



Exercises: Are they effective?

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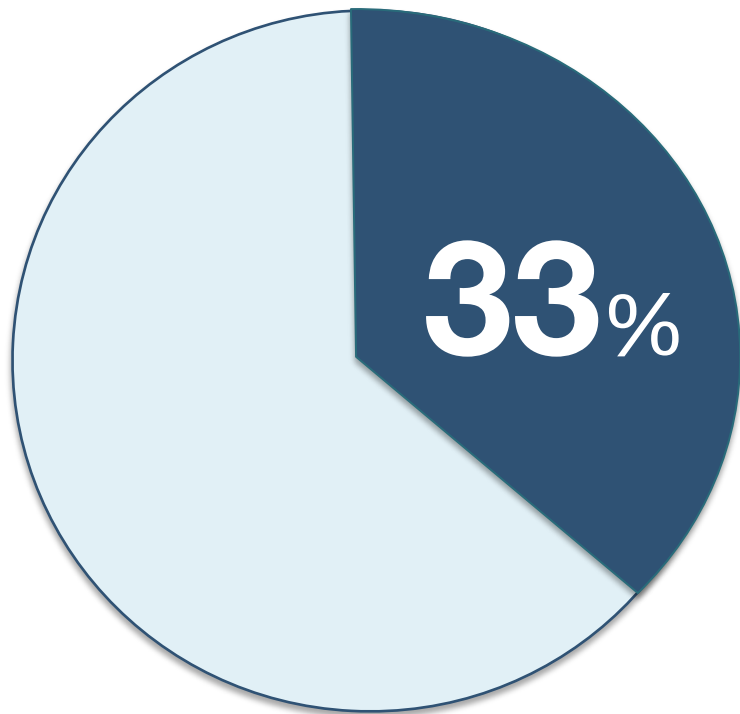
Common Questions

q1. I am too old to start exercising.

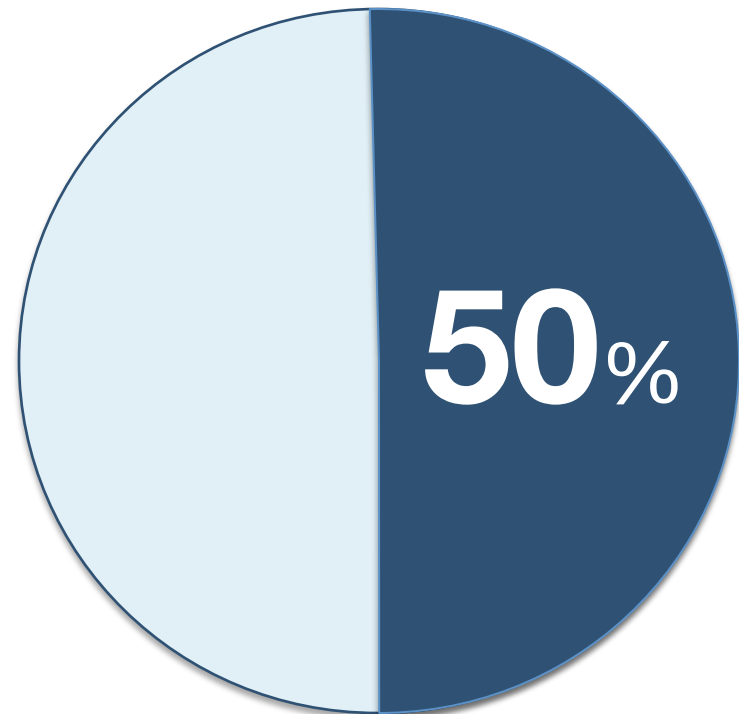
q2. Exercise put me at risk of falling.

q3. I can't exercise because of pain.

Inactive at Age *75*



Men



Women

If you are
Not Active

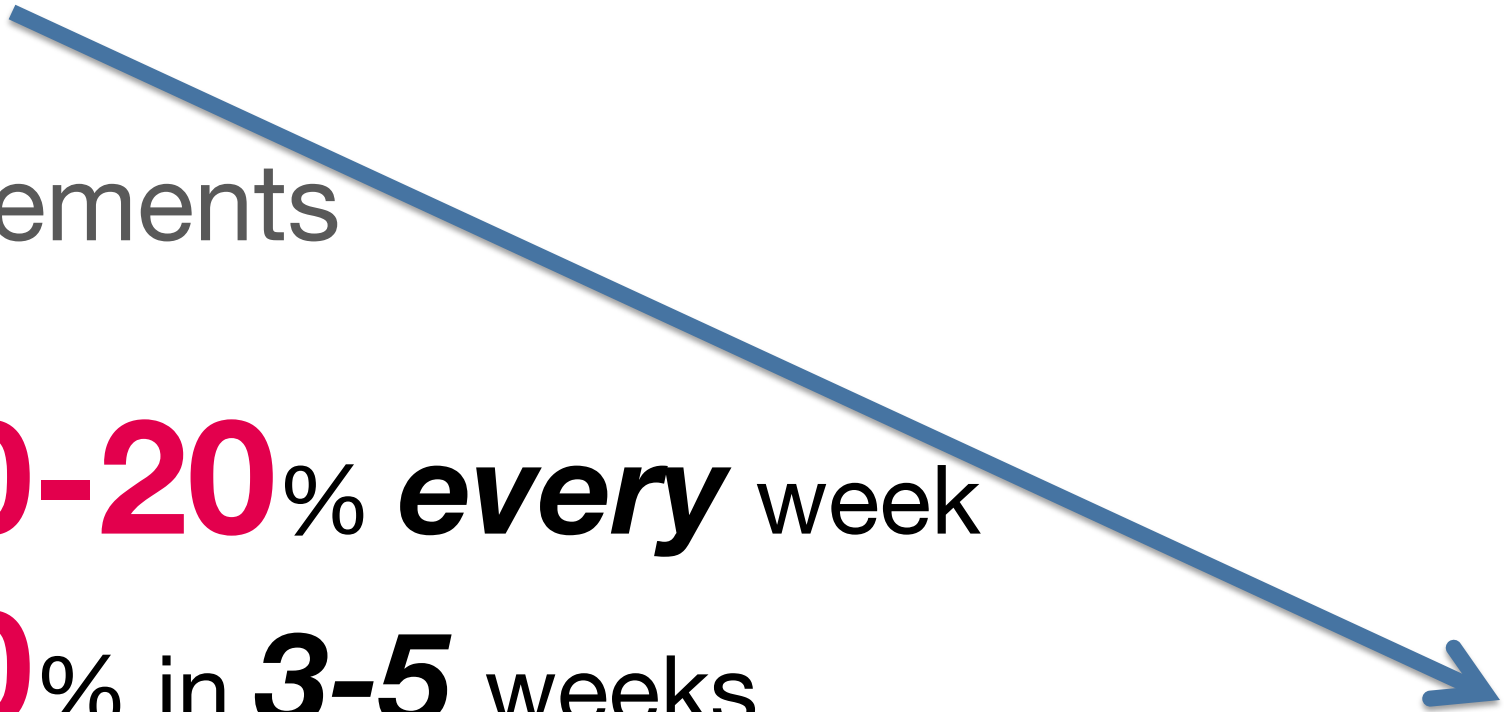
What Happens ??

Muscle strength

No movements

10-20% *every* week

50% in **3-5** weeks



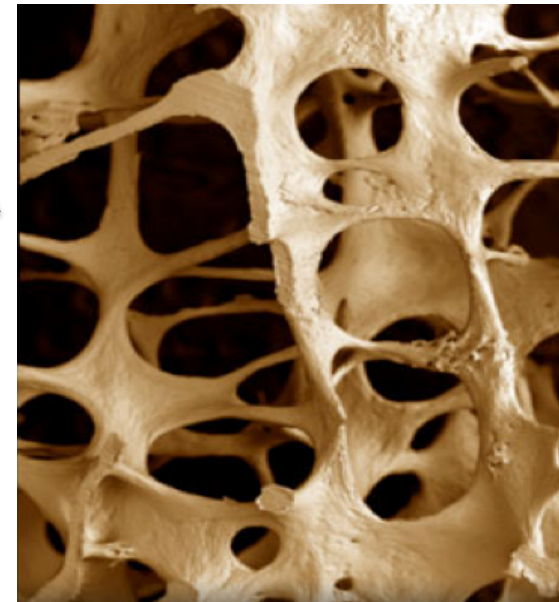


Bone density

12-week bed rest

50%

Osteoporosis



Aerobic

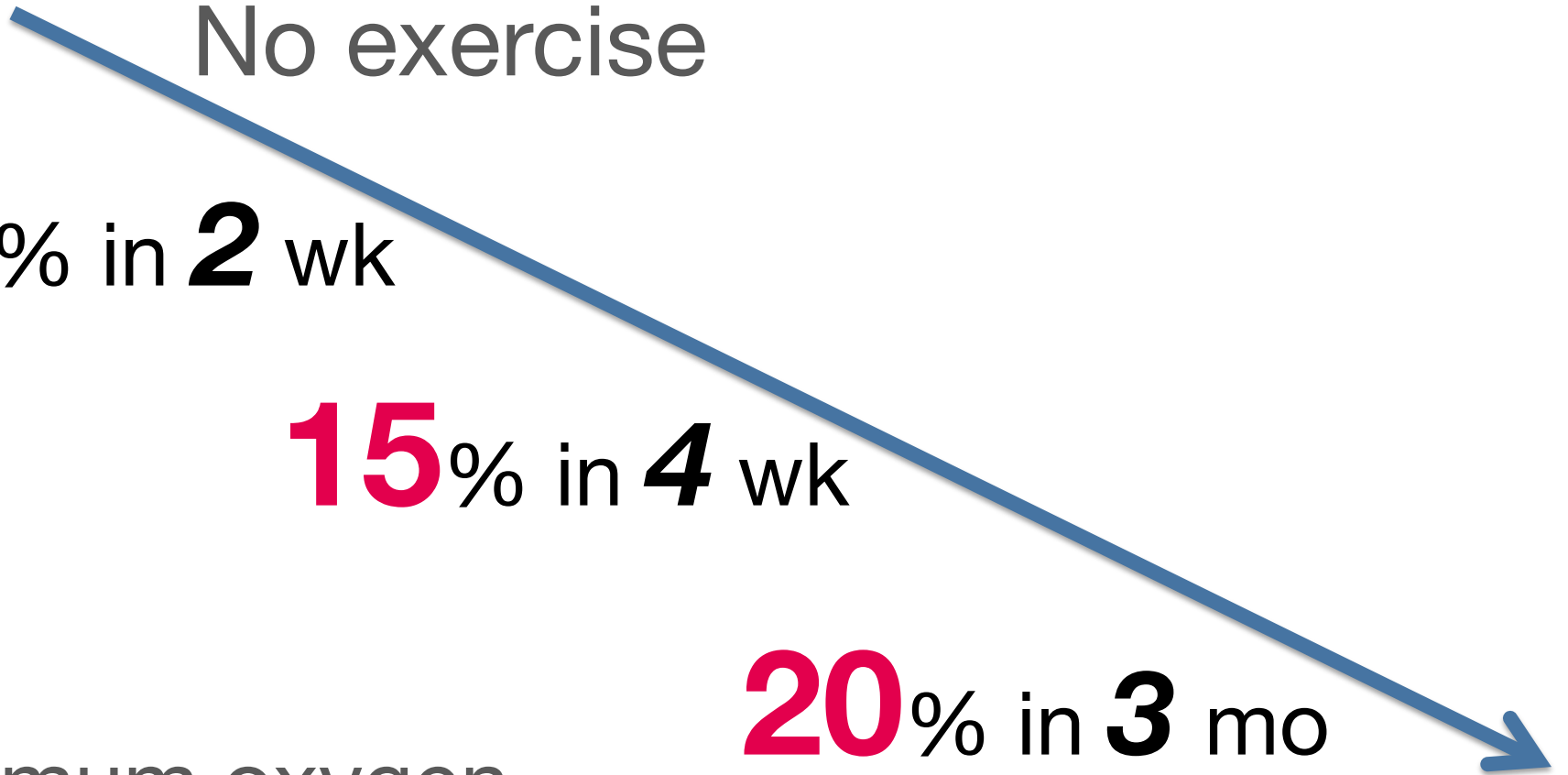
No exercise

10% in **2** wk

15% in **4** wk

20% in **3** mo

Maximum oxygen
the body can use



Metabolism

Fat **15**% in **5** wks

No activity



Psychosocial

Stress

Depression

Anxiety



No activity

Cardiovascular
Respiratory

Psychosocial
Neurological

Metabolism
Endocrine

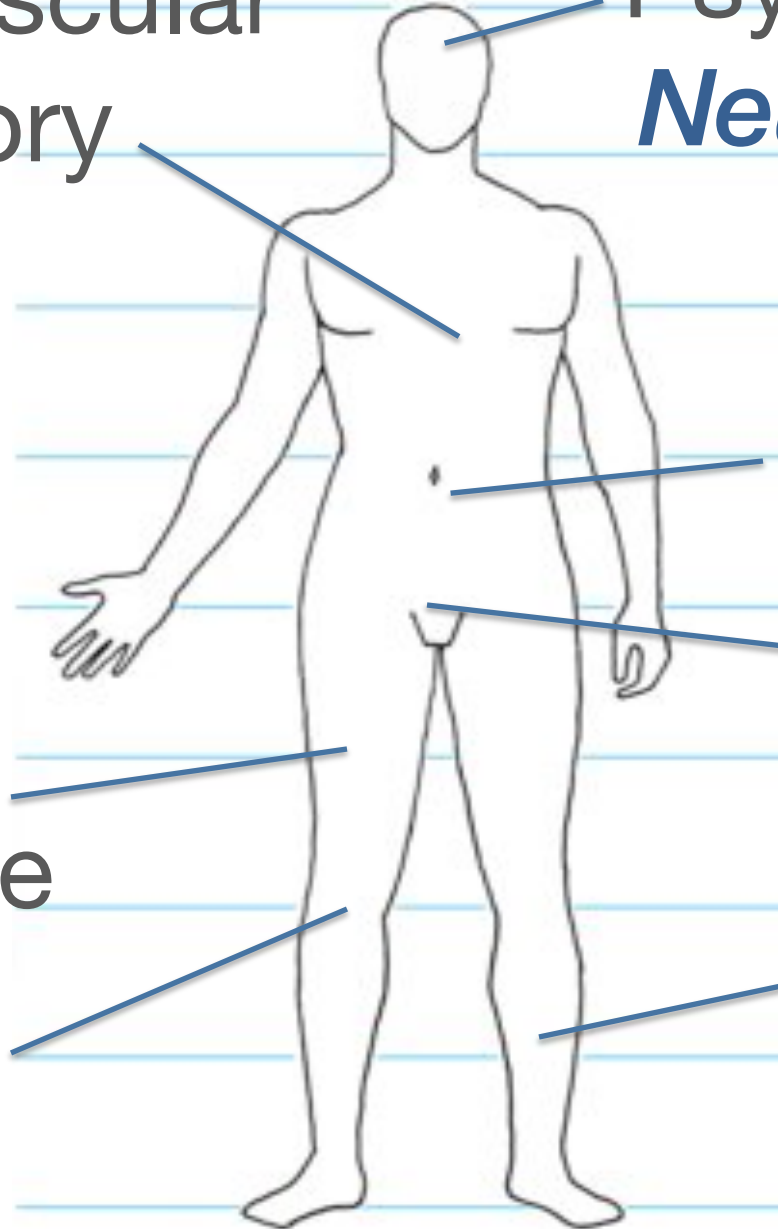
GI

Urinary

Bone
Muscle

Skin

Joint



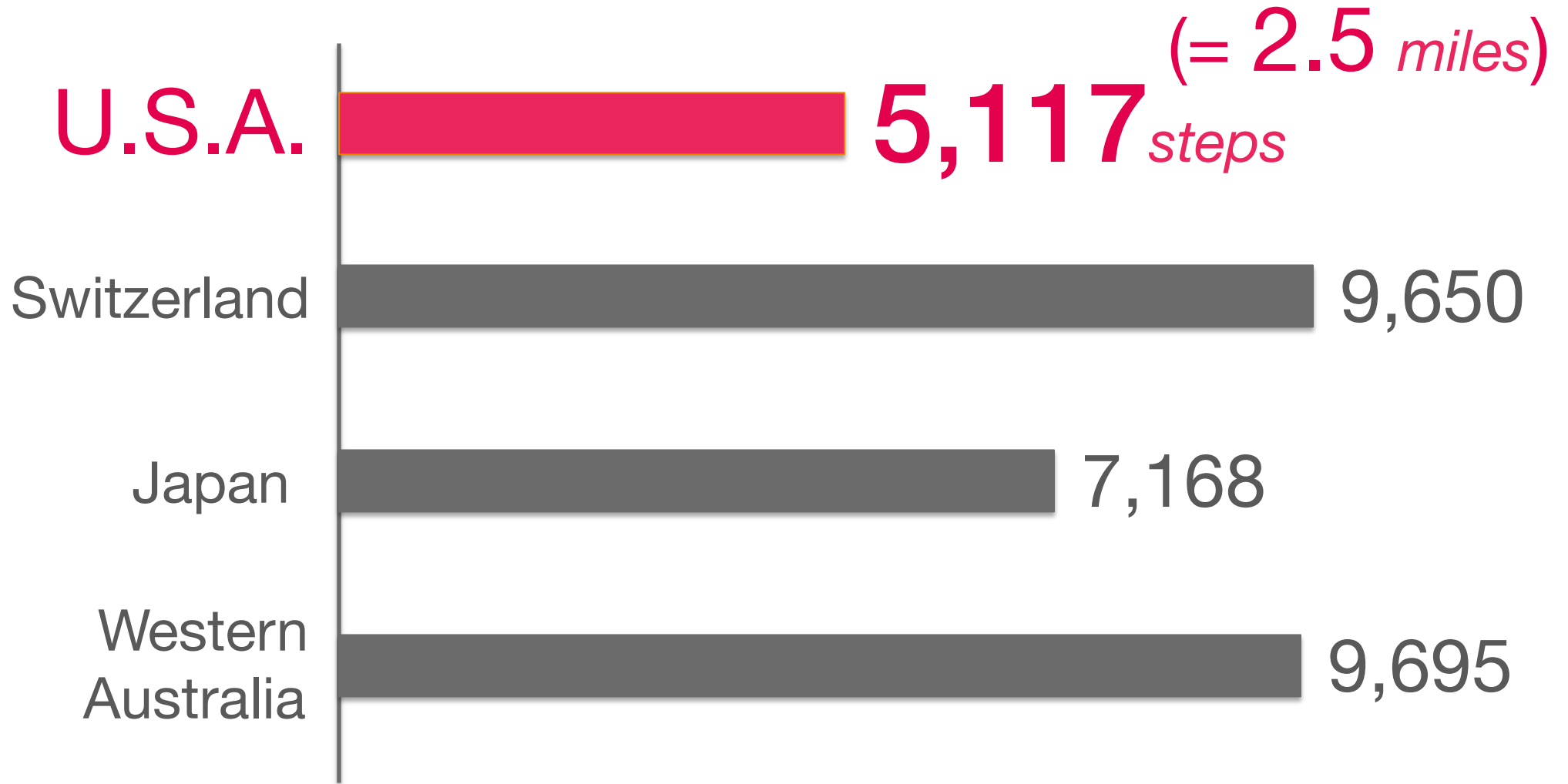
Life

May die younger

It is important to

be active

Daily steps (Pedometer-measured)



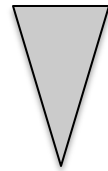
Bassett DR, et al. Med Sci Sports Exerc 2010

Age 50-71

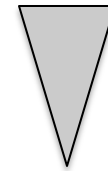
1995-96 (initial) → 2004-06 (follow up)

Watch TV **>5** h/day
Physically Active **<3** h/wk

Sit **<6** h/day
Physically Active **>7** h/wk

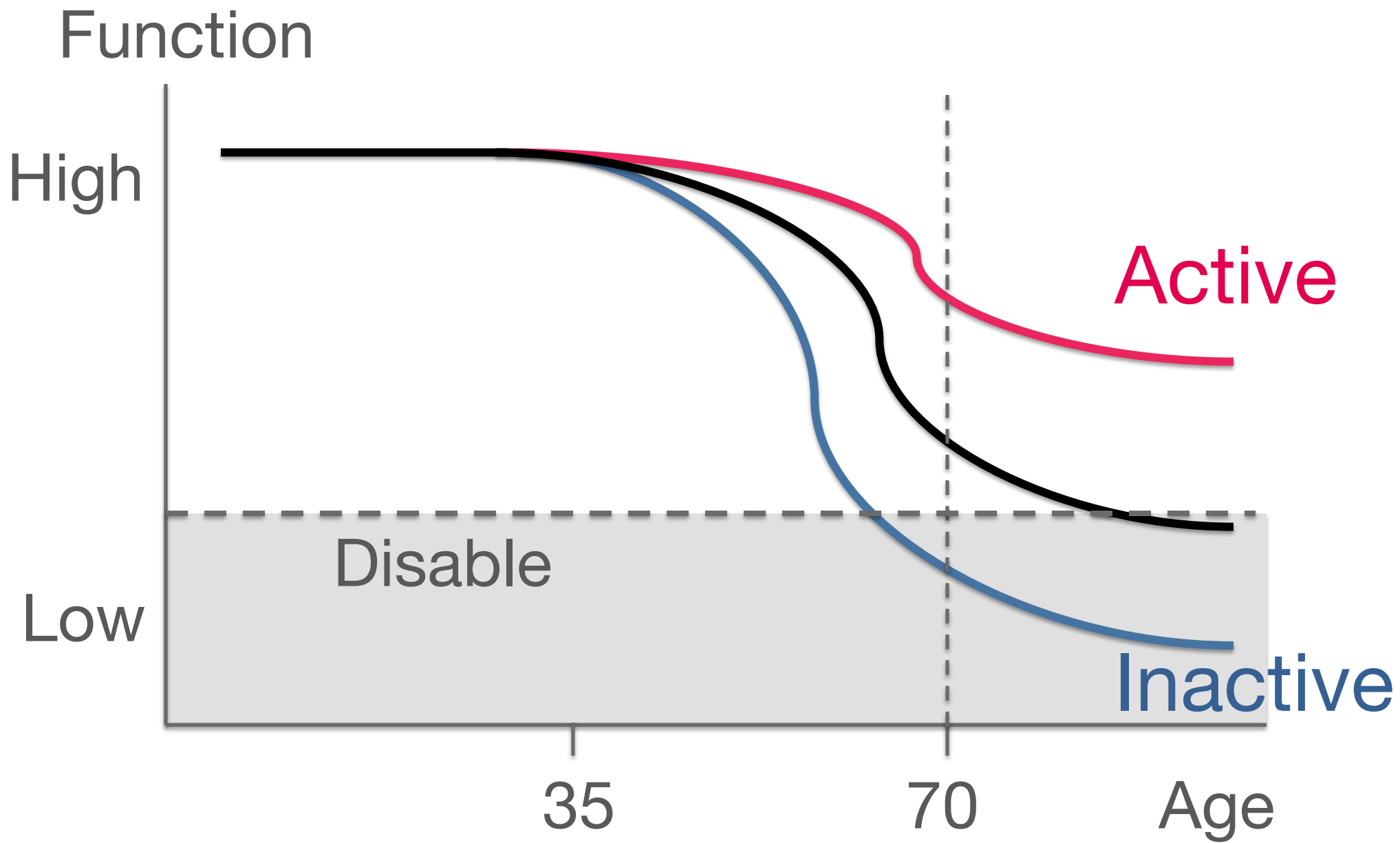


10 years



Trouble
walking

Good mobility
No disability



Physical activity



Exercise



Planned
Structured
Repetitive

706 Women
Age **75-85**

352

Supervised group
balance training /wk

354

Control

2 years

Reduced falling
Improved functions

*El-Khoury F, et al.
Br Med J 2015*

Function

Begin exercise

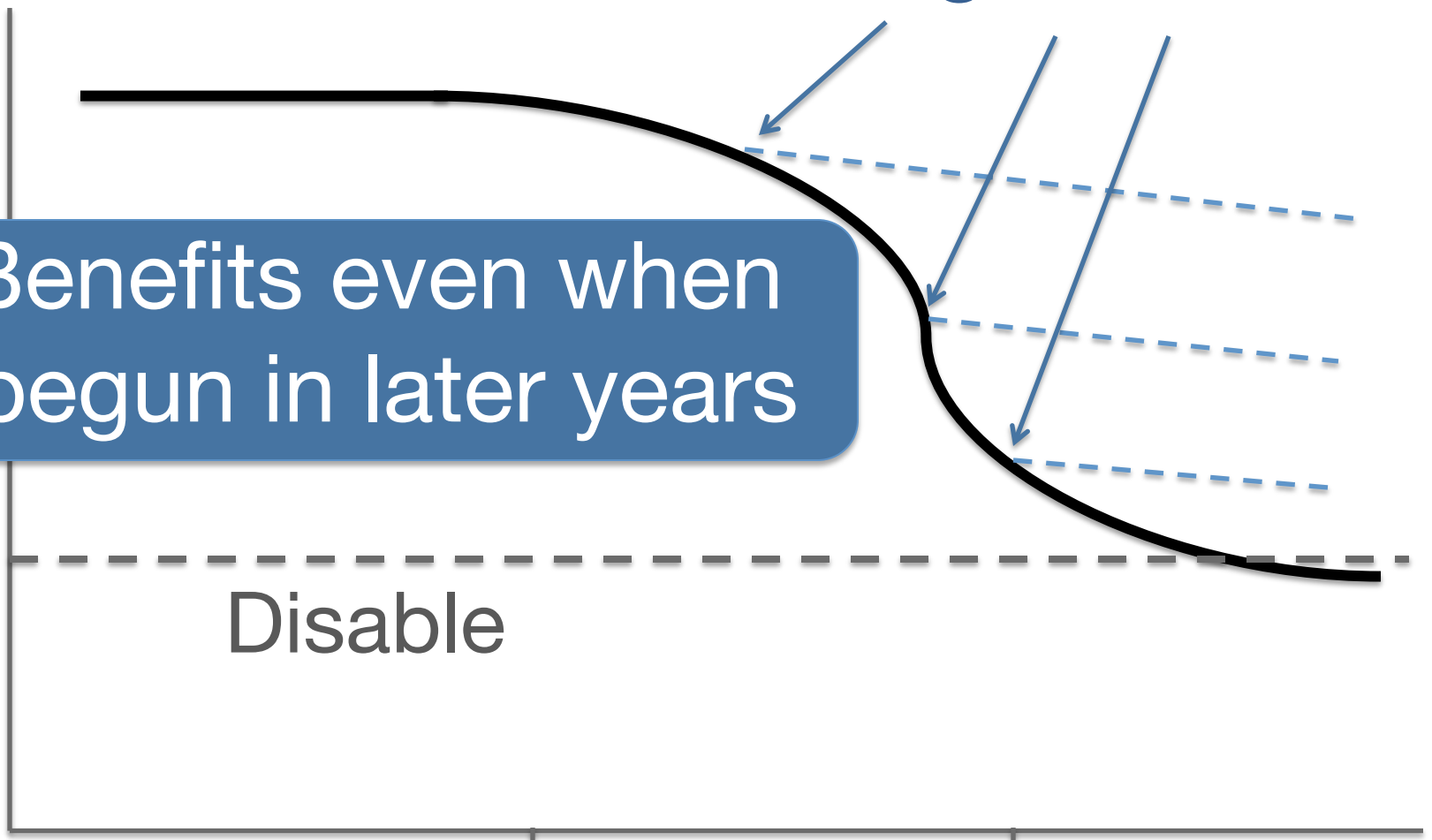
Benefits even when begun in later years

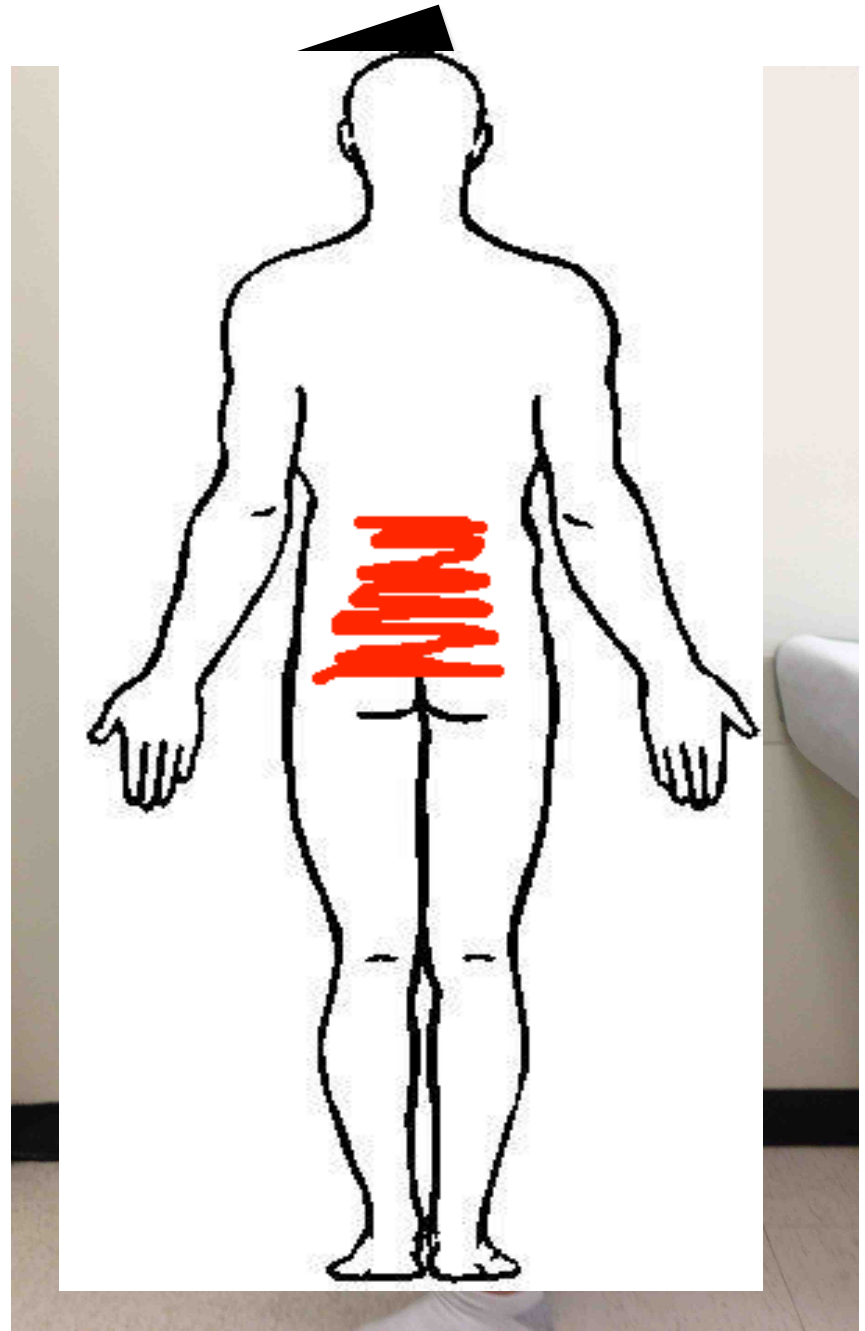
Disable

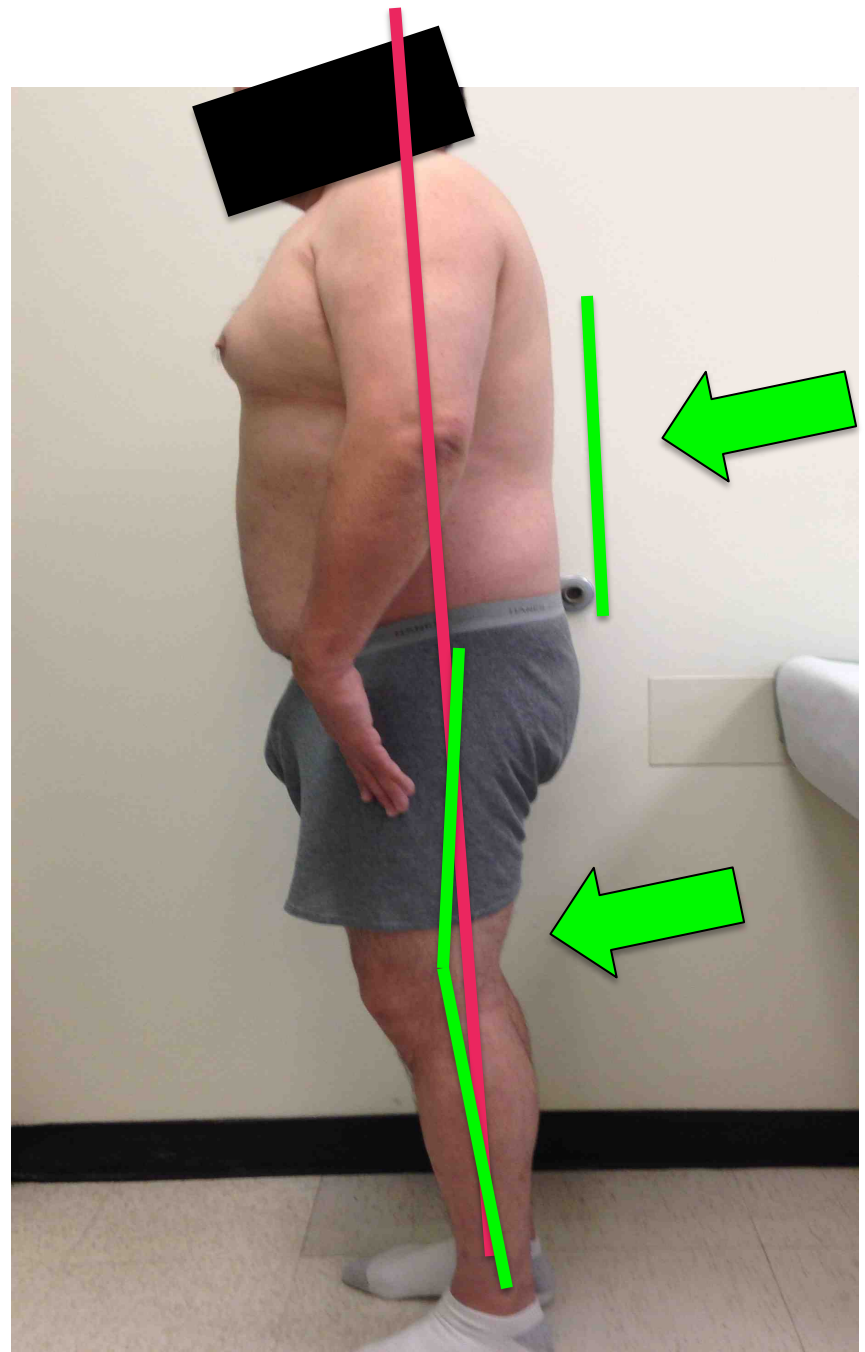
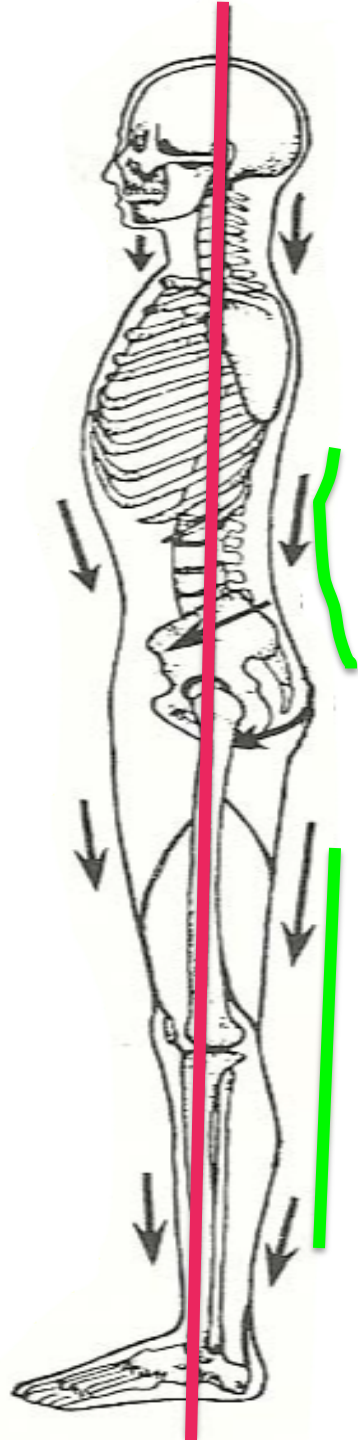
35

70

Age







Low back pain
Average Age **61**

Back exercises

Back exercises

Aerobic



Stationary bike
15 min

2x /week
5 weeks

Low back pain

Aerobic exercise

improves **pain** and **disability**

Barni, L et al. Top Geriatr Rehabil 2018

Exercises

Aerobic

Strength

Balance

Flexibility

Aerobic

Walking

Jogging

Dancing

Swimming

Biking

Strength

Push-up

Weights

Elastic band

Balance

Toe-heel stand

Leg side raising

Squat

Tai-chi

Yoga

Flexibility

Stretching

Joint mobility

Measuring *Intensity*

Talk test

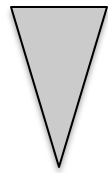
Target heart rate

Talk test

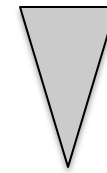
During physical activity

Conversation

A few words only



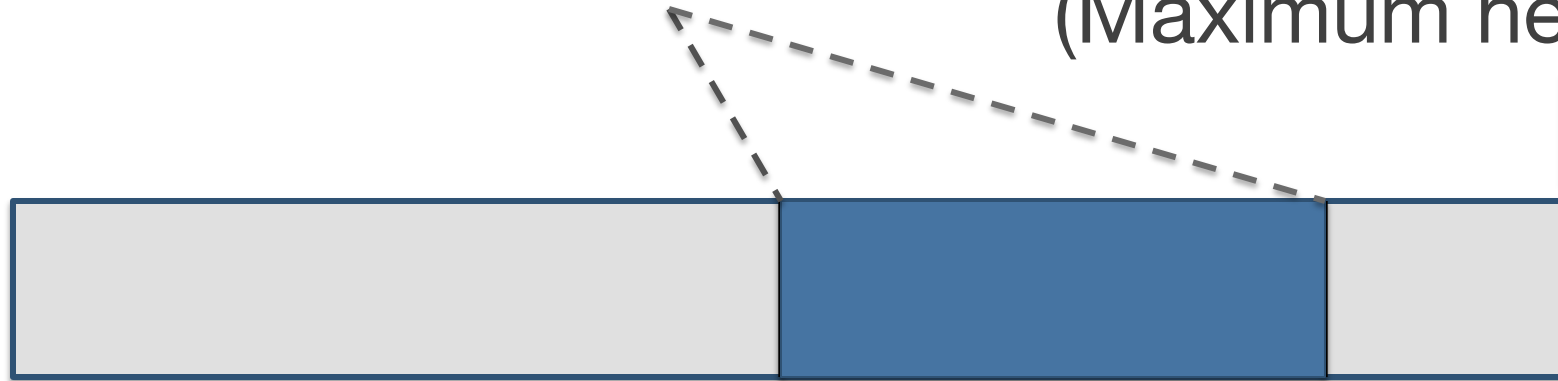
Moderate
intensity



Vigorous
intensity

Target heart rate

220 – your age
(Maximum heart rate)



50 %

85 %

75

132

150

(220 – 70)

You are **70** years old



Age ≥ 65

Aerobic

Strength

Moderate

150 min / wk

or

Vigorous

75 min / wk

AND

≥ 2 / wk

U.S. DHHS-CDC

Common Questions

q1. I am too old to start exercising.

q2. Exercise put me at risk of falling.

q3. I can't exercise because of pain.

Answers

Ans1. It is NOT late to start exercising.

Ans2. Exercise reduces the risk of falling.

Ans3. Exercise reduces pain.

Exercises: Are they effective?

YES !

Independent & Happy Life



Thank you