Matheson,[1,2] Martin Klügl,[3] Lars Engebretsen,[4,5,6] Fredrik Bendiksen,[4] Steven N Blair,[7] Mats Börjesson,[8,9] Richard Budgett,[5] Wayne Derman,[10] Uğur Erdener,[5] John P A Ioannidis,[11] Karim M Khan,[12] Rodrigo Martinez,[13] Willem Van Mechelen,[10,14,15] Margo Mountjoy,[16] Robert E Sallis,[17] Martin Schwellnus,[10] Rebecca Shultz,[1,2] Torbjørn Soligard,[5] Kathrin Steffen,[4] Carl Johan Sundberg,[18] Richard Weiler,[19,20] Arne Ljungqvist[5]

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Received 27 August 2013
Accepted 27 August 2013

ABSTRACT

Morbidity and mortality from preventable, non-communicable chronic disease (NCD) threatens the health of our populations and our economies. The accumulation of vast amounts of scientific knowledge has done little to change this. New and innovative thinking is essential to foster new creative approaches

physical activity, diet and lifestyle. (5) Mobilise resources and leverage networks to scale and distribute programmes of prevention. True innovation lies in the ability to align thinking around these core strategies to ensure successful implementation of NCD prevention and management programmes within healthcare. The IOC and SEM community are in an ideal position to lead this disruptive change. The outcome of the consensus meeting was the creation of the IOC Non-Communicable Diseases ad hoc Working Group charged with the responsibility of moving this agenda forward.

INTRODUCTION

Non-communicable diseases (NCD, box 1) account for 60% of all deaths and 44% of premature deaths.[1 2] NCD are now the greatest cause of morbidity and mortality even in developing countries where they account for twice as many deaths as HIV/AIDS, tuberculosis, malaria and all other infectious diseases combined.[1–3] They are a barrier to achieving the UN's Millennium Development Goals[4] and are a global threat to our economies in addition to our health. A report by the World Economic Forum and Harvard University estimates that chronic diseases, currently costing 2% of the global gross domestic product (GDP), will cost the global economy US$30 trillion over the next two

2013

IOC President Dr Jacques

prevention.[6] He called for safe and accessible public spaces for physical activity and sport, partnerships with transportation and urban planning, increased physical education and better sport infrastructure and organisation, thus building on the comprehensive, broad-based, long-term approaches recommended by International Society for Physical Activity and Health (ISPAH), the Grand Challenges Global Partnership, the WHO, the European Commission (EC), the World Economic Forum (WEF), Active Canada, Exercise is Medicine, the Organization for Economic Co-operation and Development (OECD)[1–3 8–13] and many others.

To date, efforts to promote a 'home' for prevention within healthcare have largely failed. Waiting for comprehensive, emergent reform of dysfunctional healthcare systems is unrealistic. Likewise, results from reductionist research studies have not been successfully implemented and scaled in such a way as to create population-wide impact.

To cite: Matheson GO, Klügl M, Engebretsen L, *et al. Br J Sports Med* 2013;**47**:1003–1011.

Get your phones and be ready!

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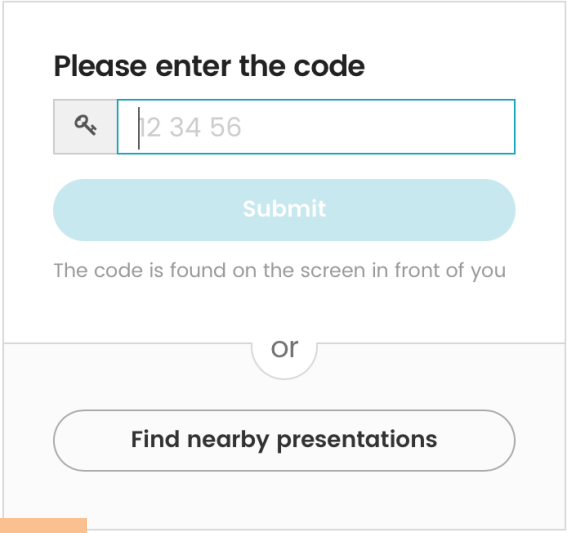
Audience participation

1. Get your smartphone or tablet
2. Are you connected to the internet?
3. Get wifi access
4. Go to www.menti.com
5. Ready to go if you see this displayed?
6. You will be given a code (number) to enter
7. Choose name (a

Mentimeter



Ready to go?

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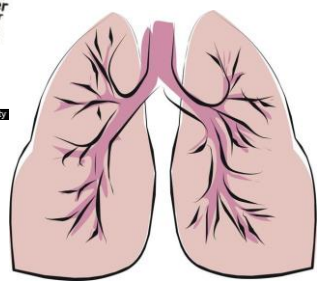
Non-Communicable Diseases (NCDs)

In 2016, non communicable (or lifestyle related) diseases (NCDs) killed > 65% of all people <u>worldwide</u>

Four groups of diseases accounted for 82% of all NCD deaths

- Cardiovascular diseases
- Cancers
- Chronic lung diseases
- Diabetes



WHO Global Status Report on NCDs – January 2015

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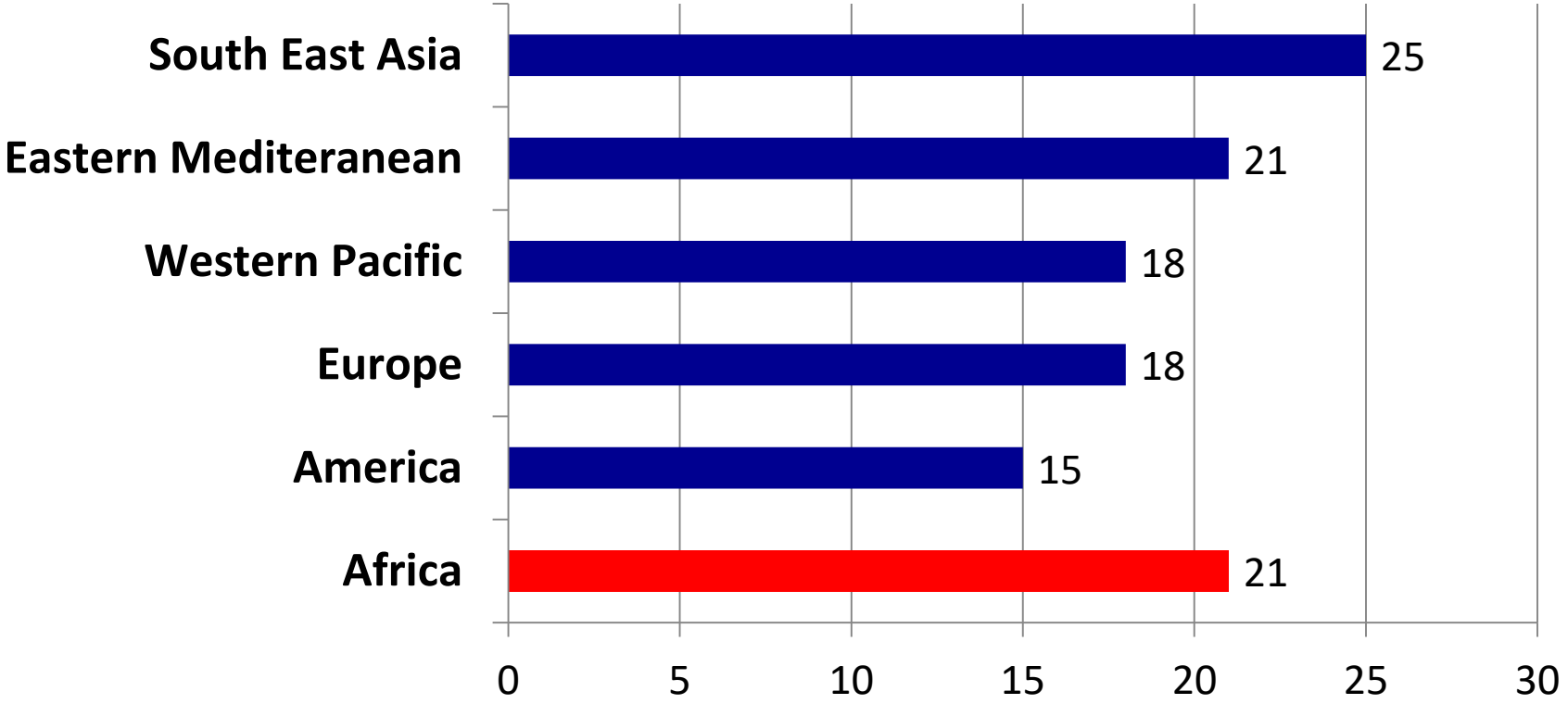
What about NCDs in Africa?

Probability of dying from NCD's in Africa vs. rest of the world



Probability of dying (%) from one of the four main NCD's (both sexes, 30-70 years age)

WHO Global Status Report on NCDs – January 2015

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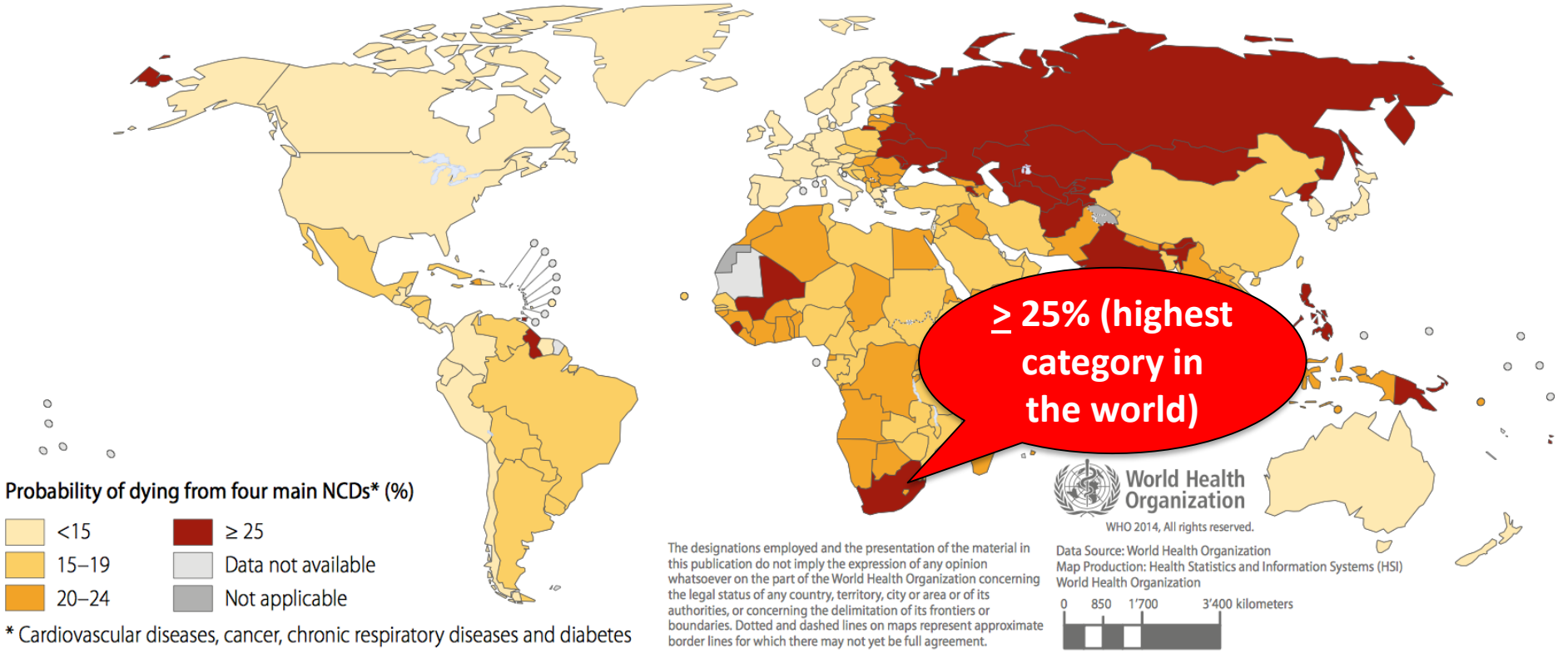
What about NCDs in South Africa?

Probability of dying (%) from one of the 4 main NCD's (30-70years)



WHO Global Status Report on NCDs – January 2015

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Lifestyle intervention for chronic disease

The drug every doctor should prescribe to every patient, every day!

Prof Martin Schwellnus

Professor of Sport and Exercise Medicine

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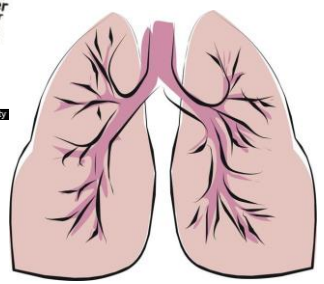

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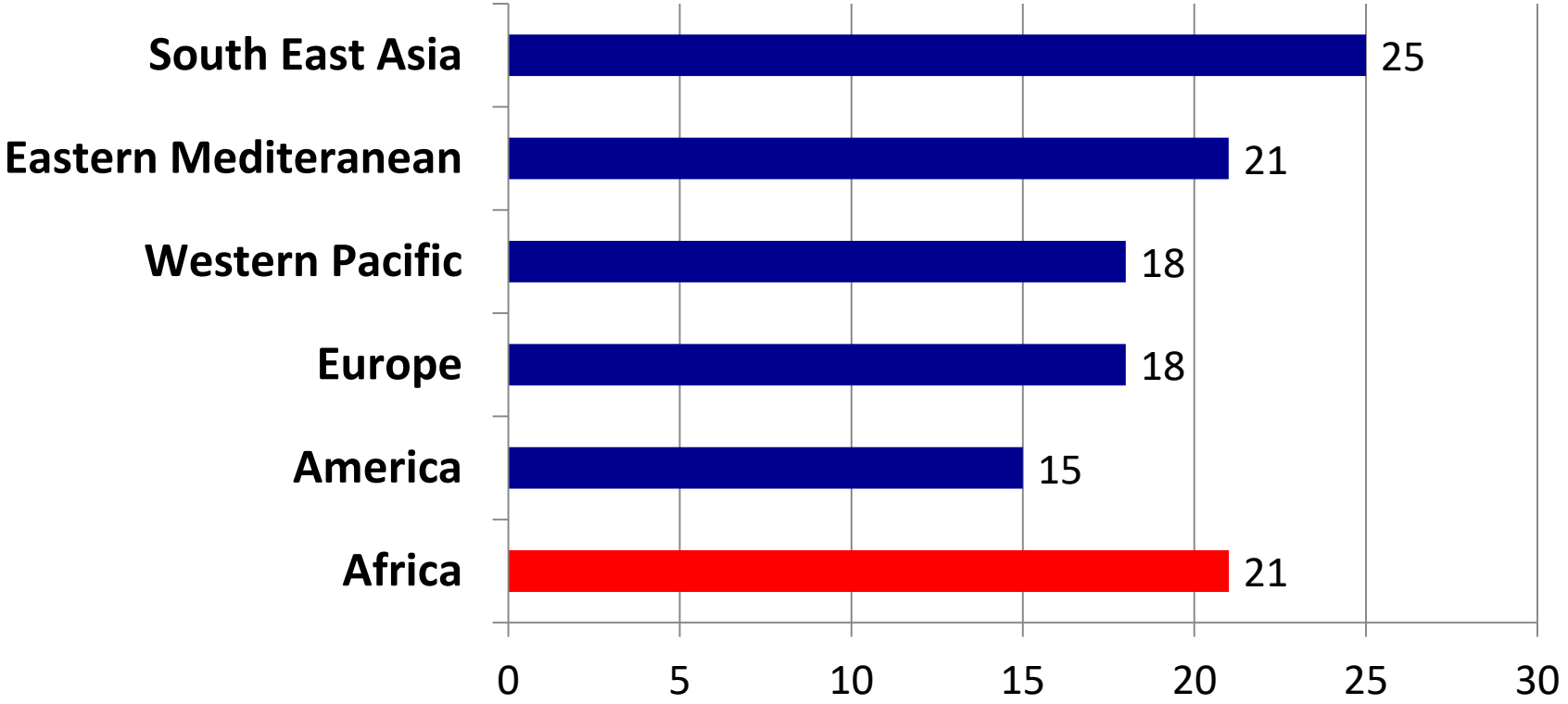
What about NCDs in Africa?

Probability of dying from NCD's in Africa vs. rest of the world



Probability of dying (%) from one of the four main NCD's (both sexes, 30-70 years age)

WHO Global Status Report on NCDs – January 2015

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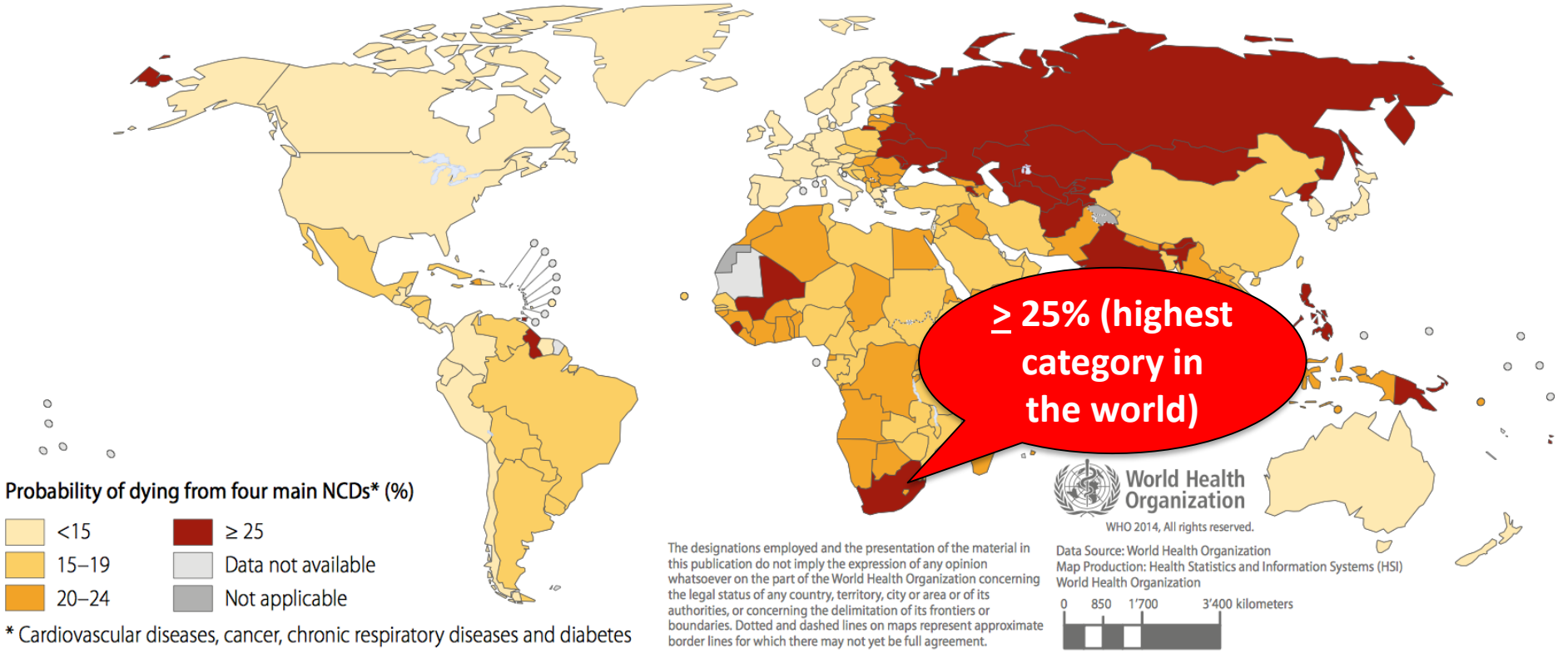
What about NCDs in South Africa?

Probability of dying (%) from one of the 4 main NCD's (30-70years)



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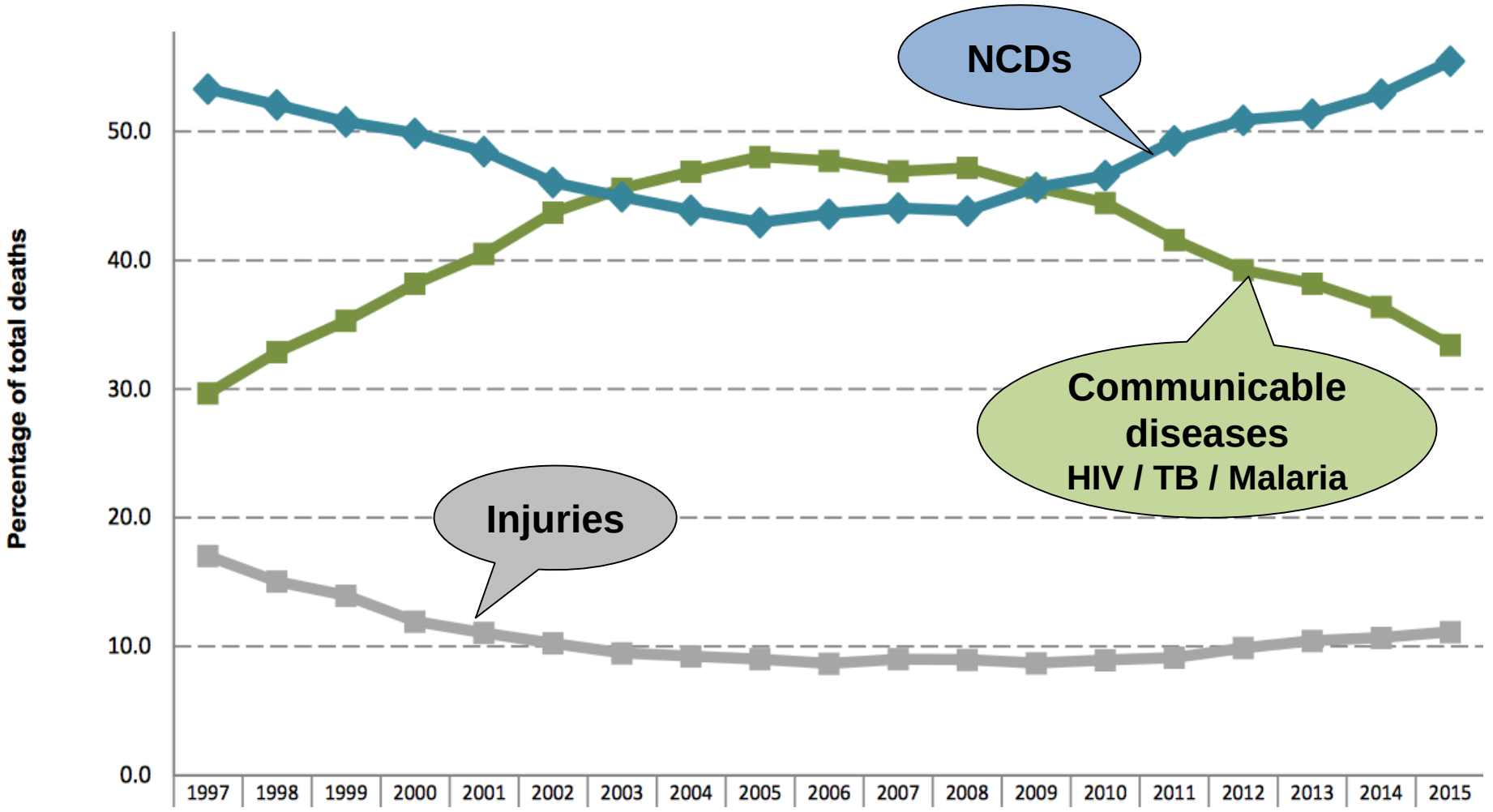
What causes deaths in South Africans?

(% total deaths by year: 1997-2015)



STATS SA: Mortality and causes of death in South Africa, 2015: Findings from death notification – Released 28 February 2017

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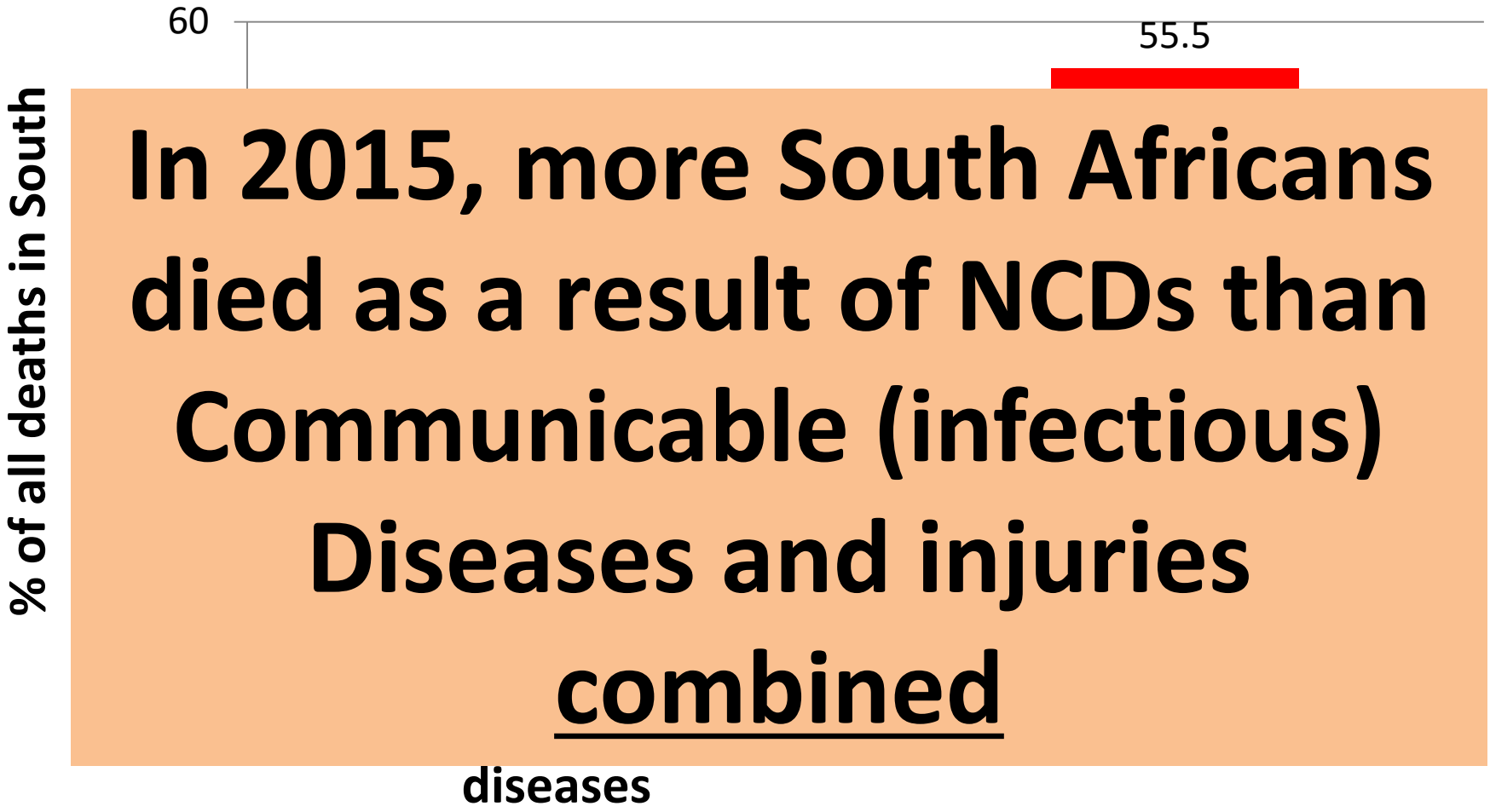
What causes death in South Africans?

(% total deaths in 2015)



In 2015, more South Africans died as a result of NCDs than Communicable (infectious) Diseases and injuries combined

STATS SA: Mortality and causes of death in South Africa, 2015: Findings from death notification – Released 28 February 2017

The "drug" everyone should take (in South Africa)

is

a drug that

1.prevents NCDs

2.treats the cause of NCDs

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The 8 "Deadly Sins" of Non-Communicable Diseases (NCD's)

1. Tobacco use
2. Harmful use of alcohol
3. Unhealthy diets
4. Physical inactivity
5. Raised blood pressure
6. Overweight / obesity
7. High blood sugar
8. High blood fats (certain types)

Four daily choices - risk factors

Four metabolic / physiological risk factors

Adapted from: WHO Global Status Report on NCDs – January 2015

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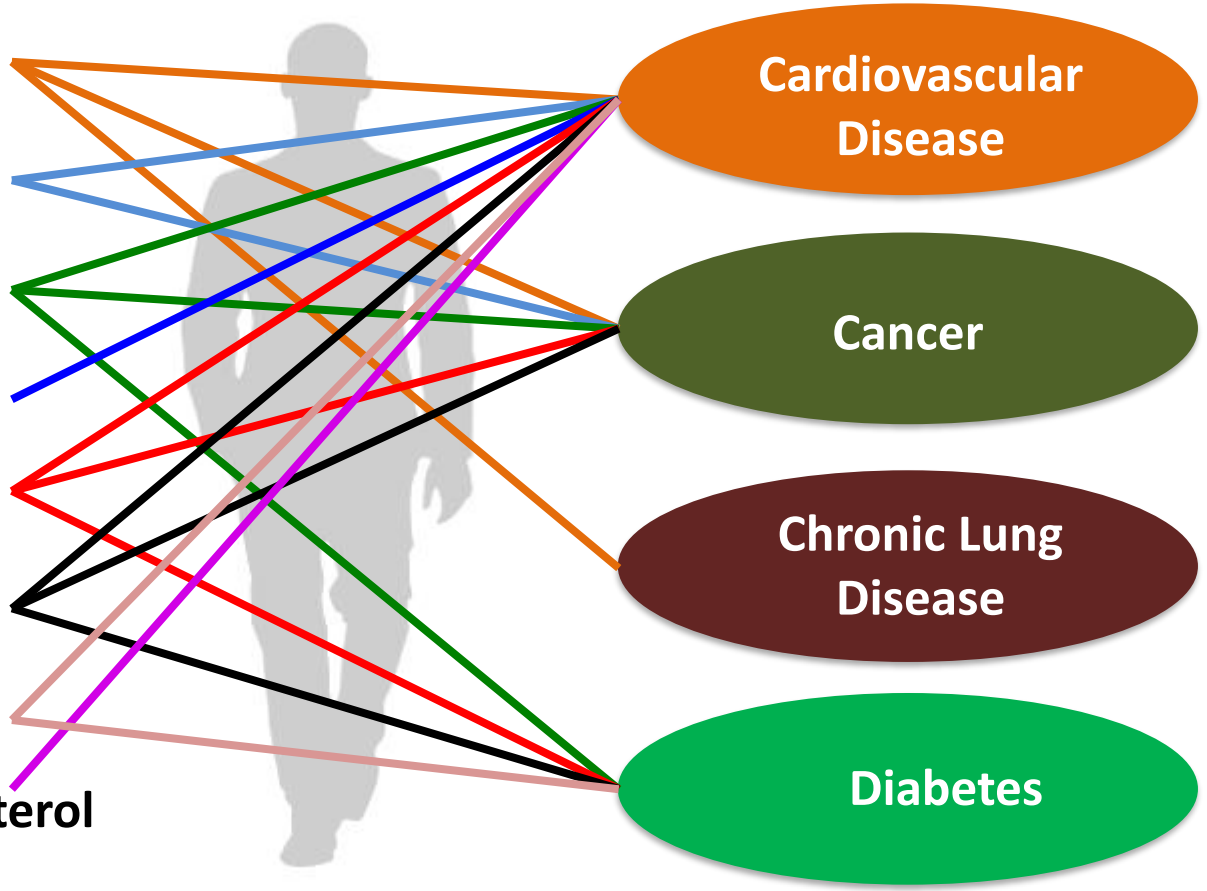
The "Deadly Web" of Chronic Diseases Risk Factors

Risk Factors

1. Tobacco use
2. Excess alcohol use
3. Diet
4. Hypertension
5. Physical inactivity
6. Obesity
7. High blood sugar
8. High blood cholesterol



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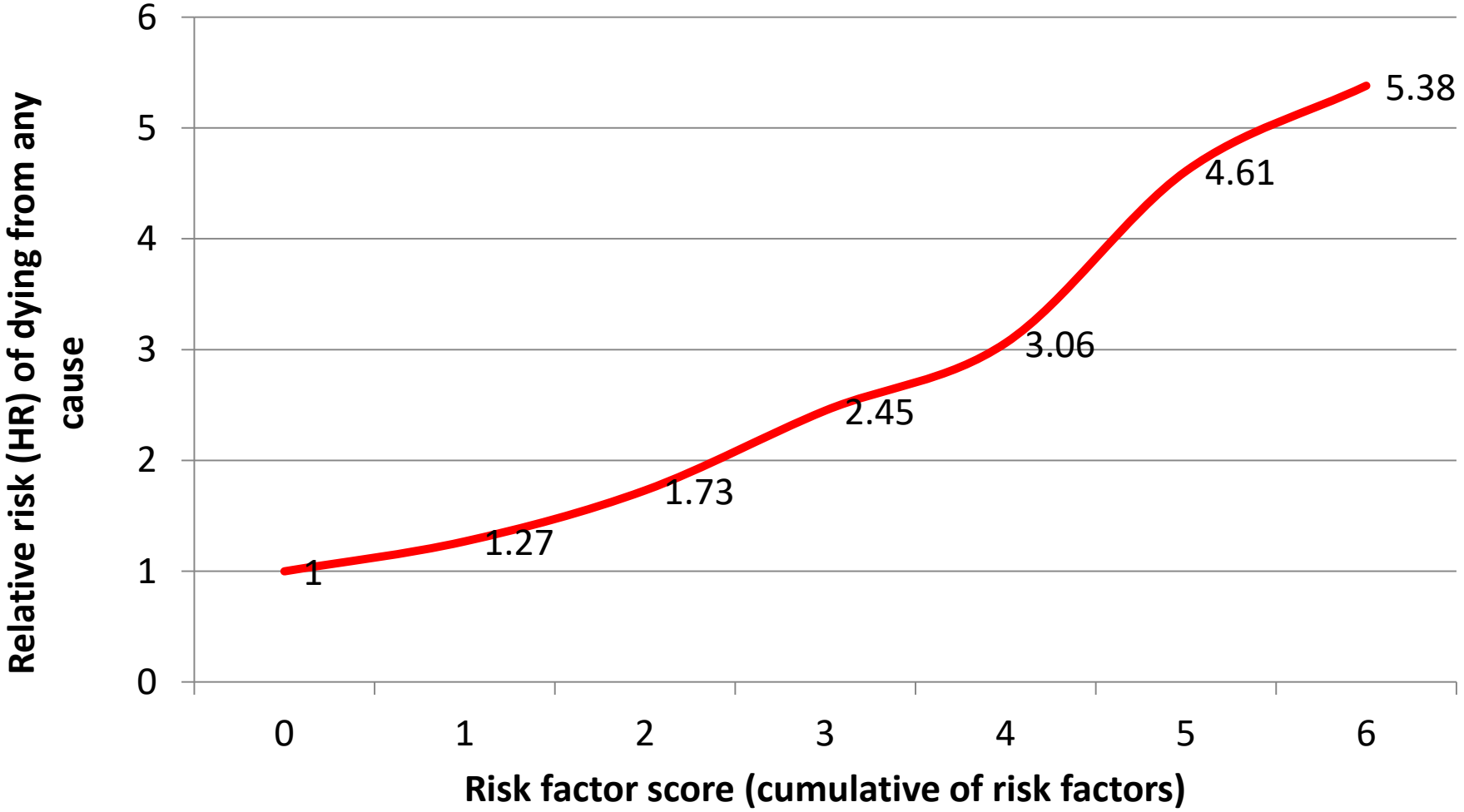
Multiple NCD risk factors - increased risk of dying?

Relative risk of dying (from all causes) in adults >45 years (n = 231 048)



Ding, D et al: PLOS Medicine, 2015, December

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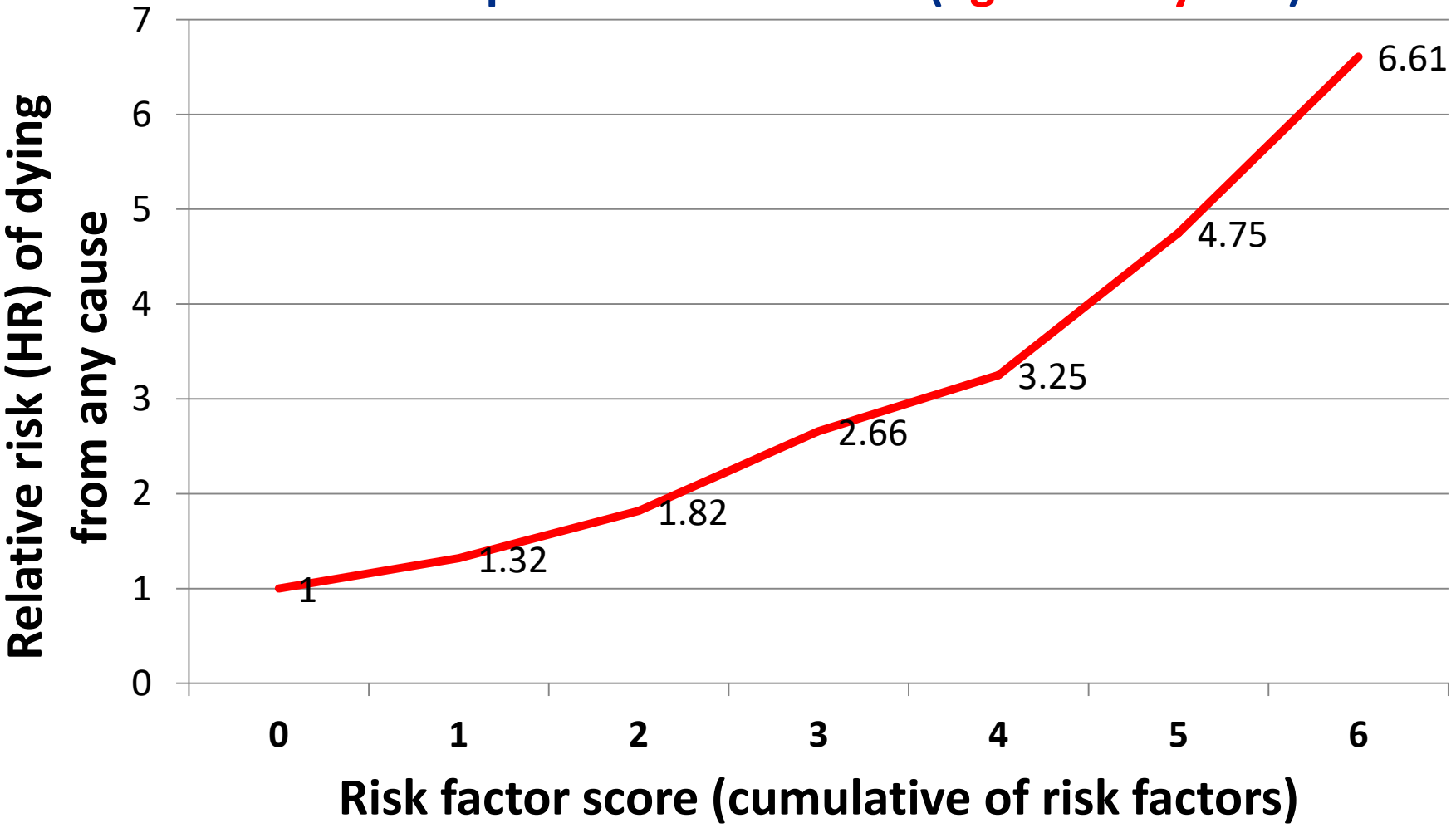
I am too old already (over 65 years) – it will make no difference?

Multiple NCD risk factors (age 65-79 years)



Ding, D et al: PLOS Medicine, 2015, December

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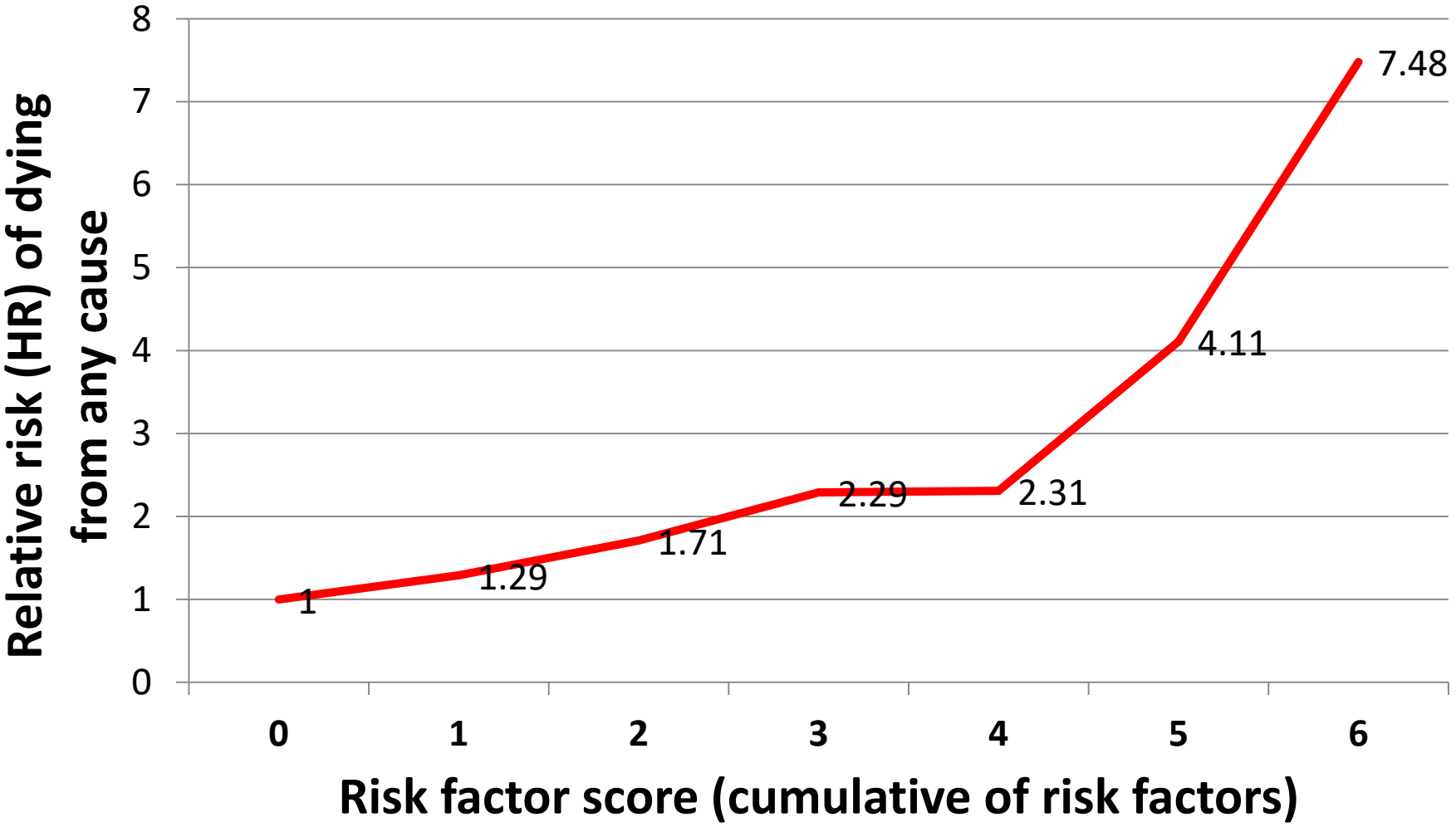
I already have heart, blood vessel or metabolic disease – it will make no difference?

Multiple NCD risk factors



Ding, D et al: PLOS Medicine, 2015, December

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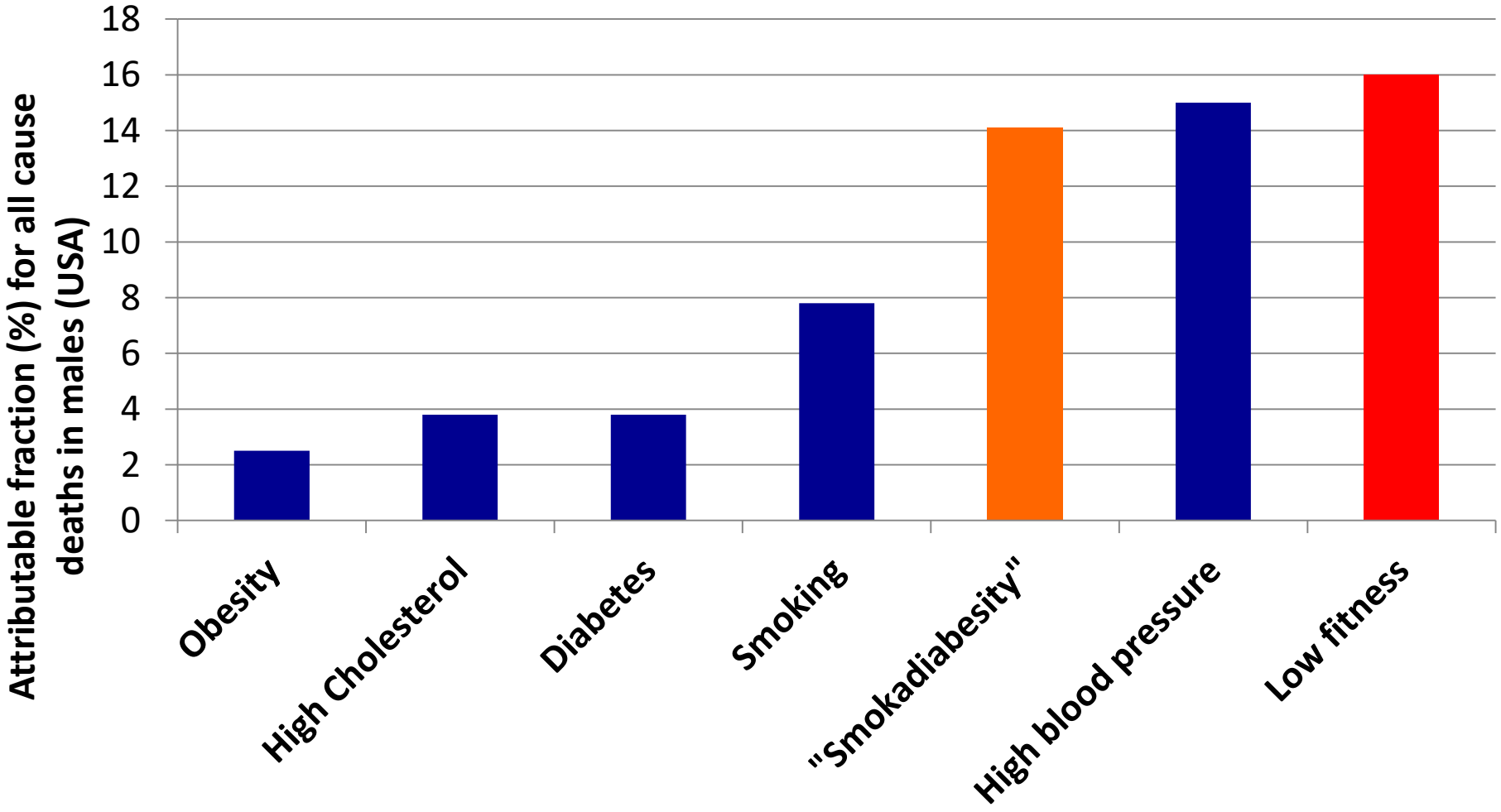
But which of these NCD risk factors is the most important killer in males?

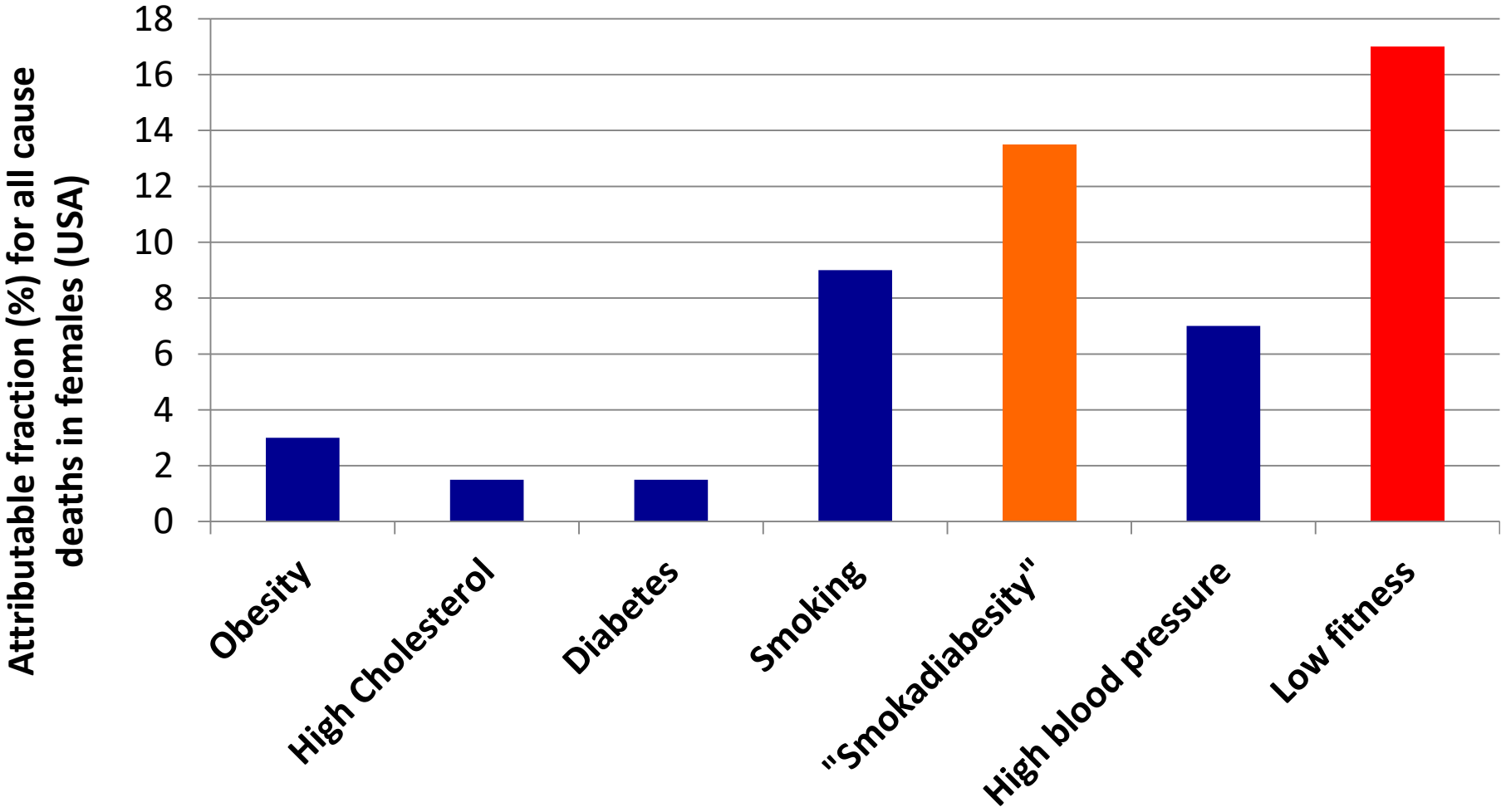
Males in the USA



Blair, S: Br J Sports Med, January 2009 (43) 1

Which of these NCD risk factors is the most important killer in females?

Females in the USA



Blair, S: Br J Sports Med, January 2009 (43) 1

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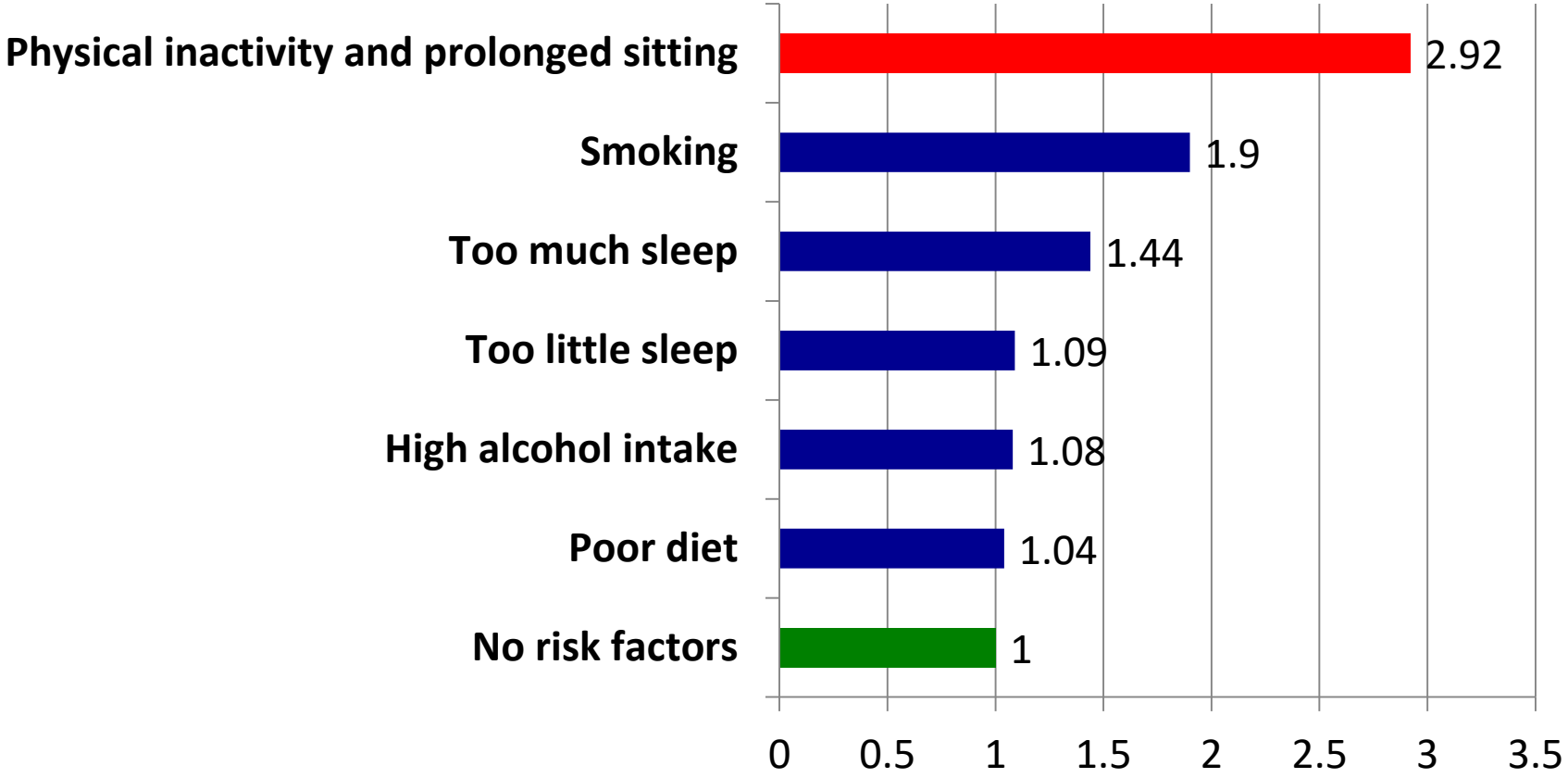
What risk factor kills most middle-aged and older Australian adults?

Risk of dying (from all causes) in adults over 45 years (n = 231 048)



Ding, D et al: PLOS Medicine, 2015, December

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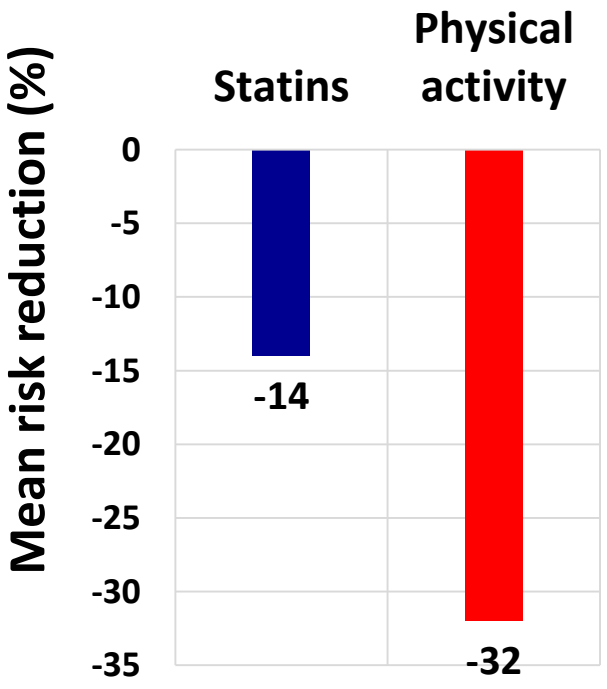
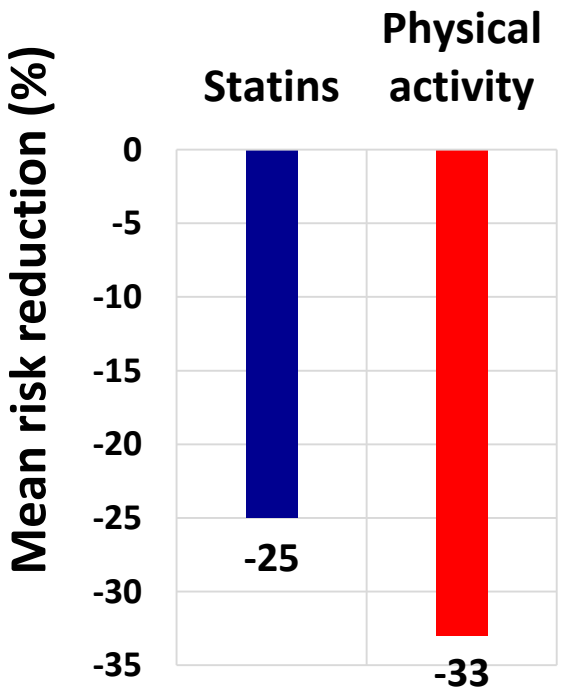
What about physical activity as a "drug"? Are cholesterol lowering drugs and anti-diabetic drugs not more effective?

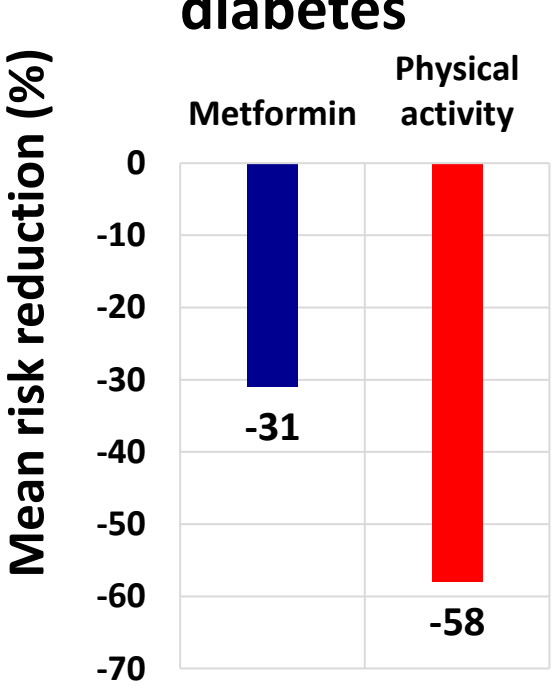
All cause mortality



CVD mortality



Pre-diabetes to diabetes



McKinney J, et al: BC Med J; 58(3), 2016

The "drug" every doctor should prescribe to every patient every day is regular physical activity

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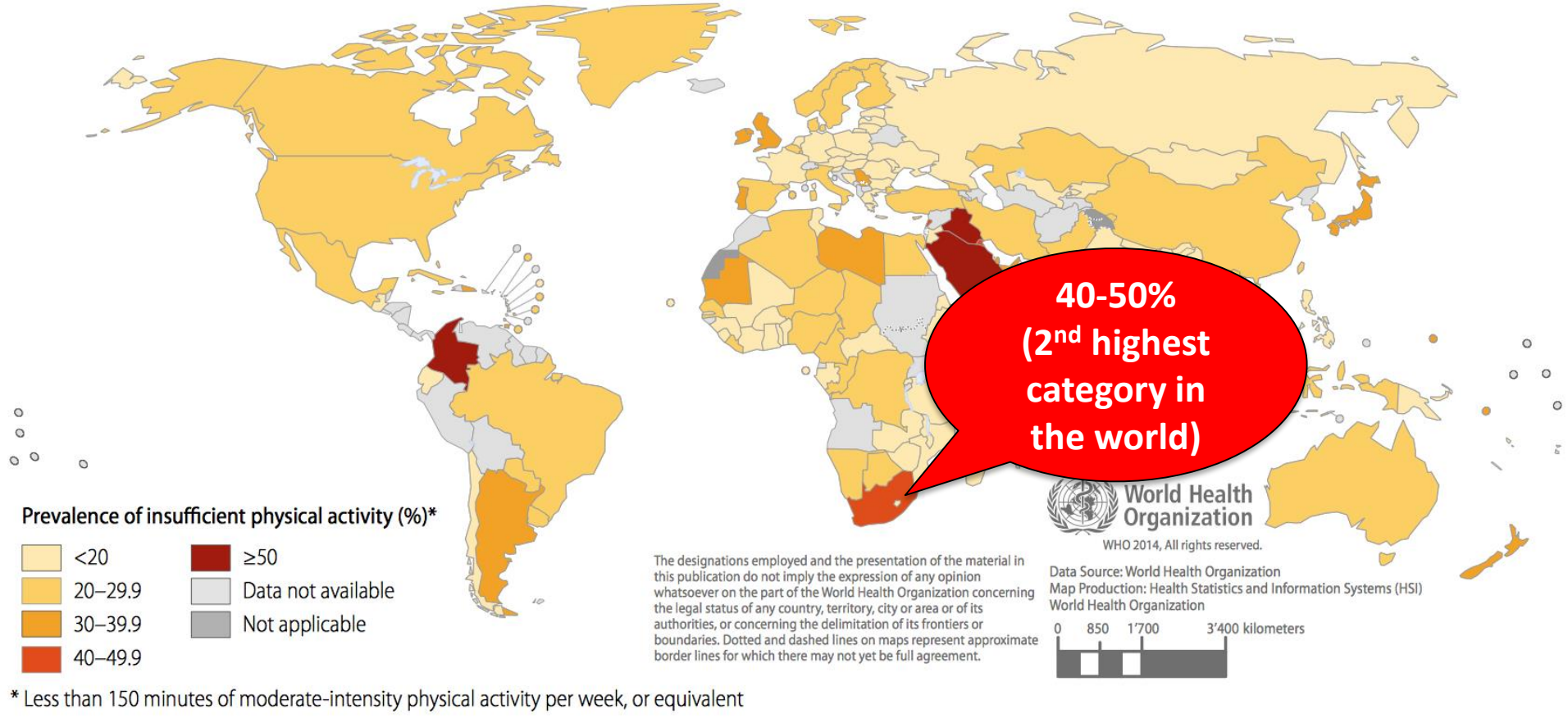
How many South African males do not take this drug?

Insufficient physical activity in South African males > 18 years (% population)



* Less than 150 minutes of moderate-intensity physical activity per week, or equivalent

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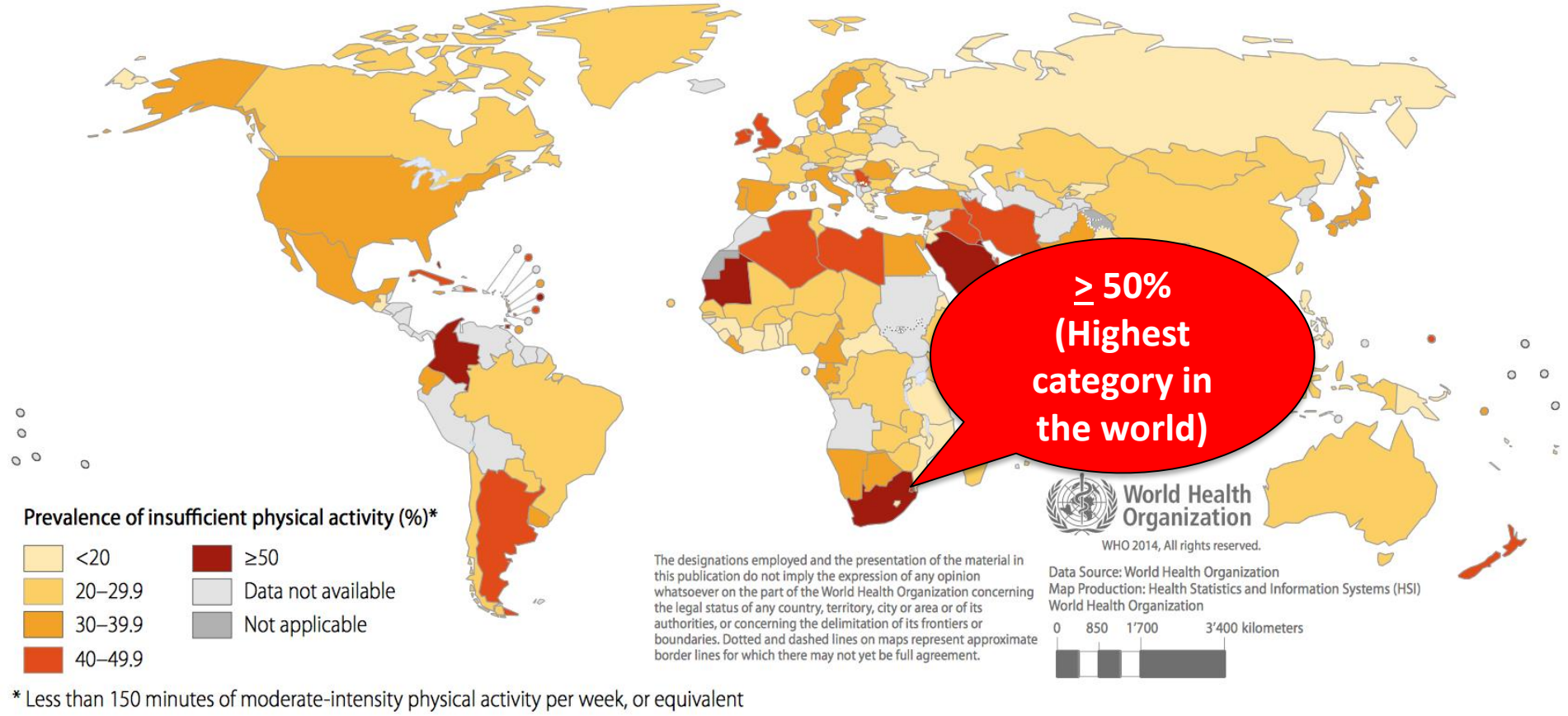
How many South African females do not take this drug?

Insufficient physical activity in South African females > 18 years (% population)



* Less than 150 minutes of moderate-intensity physical activity per week, or equivalent

WHO Global Status Report on NCDs – January 2015

"The drug everyone should take!"

How will regular physical activity be of benefit to your health?

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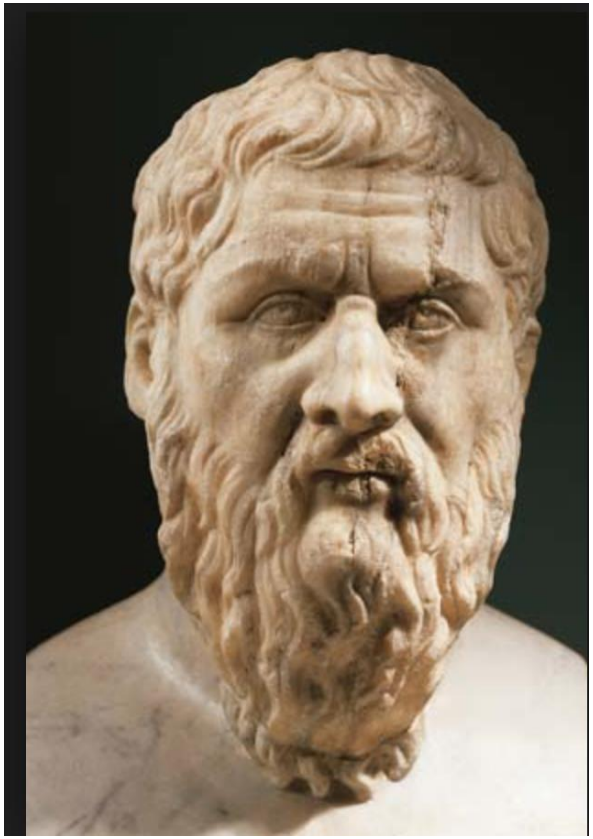
What are the health benefits of regular physical activity?

"Lack of activity destroys the good condition of every human being, while movement and methodical physical exercise save it and preserve it."

Plato (427–347 BC)



McKinney J, et al: BC Med J; 58(3), 2016

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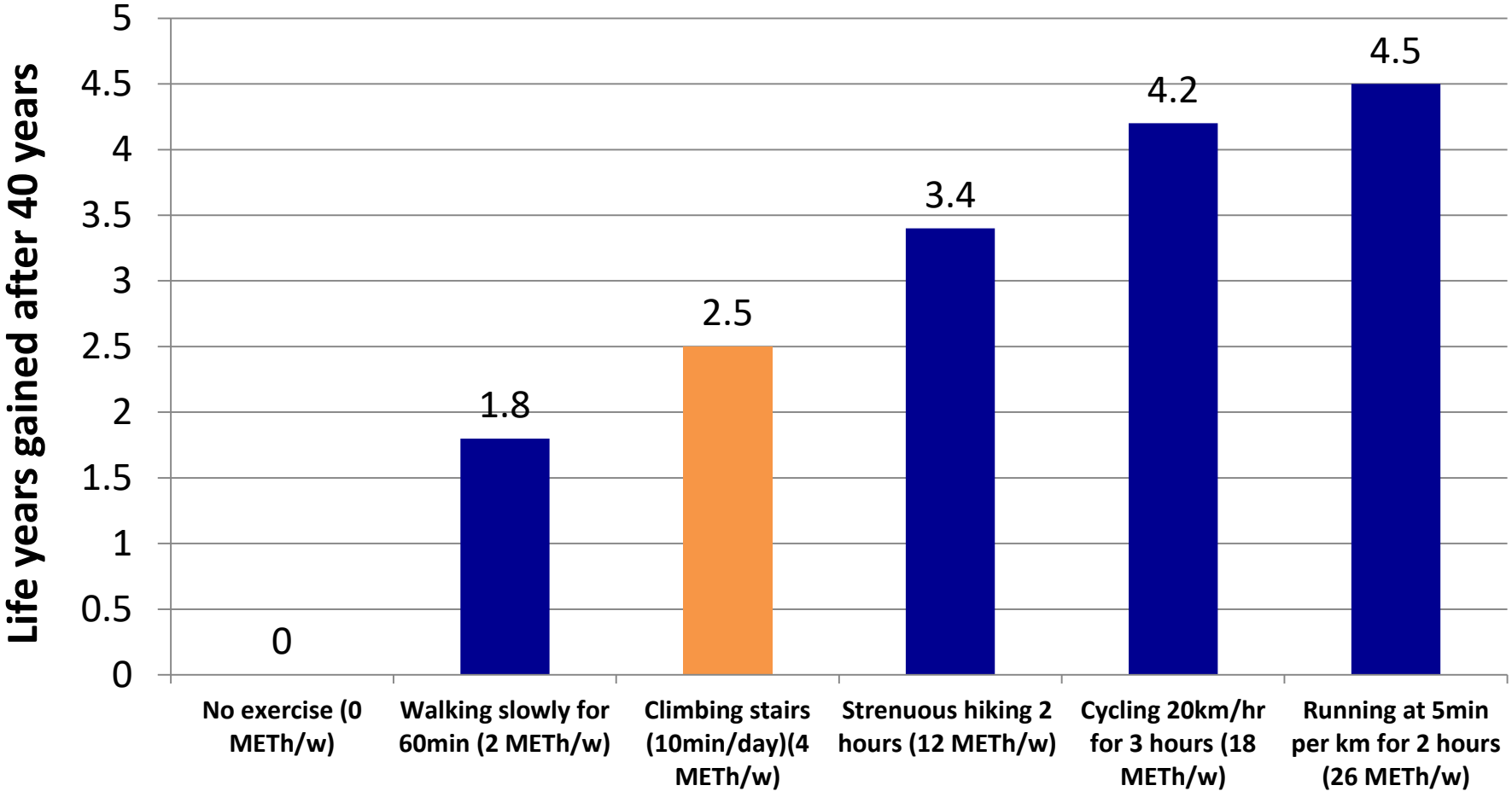
Does regular (weekly) physical activity prolong life? How much activity?

(life years gained after 40 years)



Moore S, et al: PLoS One; 2012, 9, 11

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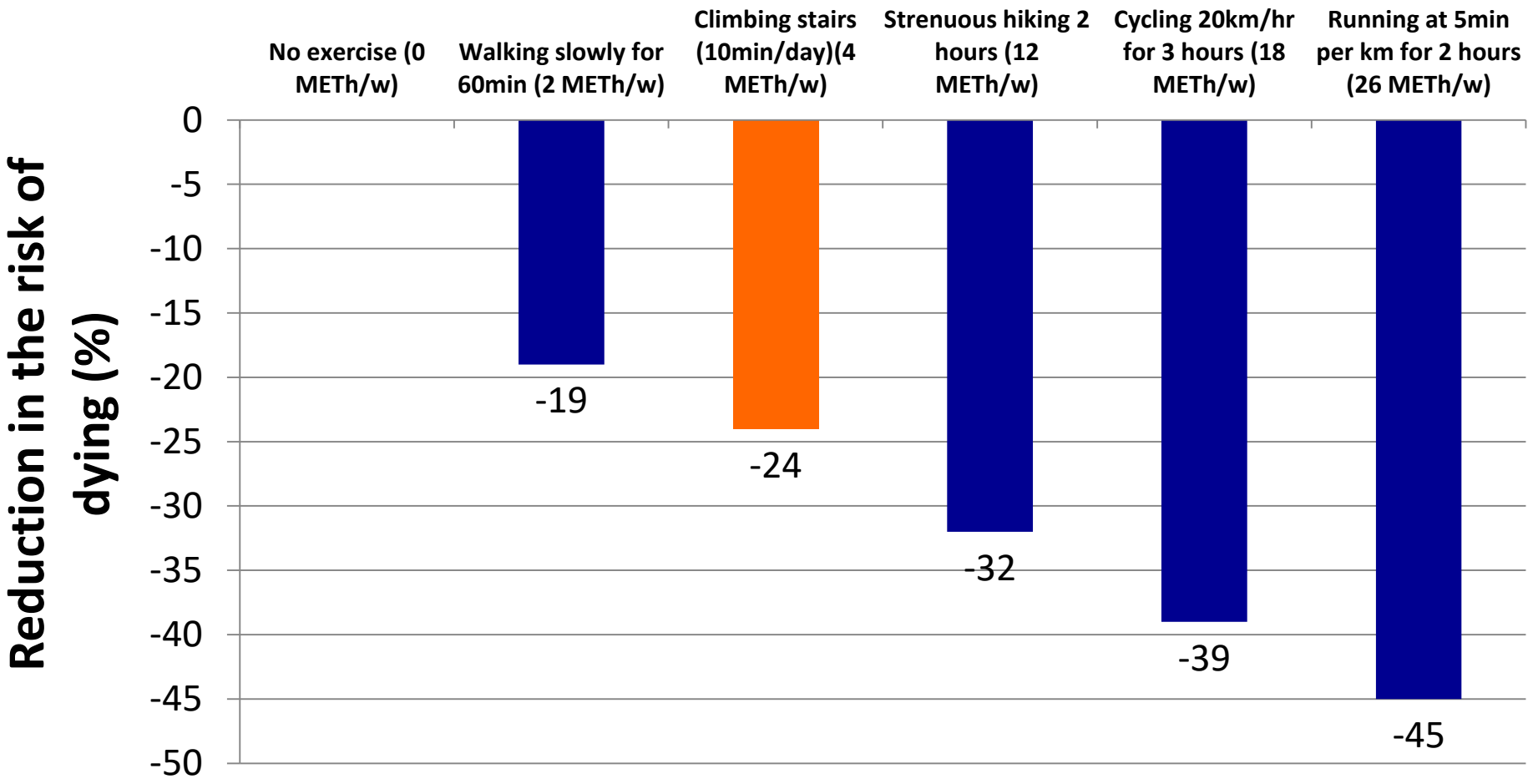
Does regular (weekly) physical activity reduce the risk of dying? How much activity?

(risk reduction of dying after 40 years)



Moore S, et al: PLoS One; 2012, 9, 11

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Multiple additional health benefits of regular physical activity

Individuals who are regular physically active have:

- a 30-45% lower risk of early death
- up to a 35% lower risk of coronary heart disease and stroke
- up to a 50% lower risk of type 2 diabetes
- up to a 50% lower risk of colon cancer
- up to a 20% lower risk of breast cancer
- up to an 83% lower risk of osteoarthritis
- up to a 68% lower risk of hip fracture
- a 30% lower risk of falls (among older adults)
- up to a 30% lower risk of depression
- up to a 30% lower risk of dementia

NHS choices Your health, your choices

"The drug everyone should take!"

Are there any negative side effects of this drug (physical activity)?

Yes!!!– Exercise paradox

When we promote regular physical activity it is our responsibility (as health professionals) to reduce the risk of any negative side effects

As with any drug we prescribe

Side effect 1: Risk of injury

Participation in physical activity and sport is associated with an increased risk of developing a musculoskeletal injury

- 50-60% of patients with NCD start an exercise program with an underlying musculo-skeletal complaint
- 30-50% of individuals engaging in recreational running over 12 months will develop an injury
- - - - - - - - - others

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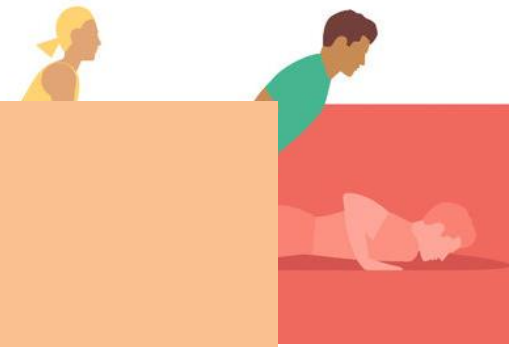
10 golden rules to prevent exercise-related injuries

1. If injured already – get expert help
2. Start training slowly – progress gradually
3. Perform
4. Develo and op
5. Use the
6. Be awa (biome
7. Use pr appro
8. Realize
9. Psycho
10. Consider lifestyle / habits e.g. stop smoking



And…

50% of exercise-related injuries are preventable

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Prevention of exercise-related injuries (10 golden rules)

1. If injured already – get expert help
2. Start training slowly – progress gradually
3. Perform an adequate warm-up / stretching
4. Develop normal muscle strength, balance and optimal neuromuscular control
5. Use the correct sports “equipment”
6. Be aware of correct exercise technique (biomechanics)
7. Use strapping and bracing if appropriate
8. Realize the value of optimum nutrition
9. Psychological status is linked to injury risk
10. Consider lifestyle / habits e.g. stop smoking

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One example:
How to progress safely with exercise to reduce the risk of injury?

If your average weekly exercise time in the last 4 weeks was 20 min/ week

And you increase your exercise in the next week to 40 min

Then your weekly increase (acute: chronic load ratio) = 40/20

= 2.0

Soligard T, Schwellnus M, et al, BJSM 2016; 50:1030–1041

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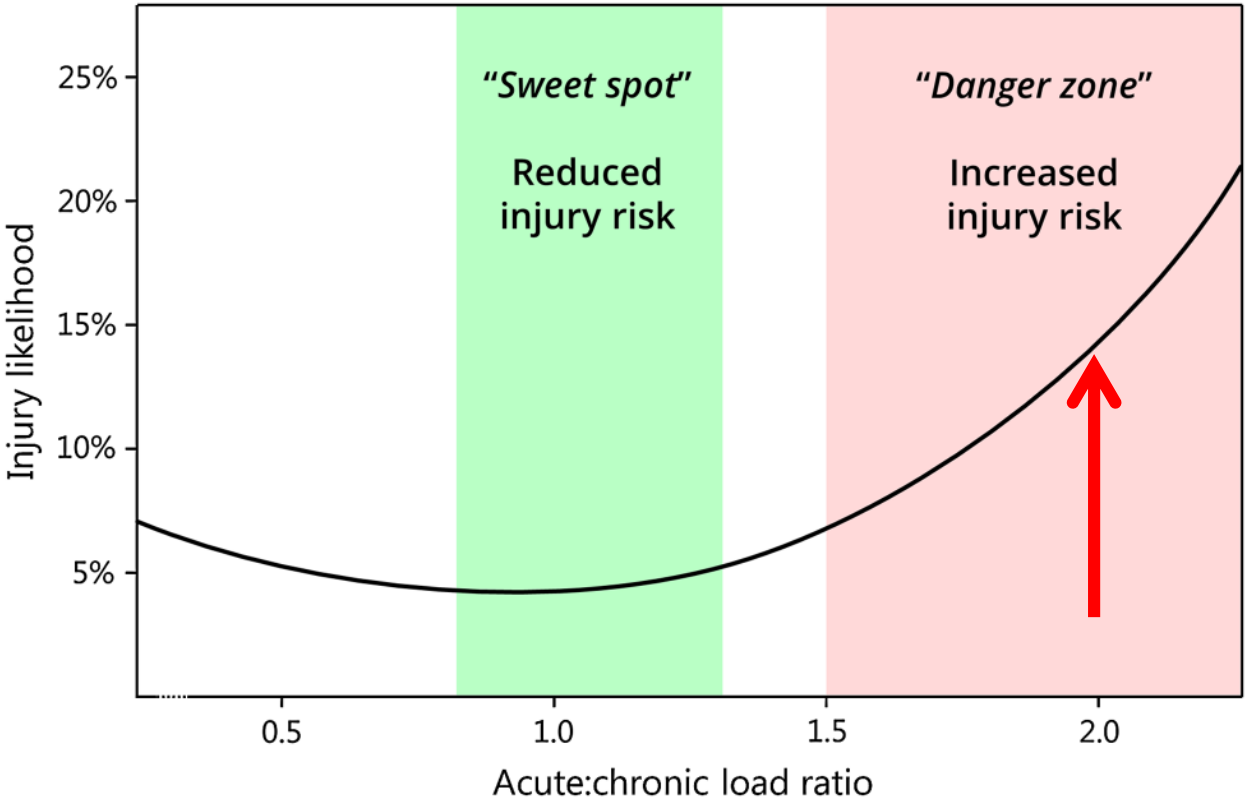
One example: How to progress safely with exercise?



A "safer" progression is 1.2-1.5 i.e. 24-30 min in the next week

Soligard T, Schwellnus M, et al, BJSM 2016; 50:1030–1041

Side effect 2: Risk of medical complications

Medical complications

- Acute cardiovascular event (cardiac arrest and sudden death)
- Serious life-threatening medical complications
- Minor medical complications
- “Unmasking” underlying disease *
- Long term health risks (? Cardiac)
- ? Non adaptors / responders

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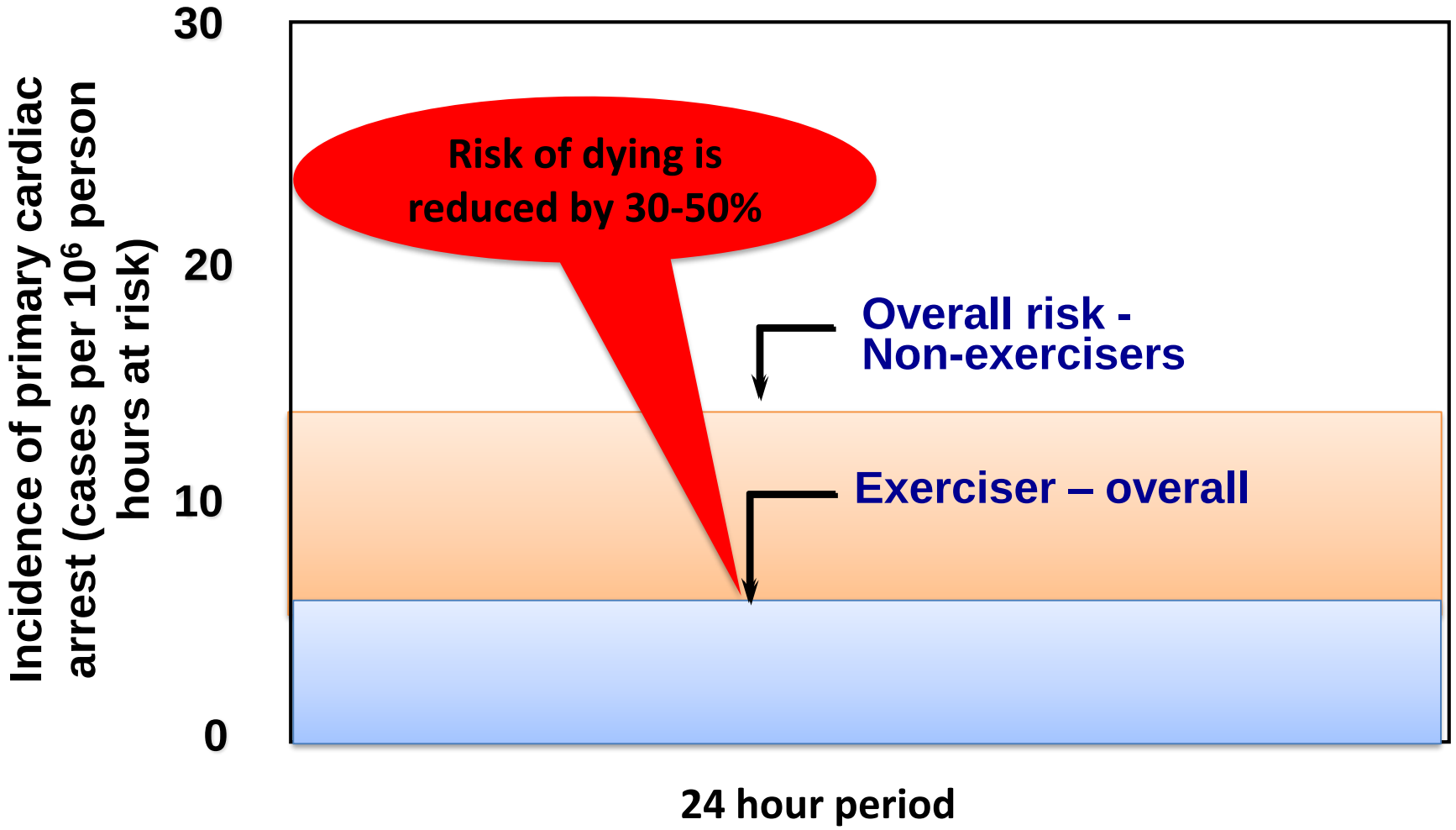
What is the risk of a serious medical complication (cardiac arrest) during a 24 hour period (1 day)?



Siscovick DS, Weiss NS, Fletcher RH, Lasky T. The incidence of primary cardiac arrest during vigorous exercise. N Engl J Med 1984;311(14):874-7.

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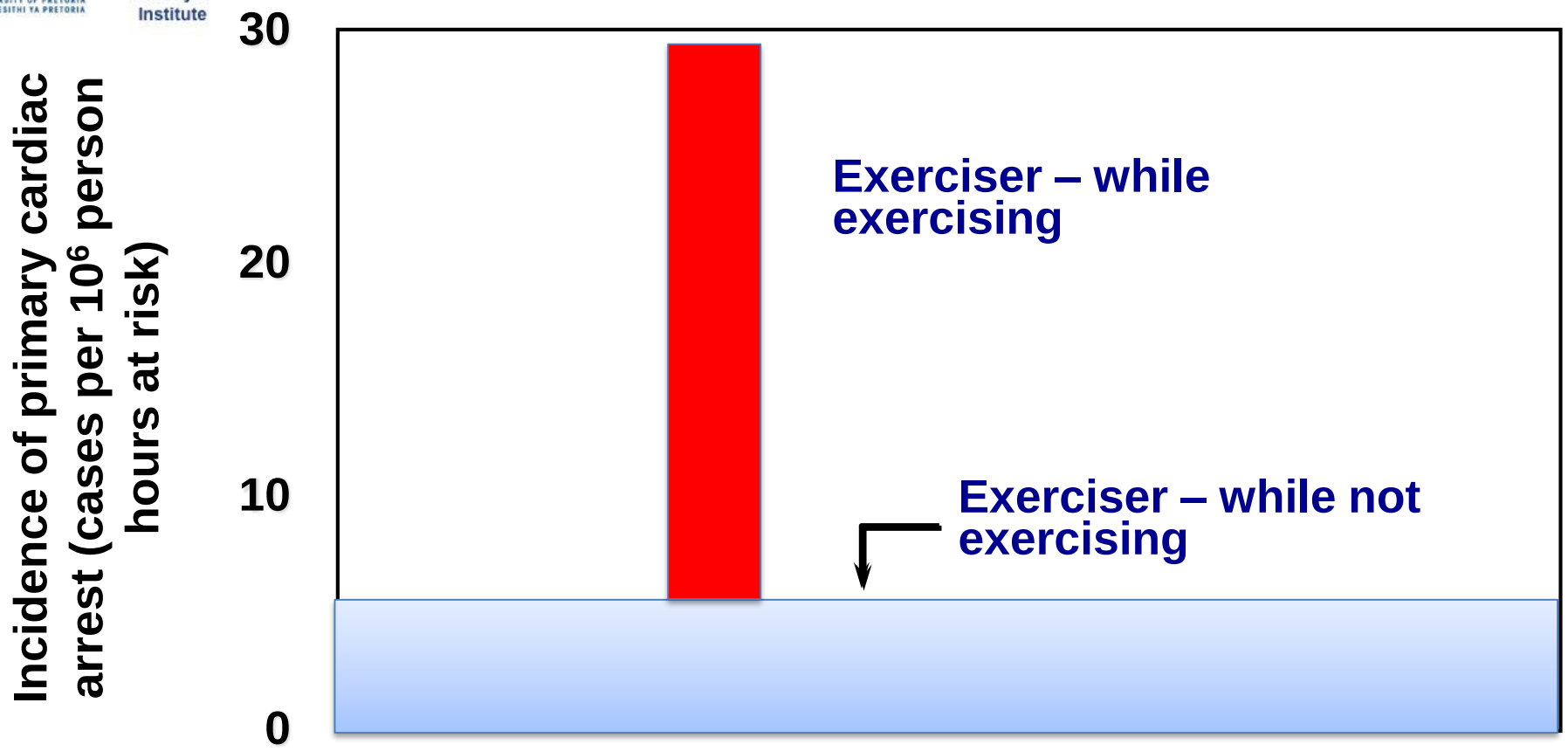

During exercise there is a 2-56 X higher risk of an acute serious medical complication (including primary cardiac arrest)

Siscovick DS, Weiss NS, Fletcher RH, Lasky T. The incidence of primary cardiac arrest during vigorous exercise. N Engl J Med 1984;311(14):874-7.

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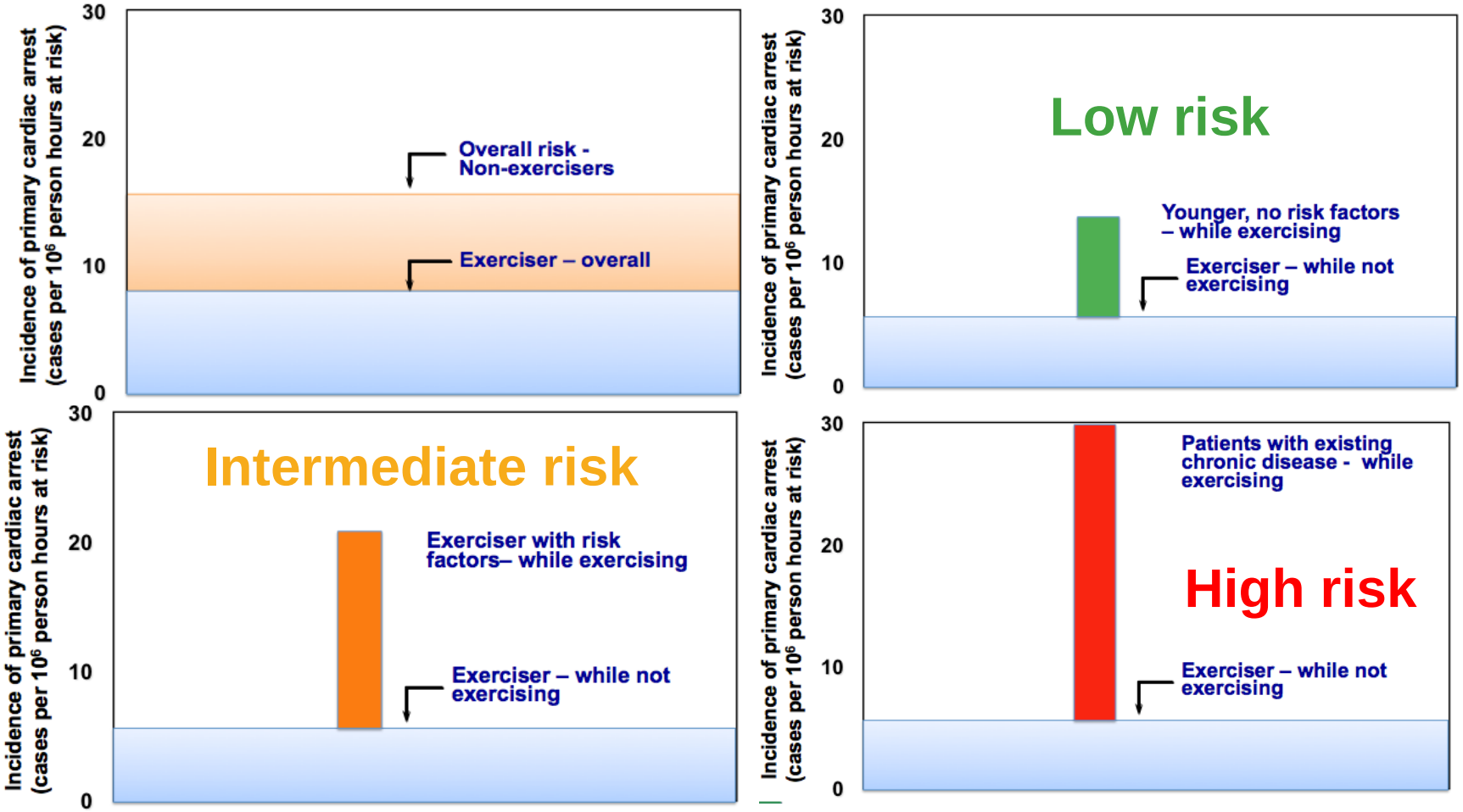
Is this risk the same for everyone?

The risk of primary cardiac arrest/SCD during exercise depends on the patient risk profile and the exercise dose/type (mainly intensity)



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Prescribing exercise SAFELY
(over-the-counter and a prescribed drug)

Patient risk profile

21 year old male medical student

35 year old female IDDM with a BMI of 31

70 year old male with hypertension and hyperlipidemia

34 year old female with acute flu-like illness on an antibiotic

Drug dose profile

***Rx*: Jogging / running: 150 min / week**

***Rx*: Running a 21km half-marathon**

***Rx*: Playing social tennis once a week**

***Rx*: Racing in a staged 7-day mountain bike race**

***Rx*: Participating in a triathlon**

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Exercise as a medicine
(over-the-counter and a prescribed drug)

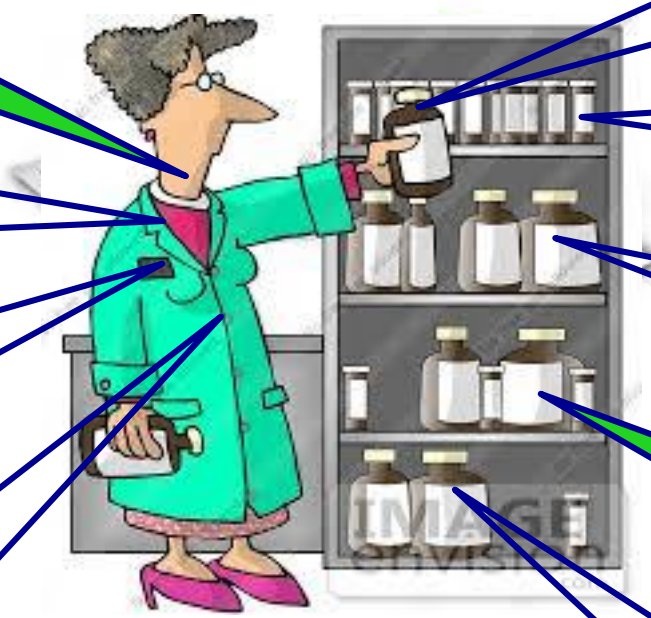
Patient risk profile **Low risk - indicated** **Drug dose profile**

21 year old male medical student

35 year old female IDDM with a BMI of 31

70 year old male with hypertension and hyperlipidemia

34 year old female with acute flu-like illness on an antibiotic



Rx: Jogging / running: 150 min / week

Rx: Running a 21km half-marathon

Rx: Playing social tennis once a week

Rx: Racing in a staged 7-day mountain bike race

Rx: Participating in a triathlon

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Exercise as a medicine
(over-the-counter and a prescribed drug)

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ATHLETE DIES DURING WORLD TRIATHLON SERIES

The man was rushed to hospital during the swimming leg of the race.

Athletes get ready to swim at the World Triathlon Series in Cape Town on 24 April 2015. Picture: @worldtriathlon via Twitter.

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We studied the risk of a medical complication during exercise in mass community-based sports events

1. **Serious/life threatening medical conditions can occur during mass community-based sports events**
2. **The role of pre-exercise medical screening and education**

SIDELINE AND EVENT MANAGEMENT

Premarathon Evaluations: Is There a Role for Runner Prerace Medical Screening and Education to Reduce the Risk of Medical Complications?

Martin Peter Schwellnus, MBBCh, MSc (Med), MD, FACSM

Schwellnus M: Current Sports Medicine Reports, May/June 2017

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Designing and implementing "Strategies to reduce Adverse medical events For the ExerciseR"?

SAFER studies

Medical complications and deaths in 21 and 56 km road race runners: a 4-year prospective study in 65 865 runners—SAFER study I

Karen Schwabe,[1] Martin Schwellnus,[1,2] Wayne Derman,[1,2] Sonja Swanevelder,[3] Esme Jordaan[3,4]

Less experience and running pace are potential risk factors for medical complications during a 56 km road running race: a prospective study in 26 354 race starters—SAFER study II

Karen Schwabe,[1] Martin P Schwellnus,[1,2] Wayne Derman,[1,2] Sonja Swanevelder,[3] Esme Jordaan[3,4]

Older females are at higher risk for medical complications during 21 km road race running: a prospective study in 39 511 race starters—SAFER study III

Karen Schwabe,[1] Martin P Schwellnus,[1,2] Wayne Derman,[1,2] Sonja Swanevelder,[3] Esme Jordaan[3,4]

A prospective cohort study of 7031 distance runners shows that 1 in 13 report systemic symptoms of an acute illness in the 8–12 day period before a race, increasing their risk of not finishing the race 1.9 times for those runners who started the race: SAFER study IV

Anri Van Tonder,[1] Martin Schwellnus,[2,3,4] Sonja Swanevelder,[5] Esme Jordaan,[5,6] Wayne Derman,[3,7] Dina C Janse van Rensburg[2]

Recent acute prerace systemic illness in runners increases the risk of not finishing the race: SAFER study V

Leigh Gordon,[1] Martin Schwellnus,[2,3] Sonja Swanevelder,[4] Esme Jordaan,[4] Wayne Derman[5]

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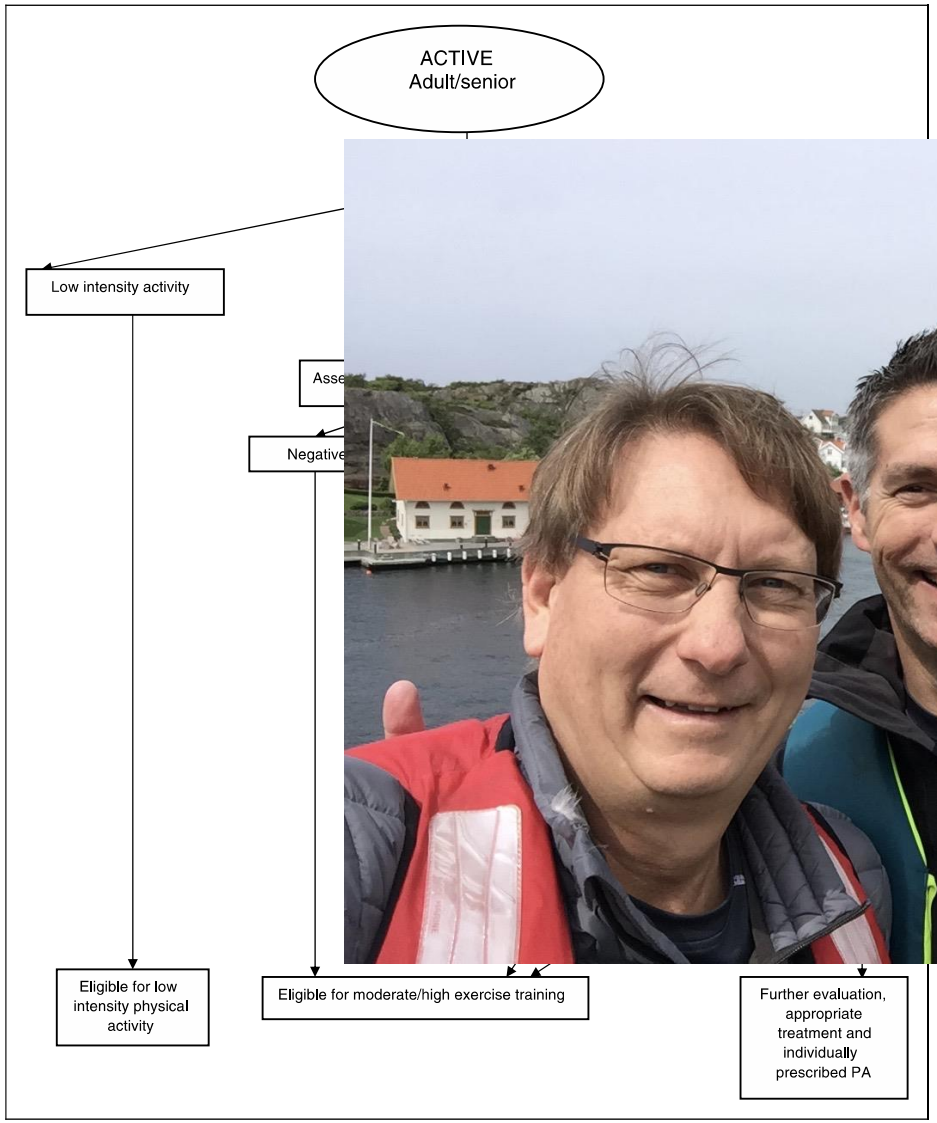
Pre-exercise medical screening for active individuals

European guidelines



USA and Canadian guidelines


PAR-Q & YOU

(A Questionnaire for People Aged 15 to 69)

Regular physical activity is fun and healthy, and increasingly more people are starting to become more active every day. Being more active is very safe for most

DELAY BECOMING MUCH MORE ACTIVE:

- If you are not feeling well because of a temporary illness such as a cold or a fever – wait until you feel better; or
- If you are or may be pregnant – talk to your doctor before you start becoming more active.

PLEASE NOTE: If your health changes so that you then answer YES to any of the above questions, tell your fitness or health professional. Ask whether you should change your physical activity plan.

Note: This physical activity clearance is valid for a maximum of 12 months from the date it is completed and becomes invalid if your condition changes so that you would answer YES to any of the seven questions.

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Borjesson, M, et al. Eur J Cardiovasc Prev Rehab, 2011, 18(3)

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10 golden rules of pre-exercsie (moderate to high intensity) medical clearance

1. Males over 45 years with > 1 risk factor for CVD
2. Females over 55 years with > 1 risk factor for CVD
3.
4.
5.
6.
7.
8.
9. If you have any concerns about the safety of exercise
10. Presence of any acute illness e.g. infection

But ..

> 60% of serious exercise-related medical complications are preventable through screening and education

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Pre- vs. Post Screening (2008-2015)
(Incidence of serious life threatening medical complications)

Incidence per 1000 runners

0.7
0.6
0.5
0.4
0.3
0.2
0.1
0

015)

71%
luction

Schwellnus M, Schwabe K, Swanevelder S, Jordaan E, Derman W, et al, MSSE May 2017 (abstract)

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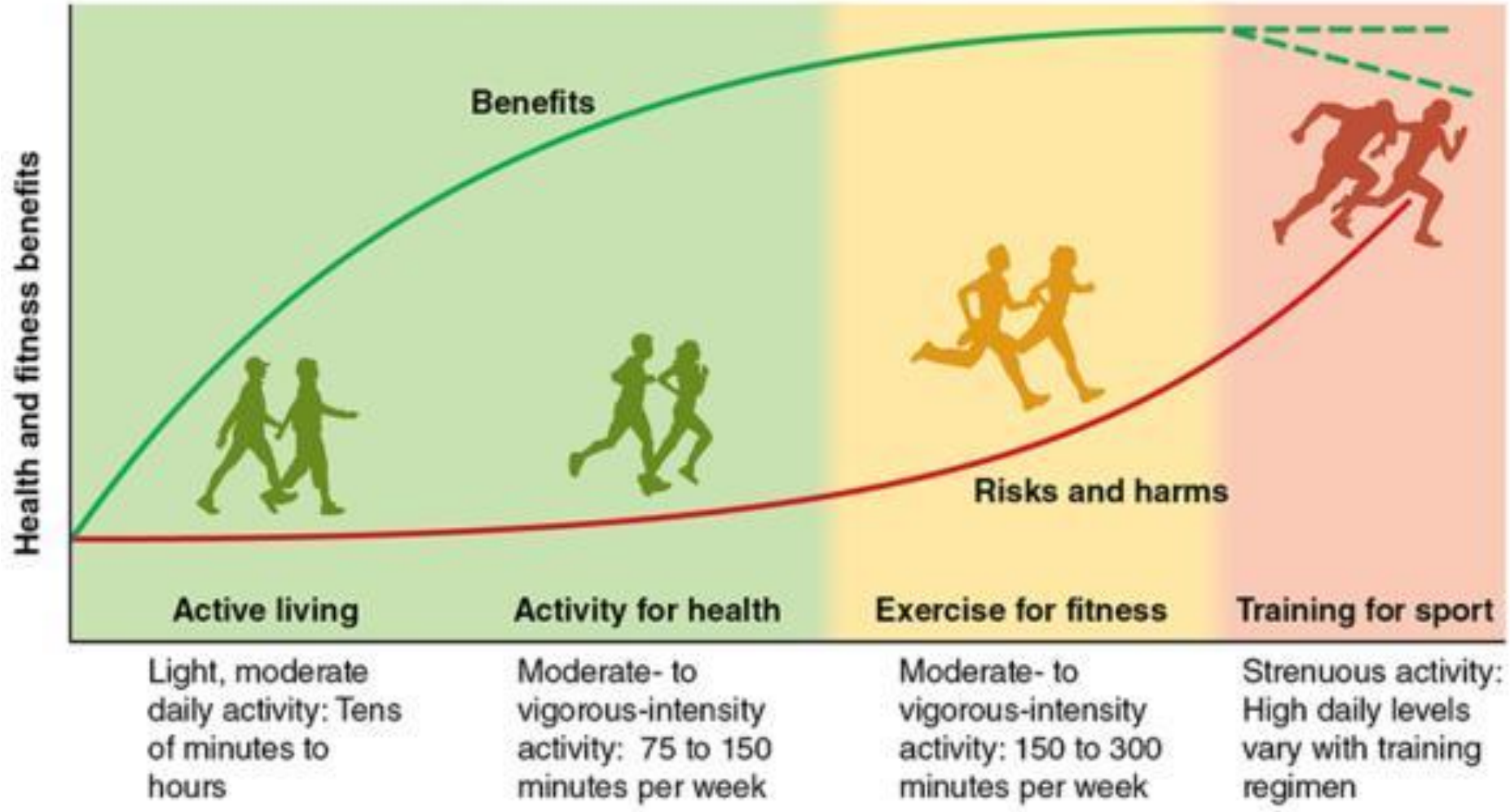
Summary

Physical activity health benefits / risks



McKinney J, et al: BC Med J; 58(3), 2016

"The drug everyone should take!"

What regular physical activity must I do?

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International guidelines for "What" physical activity should be prescribed for health

1. **Duration:** > 30 minutes per session
2. **Frequency:** Most days of the week

EXERCISE PRESCRIPTION & REFERRAL FORM

Your Prescription for Health
ExeRcise is Medicine®

Summary:

1. 150 min of moderate to high intensity endurance physical activity per week
2. Strength and balance training 2-3 per week

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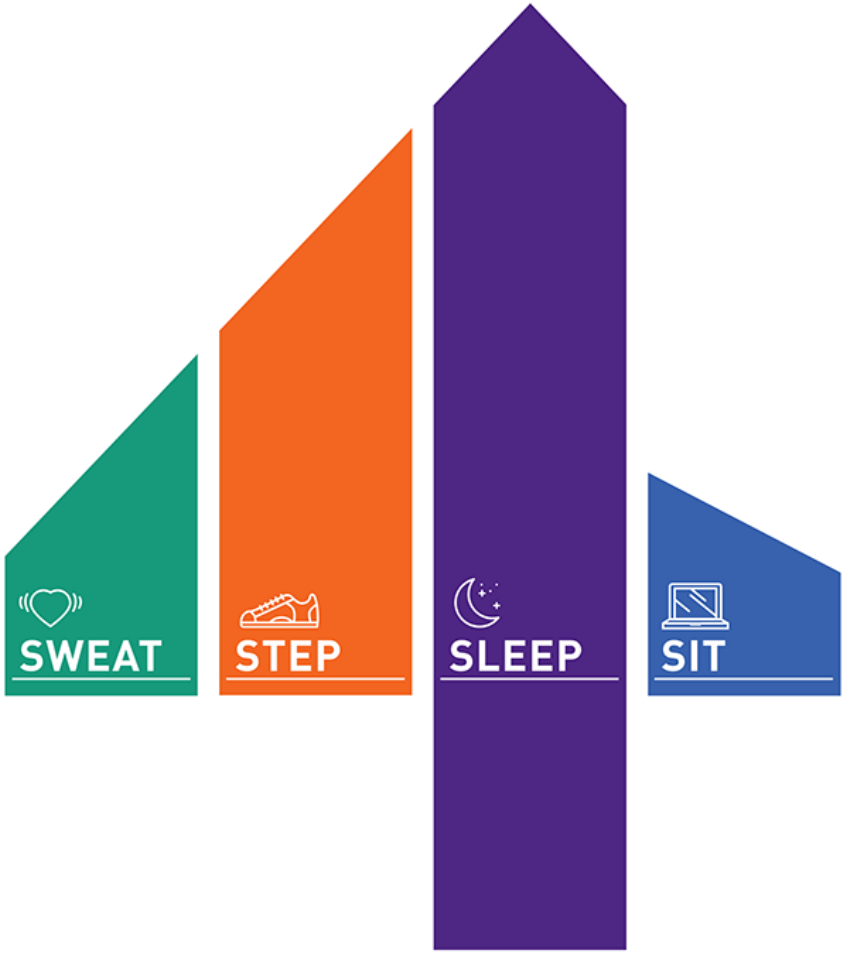
Physical activity for health
4 Practical tips!!!!

1. **Sweating:**
   - During exercise for 30min on most days of the week
2. **Stepping:**
   - Daily > 10 000 steps
   - Climb stairs (10 min per day)
3. **Sleeping:**
   - Adequately
   - 7-9 hrs quality sleep
4. **Sitting less:**
   - Get up every 20min to stand / walk



McKinney J, et al: BC Med J; 58(3), 2016

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What is your "Why" statement for health?

When I leave this room today I am going to

Get your phones and be ready for some questions!

for my health and for the health of my patients

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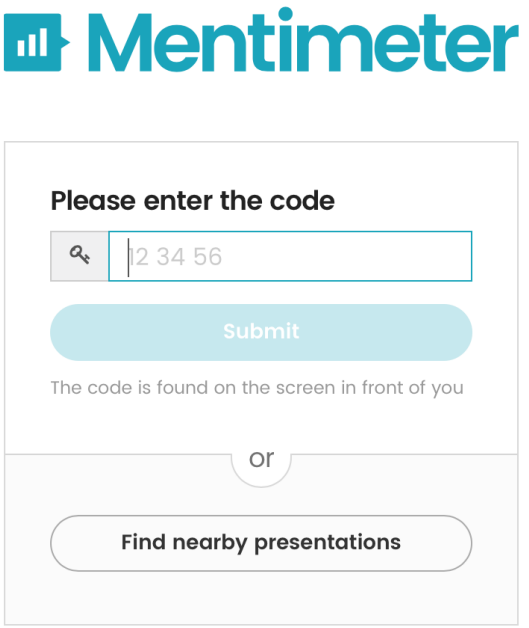
Audience participation

1. Series of questions at intervals in the presentation
2. Questions will be displayed on your phone
3. You have 20sec to select and submit your answer
4. There may be more than one correct in some instances
5. Points for some questions – faster entry of correct answer = higher score
6. Results will be displayed on the screen
7. There is a prize for the winner!!!



Ready to go?

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Thank You for Your Attention

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