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Moving + Eating Well = Ageing Well

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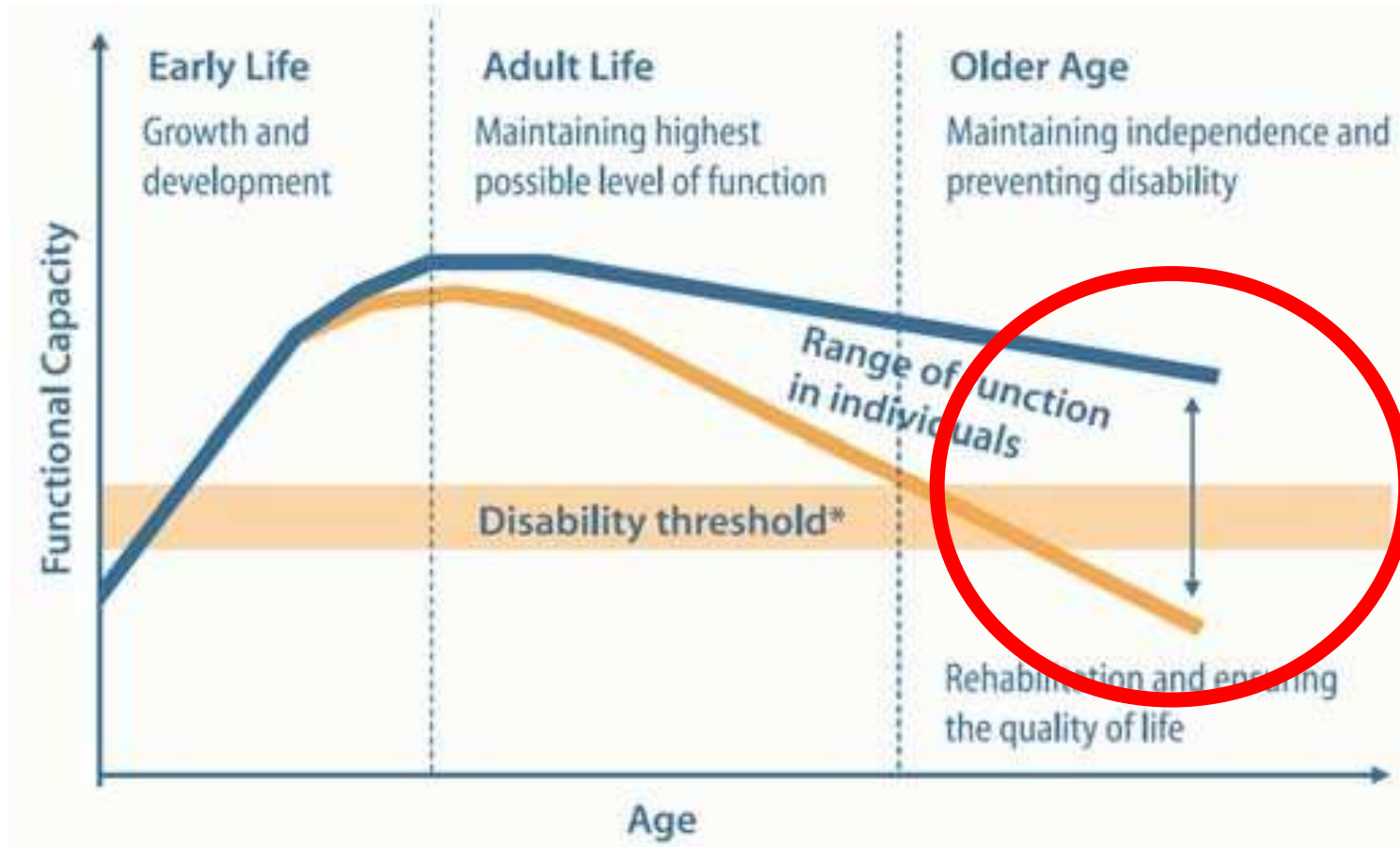


Topics for Discussion

- How active should we be to support healthy ageing?
- What is a healthy diet? What types of food should we eat to support healthy ageing?
- Assessing what you eat – using the UK Diabetes and Diet Questionnaire to score the health of your diet

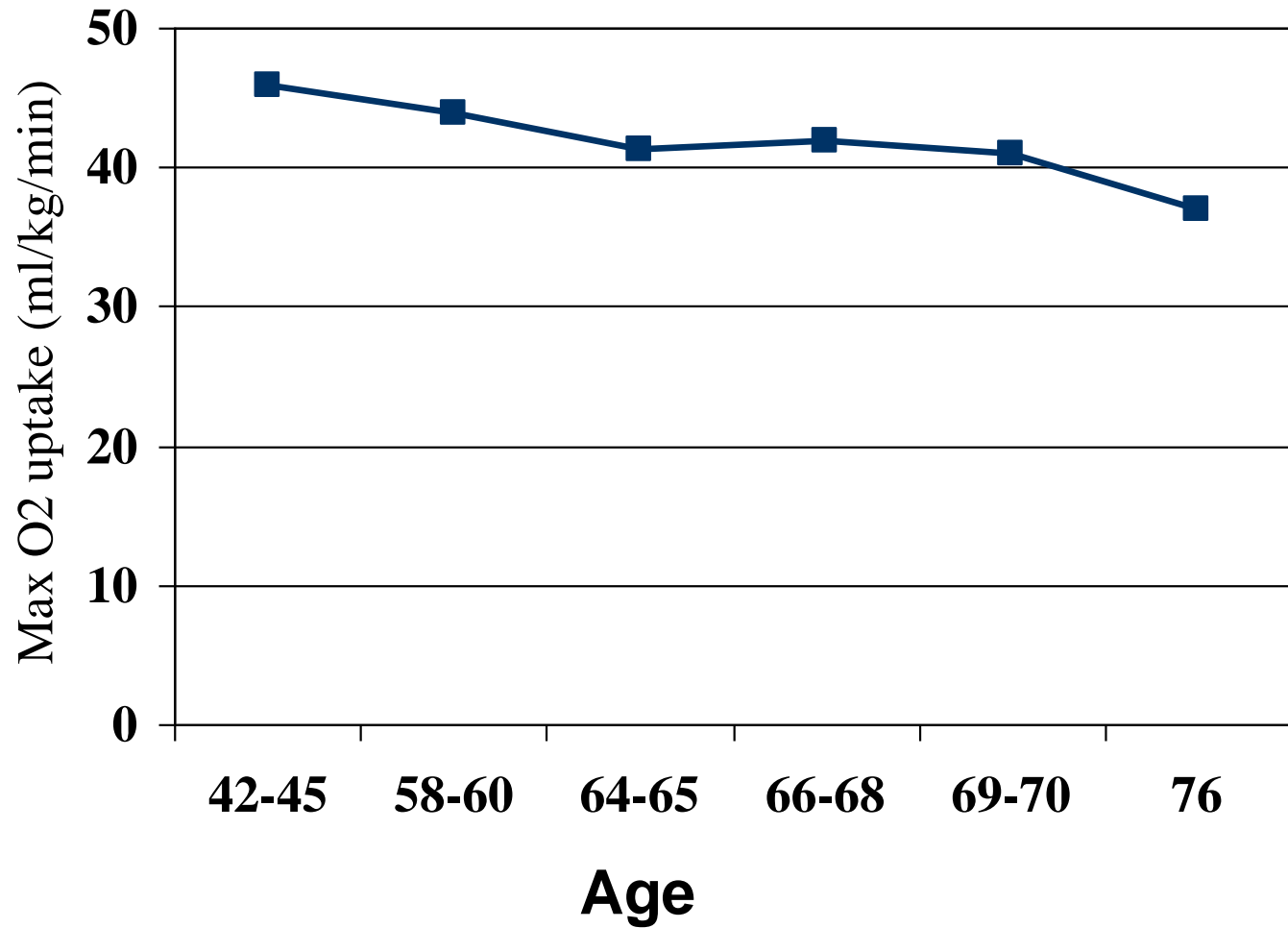


Age-related benefit of physical activity



33 year exercise programme!

**Aerobic
Fitness**



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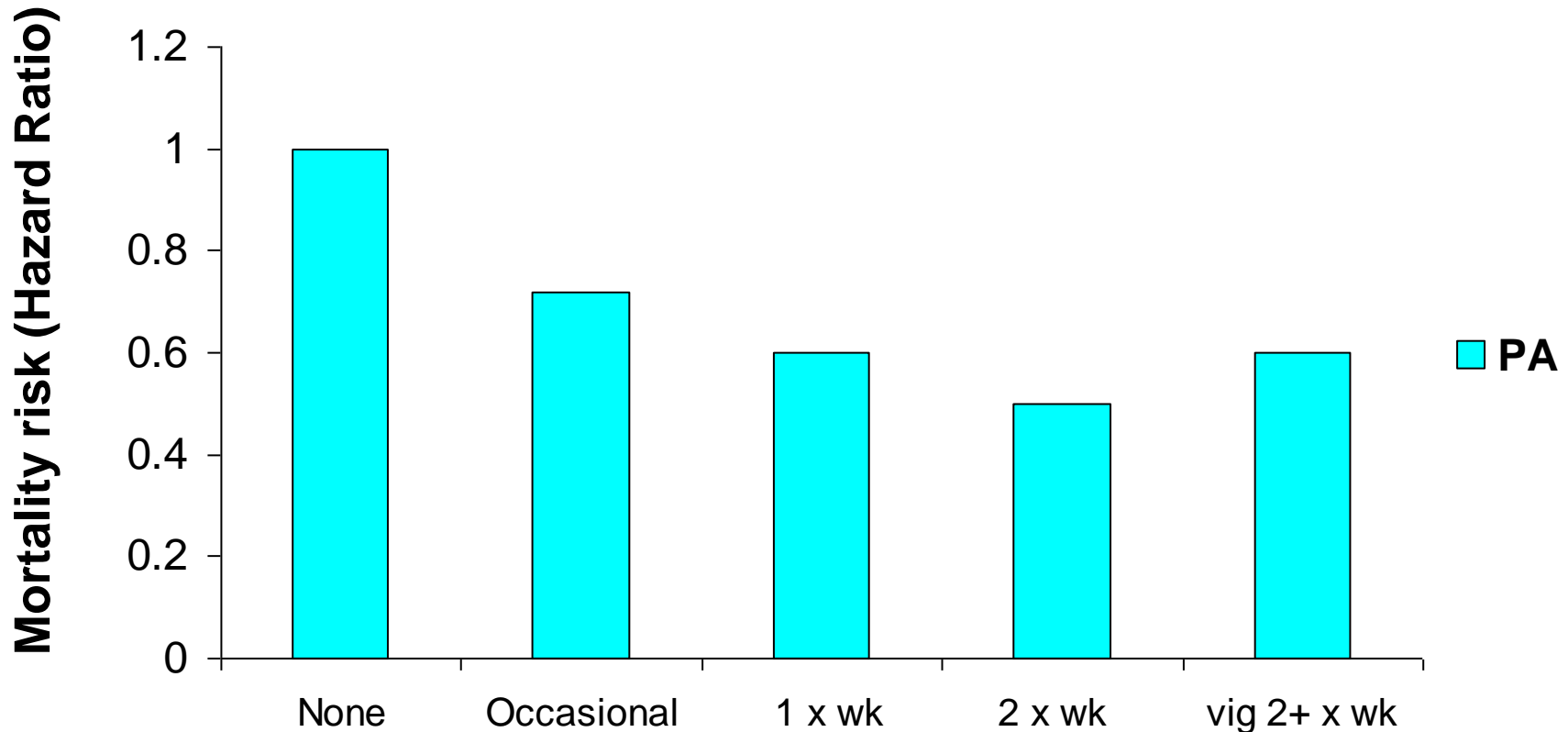
Kasch et al. (1999)
Age & Ageing, 28, 531-536

Current Physical Activity Recommendations for Older Adults

- A minimum of 150 min per week of moderate-to-vigorous aerobic physical activity
- 2 or more days per week of muscle-strengthening activities
- For those who cannot achieve this level, be as active as one's condition allows



Physical activity & mortality risk in the elderly (3206 men and women 65+ yr)



New Emerging Evidence

- Importance of “light” intensity physical activity in promoting health and function
- Benefits of engaging in “multi-component” physical activity/exercise programmes:
 - Balance, strength, endurance, gait, physical function activities
 - Recreational activities
- Benefits of reducing and “breaking up” time spent sitting (sedentary time)

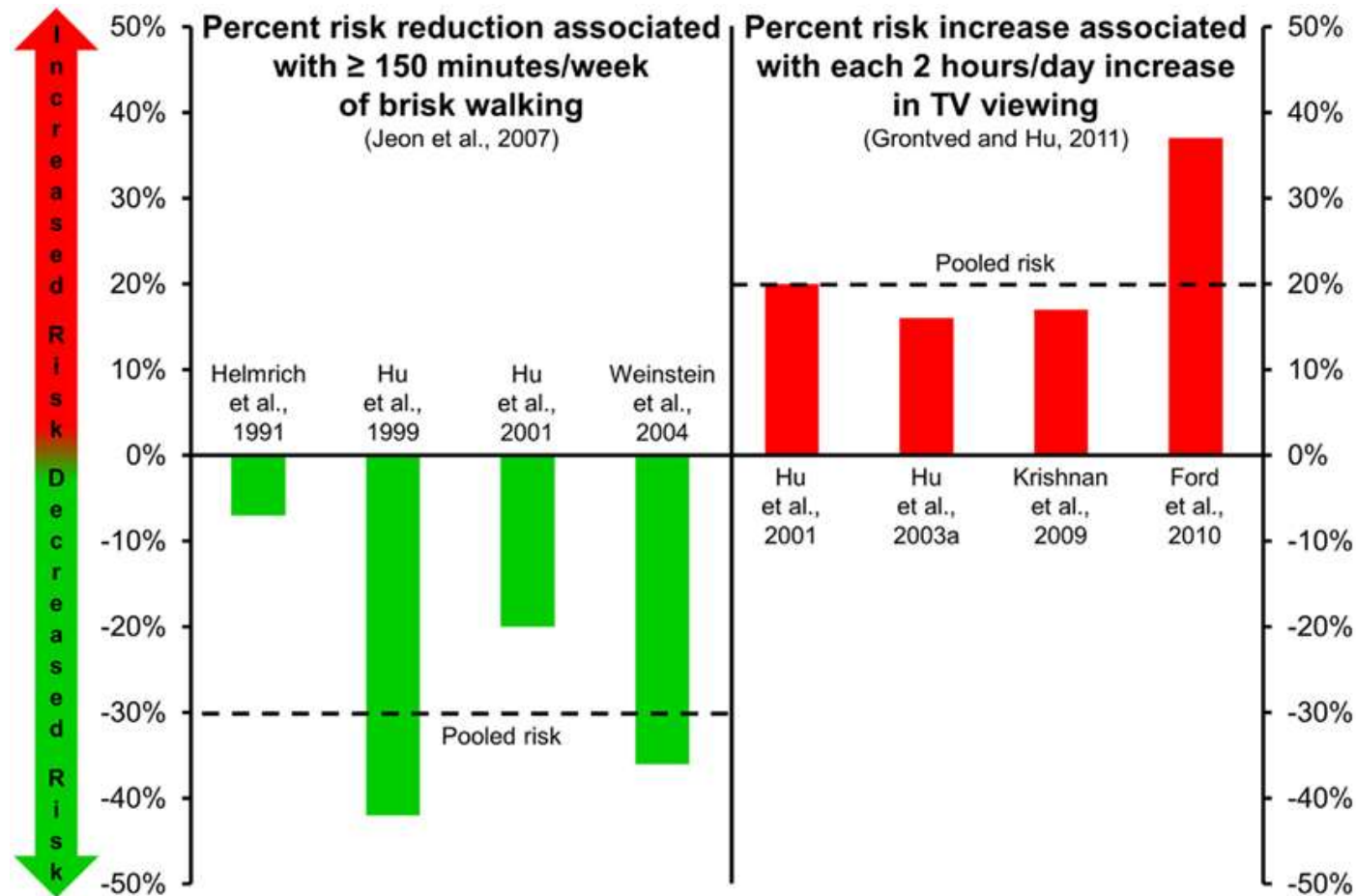


What about sedentary time?

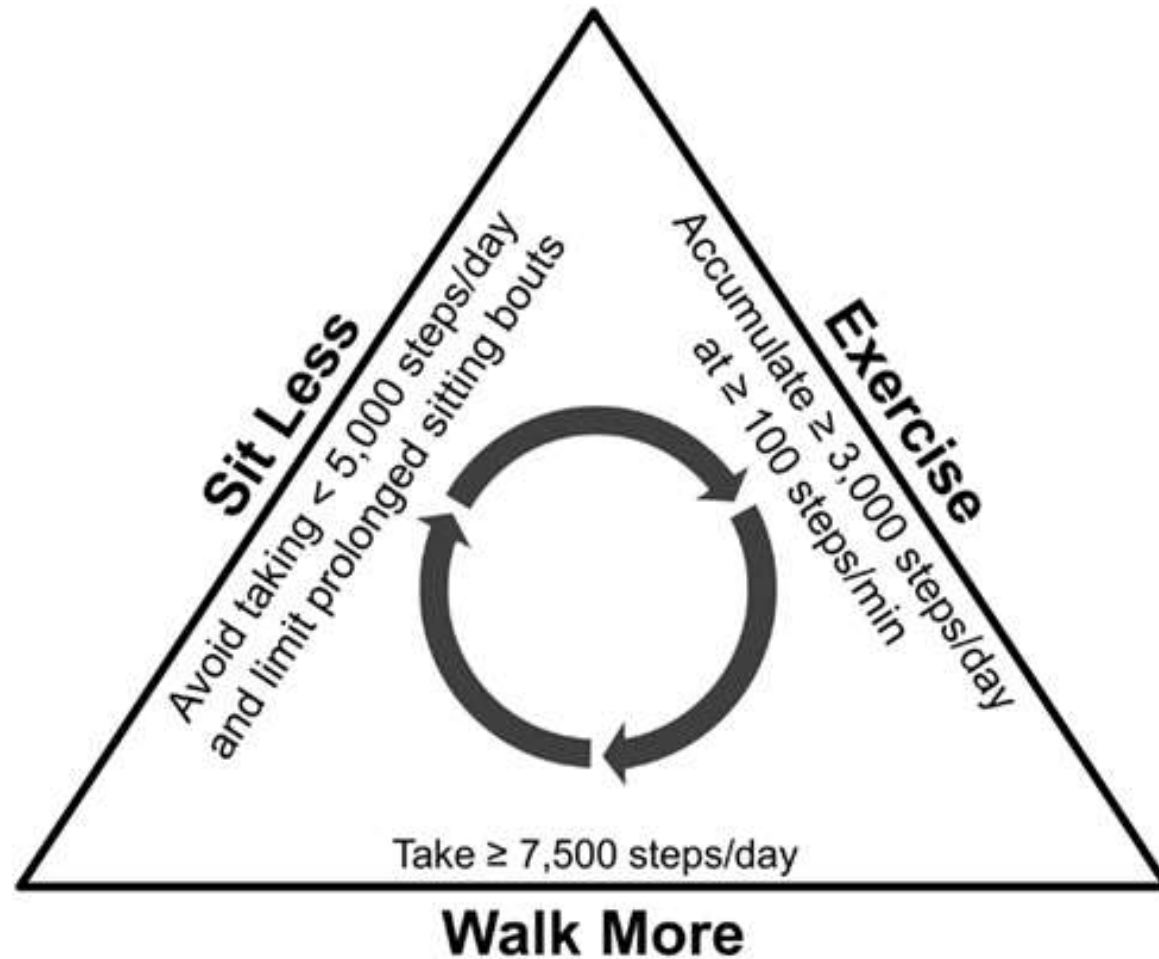
- ❑ Sedentary behaviours = activities with a relatively low energy expenditure (1-1.5 METs)
- ❑ Association between time spent sedentary and mortality from all causes and CVD that is independent of exercise/physical activity
- ❑ Associations between higher sedentary time and greater risk for obesity, type 2 diabetes, and metabolic syndrome
- ❑ Can be physically active AND sedentary
- ❑ Breaking up extended sitting time with short bouts of walking may moderate negative effects



Risk of type 2 diabetes with walking and TV viewing



“Walk more, sit less, *and* exercise”

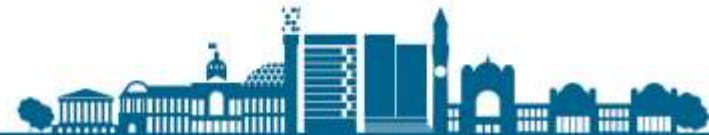


The Bottom Line...

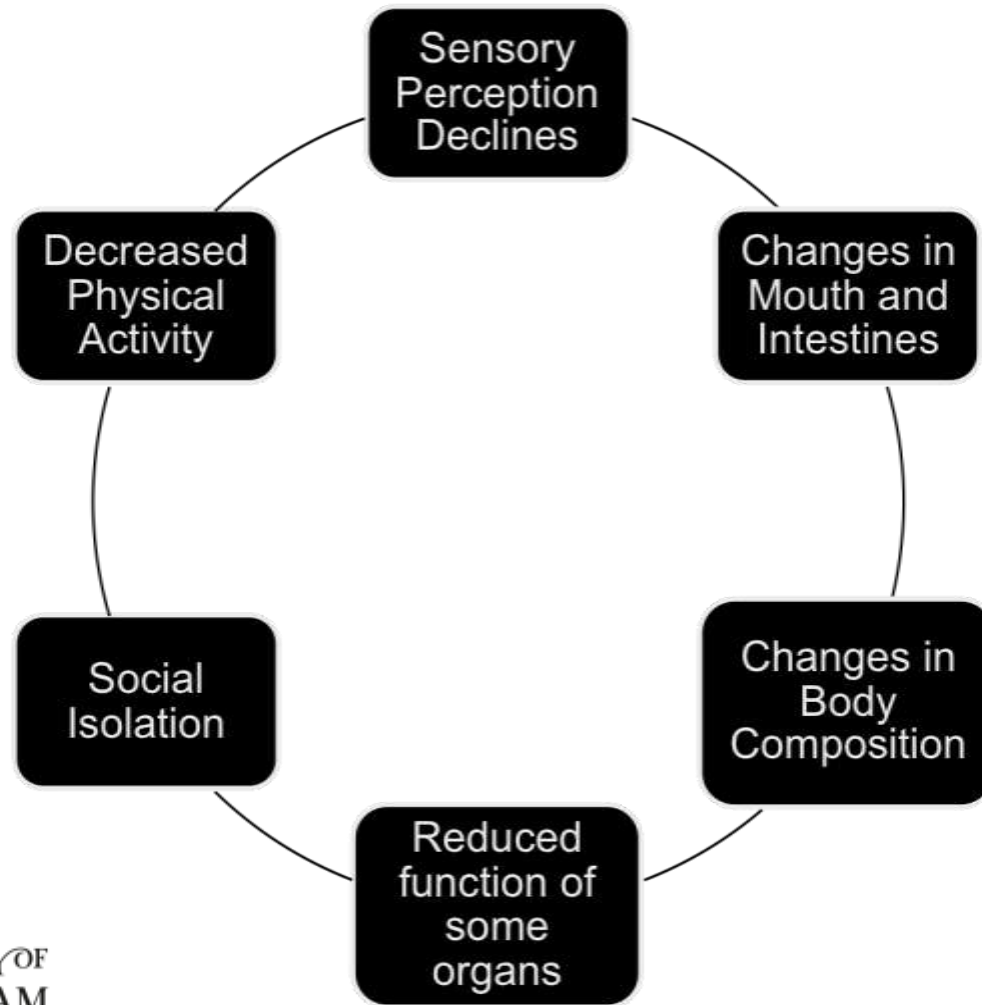
- Doing any amount of physical activity is better than doing nothing
- Try to frequently break up your sitting/sedentary time with moving
- Engaging in diverse types of activities is highly beneficial



What About Diet?



Physical, Social, and Psychology Changes with Ageing that affect what/how we eat



Impact of changes in sensory perception

- Sense of **smell, taste, and vision** decline – linked with appetite
- Reduces enjoyment of food and limits food preferences and choices
- Increased risk of food infection as less capable of detecting ‘spoiled’ food
- Challenges reading food label
- Less able to drive which limits food shopping
- Hard to read knobs/controls when cooking



Impact of changes in mouth and intestines

- Reduced saliva production
 - Reduces ability to chew, swallow, and taste perception declines
- Secretion of hydrochloric acid in the stomach may be reduced
 - Limits absorption of minerals and certain vitamins (e.g., vitamin B12)
- Some may experience a decrease in ‘protective’ gut bacteria and an increase in ‘pathogenic’ gut bacteria
 - Impairs immune function and affects absorption of nutrients



Impact of changes in body composition

- Body fat increases and muscle mass declines
 - Causes loss of muscle strength and physical function
- Abdominal fat shifts from ‘subcutaneous’ (just below the skin) to ‘visceral’ (more internal around organs)
 - Causes obesity and increases risks for diabetes, heart disease, and some cancers
- Decreased bone density
 - Causes osteoporosis and increases risk for fractures



Impact of reduced function of organs

- Reduced ability of kidneys to concentrate waste products
 - Increases risk for dehydration
- Liver less able to break down drugs and alcohol
- Pancreas less precise in regulating blood glucose levels
 - Increases risk for diabetes
- Bladder control may decline



Impact of social isolation

- Increases risk of depression
- Less likely to want to prepare and consume meals
- May not be able to afford or access adequate amounts of healthy foods
- No one to 'look out' for older adults to ensure adequate intake of a healthy, varied diet and proper intake of medications



So what is a healthy diet? And how much should older adults eat?

- Important to recognise that:
 - 70% older adults are overweight or obese
 - 3% are underweight (or malnourished)
- Dietary recommendations for older adults are similar to those for younger adults with just a few exceptions...



UK Nutrition Recommendations for Older Adults

- Food Standards Agency
- Public Health England
- Department of Health
- British Dietetic Association
- British Nutrition Foundation
- Age UK



Energy in /Energy out

Nutritional recommendation	Reason for change
<ul style="list-style-type: none">• Eat a wide variety of foods in amounts that balance your energy needs• Energy IN \leftrightarrow Energy OUT	<ul style="list-style-type: none">• Some older adults have a limited variety in their diets• Less energy expenditure due to lower physical activity levels



More vitamin D

Nutritional recommendation	Reason for change
Increased need for vitamin D: -take supplement: 10 mcg (400 IU) daily -or eat oily fish and fortified breakfast cereals regularly	<ul style="list-style-type: none">• Less vitamin D absorbed through the skin• Lower bone density



Eat more Protein?

- Current recommendations = 0.75 grams per kg body weight per day
- New evidence suggests needs may be as high as 1.2 grams per kg body weight per day



Daily need for protein (grams) based on body weight

Weight (stones)	Weight (kg)	Lower end of need (0.75 grams per kg body weight per day)	Higher end of need (1.2 grams per kg body weight per day)
7 stones 12 lb	50	38 grams	60 grams
9 stones 6 lb	60	45 grams	72 grams
11 stones	70	53 grams	84 grams
12 stones 8 lb	80	60 grams	96 grams
14 stones 3 lb	90	68 grams	108 grams
15 stones 10 lb	100	75 grams	120 grams

Protein content of common foods

Food	Protein (in grams)
100 grams (3.5 oz) chicken breast	32
100 grams (3.5 oz) gammon steak	24
176 grams cod fillet	18
100 grams beef mince burger	26
200 ml whole milk	6.8
-semi-skimmed milk	7.2
-skimmed milk	7.2
150 gram pot yogurt (plain)	8.6
150 gram pot yogurt (fruit)	6.0
Cheddar cheese (30 gram matchbox size serving)	7.6



OTHERWISE, SAME OLD STORY ...

- IT IS WHAT YOU'VE BEEN HEARING ABOUT FOR A NUMBER OF YEARS!
 - Eat a wide variety of foods
 - '5-a-day' portions of vegetables and fruit (7 is better!) – portion = 80 grams
 - Reduce saturated fat and sugar
 - Eat amounts that support a healthy body weight and healthy levels of physical activity
 - Use the Eatwell Guide to help you



The Eatwell Guide



The Eatwell Guide

- Interactive guide for the Eatwell plate now available on the NHS website
- <http://www.nhs.uk/Livewell/Goodfood/Pages/the-eatwell-guide.aspx>
- Provides details on portion sizes for all foods
- Other Healthy Eating tools also available on this website



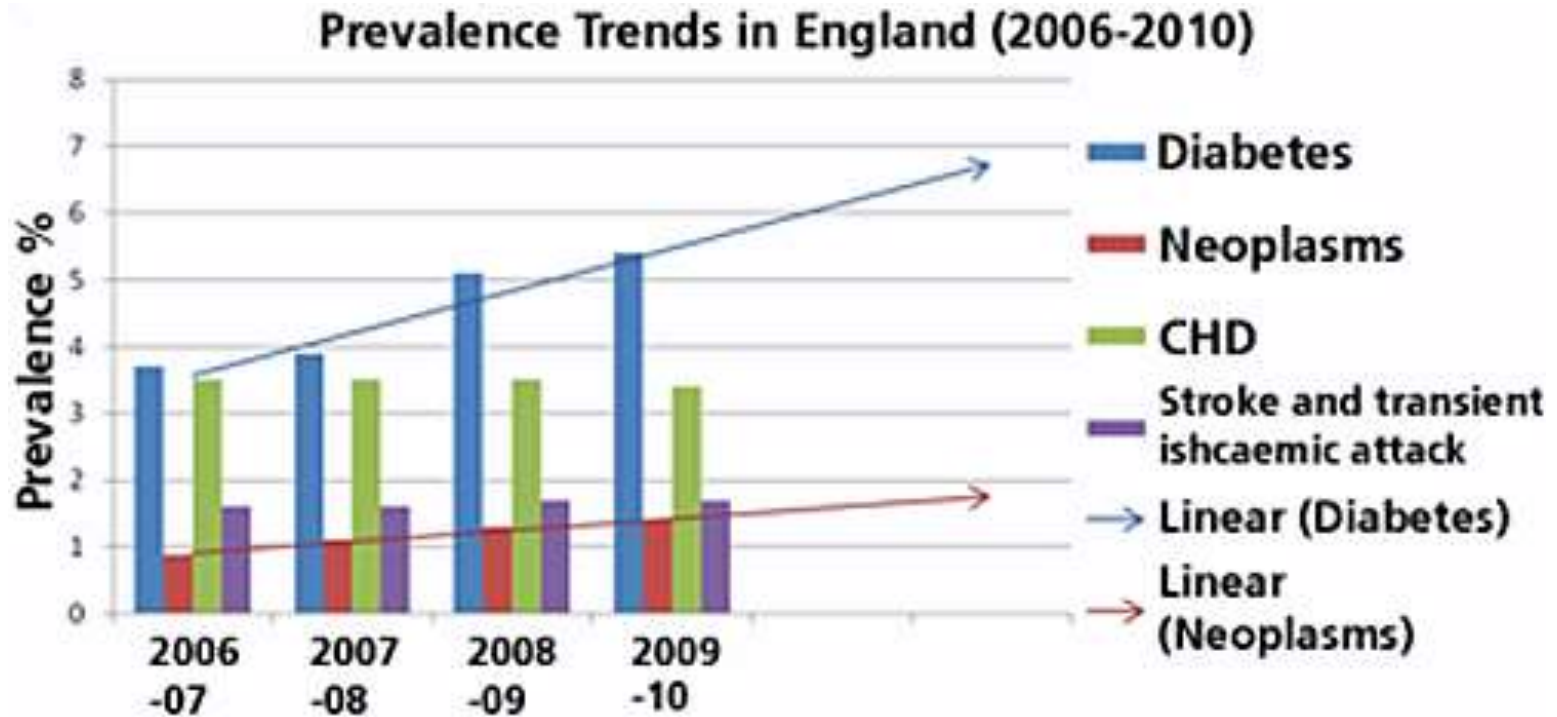
Assessing what you eat: the UK Diabetes and Diet Questionnaire

- Example of a food frequency questionnaire
- Developed by Professor Janice Thompson at the University of Birmingham, and Dr Clare England at the University of Bristol
- Developed and evaluated in adults with and **AT RISK** for diabetes
- Includes foods and eating behaviours associated with healthy blood sugar and the EatWell guide

England CY, JL Thompson, R Jago, A Cooper, and R Andrews.
Public Health Nutrition, 2016, 20(2):1-9.



Prevalence Trends of Diabetes in England – Higher than heart disease and all cancers



*Neoplasms = cancers

Source: Diabetes UK, <https://www.diabetes.org.uk/>

about_us/news_landing_page/diabetes-rates-in-the-uk-soar-to-nearly-3m



How can the UKDDQ be helpful in guiding me if I don't have diabetes?

- ❑ There is no such thing as “zero” risk for diabetes – some people have higher risk than others
- ❑ Older adults have an increased risk for diabetes due to:
 - Reduced function of the pancreas
 - Being overweight
 - Being inactive
- ❑ The UKDDQ was developed for use with people who may be **at risk** for diabetes
- ❑ It is a quick and easy way to score the quality of the foods you eat and your eating behaviours
- ❑ Gives guidance on how you can improve the quality of your diet and eating behaviours

