Advise on health risks of obesity and weight management options

Session 6

Acknowledgements
Obesity Canada

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5As of Obesity Management

- **Ask** for permission to discuss weight.
- **Assess** obesity-related risk and potential “root causes” of weight gain.
- **Advise** on obesity risks, discuss benefits and options.
- **Agree** on realistic weight management expectations and on a SMART plan to achieve behavioural goals.
- **Assist** in addressing drivers and barriers, offer education and resources, refer to provider, and arrange follow-up.

Advise

- Advise on obesity risks.
- Explain benefits of modest weight loss (adults).
- Explain benefits of health behaviours (families/children).
- Explain benefits of healthy weight gain within the guidelines (pregnant women).
- Explain need for long-term strategy (adults and families/children).
- Explain the need for a strategy throughout pregnancy and the postpartum period.
- Advise on weight management options.

Advise on obesity risks (adults and paediatrics)

- Obesity risks are more closely related to obesity stage than to BMI.

- Focus of management should be on improving health and well-being rather than simply losing weight.

Advise on obesity risks (pregnancy)

- Gestational weight gain (lower or higher than recommended) is linked to negative outcomes for the mother and her fetus.
- Gestational weight management should be about improving the health and well-being of both mother and fetus – rather than just measuring weight.

Explain need for long-term strategy

- Relapse is virtually inevitable when any intervention stops.
- This means that all management strategies must be feasible and sustainable.
- Interventions involving “quick fixes” and unsustainable strategies result in an inability to maintain health behaviours.

Source: Obesity Canada, 5As of Obesity Management

Explain benefits of health behaviours

- The first goal is to stabilize BMI.
- Changes in health behaviours can result in substantial health benefits, including improvements in:
  - lipid profile
  - blood sugar control
  - blood pressure control
  - fitness
  - sleep
  - body image
  - self-esteem
  - coping

Explain benefits of gaining within the guidelines during pregnancy

Healthy weight gain within the guidelines can result in substantial health improvements for:

women

- fewer complications before, during and after birth
- blood glucose control
- blood pressure control
- less weight to lose after birth

babies

- healthy birth weight
- less birth trauma
- less chance of need for admission to a special care nursery/intensive care nursery (e.g. blood glucose control, temperature control)
- less chance of overweight and obesity during childhood and as an adult

Advise on treatment options (adults)

Average sustainable weight loss with behavioural intervention is about 3–5% of initial weight.

- sleep, time and stress management
- dietary interventions
- physical activity
- psychological
- low-calorie diets
- anti-obesity medications
- bariatric surgery

Advise on management options (pregnancy)

- **Weight gain**
  - Should be based on pregnancy BMI – women with higher pregnancy BMI require less weight gain. Refer to guidelines.
- **Sleep, time and stress**
  - Management interventions may improve eating and activity behaviours as well as mood.
- **Eating behaviour**
  - Should focus on healthy nutrition. An extra 2–3 servings total about 250–500 Kcal/day.
  - Trimesters 2 and 3 only.
  - Fruit and vegetables, grains, milk, and alternatives, meat and alternatives (e.g. 1 piece of fruit + ¾ cup of yoghurt, 1 piece of toast + 1 cup of milk).
  - Exercise caution with cravings

Advise on management options (pregnancy)

- **Physical activity**
  - Interventions should promote physical activity (if there are no contraindications) throughout pregnancy.
- **Sedentary behaviour**
  - Women should be encouraged to reduce sedentary time.
- **Mental health**
  - Women should be encouraged to focus on experiences (activities or relationships) that enhance positive self-esteem, well-being and quality of life throughout their pregnancy. Referral to mental health treatment in situations where there are underlying/ comorbid psychological issues or problems is recommended.

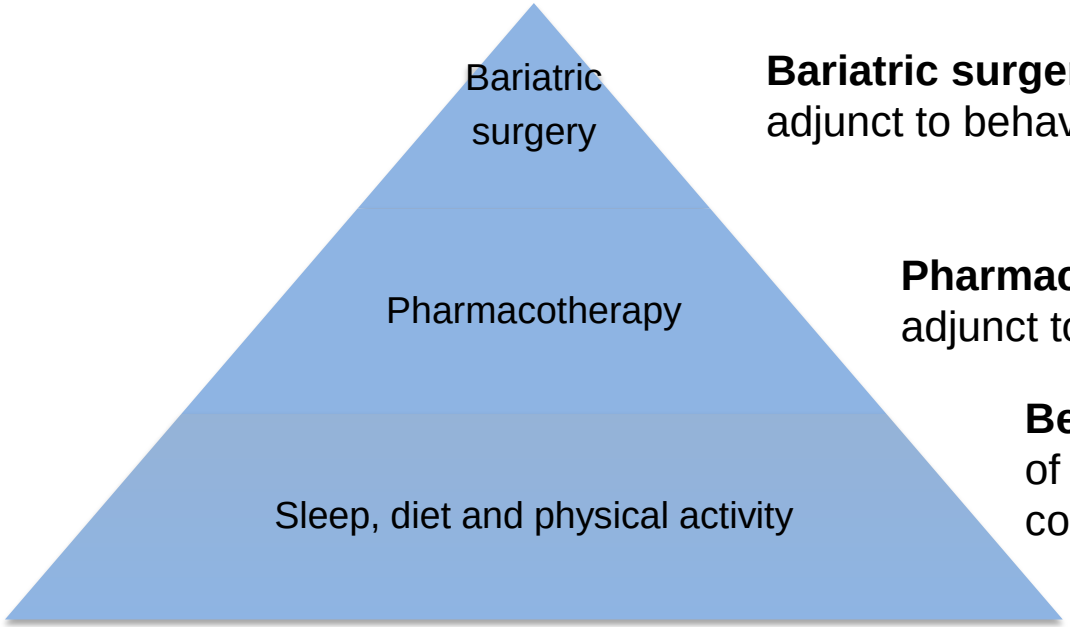
Advise on family-based management options

Sleep	• Management interventions can significantly improve eating and activity behaviours as well as mood and school performance.
Eating behaviours	• Should focus on eating and drinking hygiene. Extreme and “fad” diets are not sustainable in the long term.
Physical activity	• Rather than focusing on “burning calories”, interventions should aim to reduce sedentariness and increase daily physical activity levels to promote fitness, overall health and general well-being.

Advise on family-based management options

Sedentary behaviour	• Should be limited through minimizing recreational screen time to less than 2 hours per day, choosing active transportation over motorized, and increasing active play and active family time.
Mental health	• Treatment referrals to help manage underlying/ comorbid psychological issues. • Interventions can improve body esteem and self-esteem, reduce emotional eating, and promote coping strategies.
Bariatric surgery	• May be considered for adolescents who have reached their final adult height, with BMI >40 and obesity-related health complications. • Candidates and their families are required to have completed a multidisciplinary 6-month presurgical intervention.

Treatment modalities for obesity in adults



Bariatric surgery: RYGB, VSG, BPD, LAGB; adjunct to behavioural modifications

Pharmacotherapy: orlistat and liraglutide; adjunct to behavioural modifications

Behavioural modifications: consists of nutrition, physical activity and cognitive behavioural therapy

Lau DC, Douketis JD, Morrison KM, Hramiak IM, Sharma AM, Ur E. 2006 Canadian clinical practice guidelines on the management and prevention of obesity in adults and children. CMAJ. 2007;176(8):S1–13

Choice of treatment depends on evaluation of a patient's level of obesity and their risk of obesity-associated disease.

Nutrition

Unhealthy diets and overweight

- Historically, malnutrition used to be the main problem for many countries
- Today, excess consumption of energy and nutrients of concern the main issue: too much saturated fat, trans fats, salt and free sugars leading to noncommunicable diseases (NCDs).
- However:
  - dietary and activity guidelines are often complex;
  - advice on nutrient intake needs to be translated to diets and foods;
  - different populations have different lifestyles and diets, hence different needs.

Advice needs to be individualized.

WHO summary of a healthy diet

- **Energy** intake should **balance** energy expenditure.
- Keep **total fat** intake to less than 30% of total energy intake, swap **saturated fats** for **unsaturated fats**, and avoid industrial **trans fats** altogether.
- Limit intake of **free sugars** to less than 10% (or even less than 5%) of total energy intake.
- Keep **salt** intake to less than 5 g per day.
- Eat at least 400 g (five portions) of **fruit and vegetables** a day.

The 5 Keys concept

1. **Best start in life**: exclusive breastfeeding and appropriate complementary foods
2. **Diversity**: eat a variety of foods
3. **Plant-based**: eat plenty of fruit and vegetables
4. **Moderation**: moderate amounts of fats and oils
5. **Minimize**: eat less salt and sugars

Translating guidance to food-based dietary guidelines

- Most people think in terms of food, not nutrients.
- Advice that is easy to understand and culturally acceptable to those for whom it is intended.
- Uses simple language and/or symbols.
- FBDGs should support and be supported by nutrition policies.

Example from the UK Eatwell Guide

Breastfeed babies

Key 1
Best start in life

From birth to 6 months

- Promote exclusive breast milk (i.e. no other food or drink).
- Feed “on demand” (i.e. as often as baby wants, day and night).
- Breast milk provides all the nutrients and fluids needed for healthy growth and development during the first 6 months.
- Exclusively breastfed babies gain resistance against common childhood illnesses such as diarrhoea, respiratory infections and ear infections.
- Breastfeeding reduces long-term risk of obesity and NCDs such as diabetes, heart disease and stroke.

Breastfeeding supports:

Key 1
Best start in life

Infant

- Neonatal and child mortality reduction
- Reduced morbidity and mortality from diarrhoea and pneumonia
- Protection against infections: ear, gastro-intestinal, skin and SIDS
- Improved growth and nutrition status
- Increased bonding between baby and mother
- Improved cognitive and motor developm
- Lower risk of heart disease, diabetes, some cancers and obesity

Mother

- Faster maternal recovery and weight loss postpartum
- Fertility reduction in early months
- Reduction in risk of maternal cancers

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Complementary feeding and first foods

Key 1
Best start in life

- At 6 months of age, introduce a variety of safe and nutritious foods to *complement* continued breastfeeding until babies are 2 years of age or more.
- Do not add salt or sugars to foods prepared for babies and young children, and avoid commercially available products high in these nutrients.

Eat a wide variety of foods

Key 2
Diversity

- Eating a variety of whole (i.e. unprocessed or minimally processed) and fresh foods every day helps children and adults to obtain the right amounts of essential nutrients.
- It also helps them to avoid a diet that is high in sugars, fats and salt, which can lead to overweight and obesity and NCDs.
- A varied diet includes: staple foods (wholegrain bread, starchy vegetables), legumes, lots of different vegetables and fruits, and some foods from animal sources (e.g. meat, fish, eggs and milk).
- A good tip for main meals, for example, is that the majority of the plate should be filled with vegetables.
- Similarly, across the day/week you should aim for lots of different fruits and vegetables – colour is a good indicator of variety.

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Eat plenty of fruit and vegetables

Key 3
Plant-based

- Vegetables and fruit are important sources of vitamins, minerals, dietary fibre, plant protein and antioxidants.
- Diets rich in vegetables and fruit lower risk of obesity, heart disease, stroke, diabetes and some cancers.
- Choose raw vegetables and fresh fruit for snacks, rather than foods that are high in sugars, fats or salt.
- Avoid overcooking vegetables and fruit, which destroys important vitamins.
- When using canned, dried or frozen vegetables and fruit, choose varieties without added salt and sugars.

Eat moderate amounts of fats and oils

5 keys to a healthy diet

Key 4
Moderation

- Fats and oils are concentrated sources of energy and an essential part of the diet.
- However, eating too much fat, particularly saturated (hard) fat and trans fat, increases risk of heart disease and stroke.
- Use unsaturated vegetable oils (e.g. olive, soy, sunflower) rather than animal fats or oils high in saturated fats (e.g. butter, ghee or palm oil).
- Choose white meat (e.g. poultry) and fish, which are lower in fats than red meat.
- Limit processed meats, which are high in both fat and salt.
- Adults and children over 2 who are growing well can choose low-fat or reduced-fat versions of milk and dairy products.

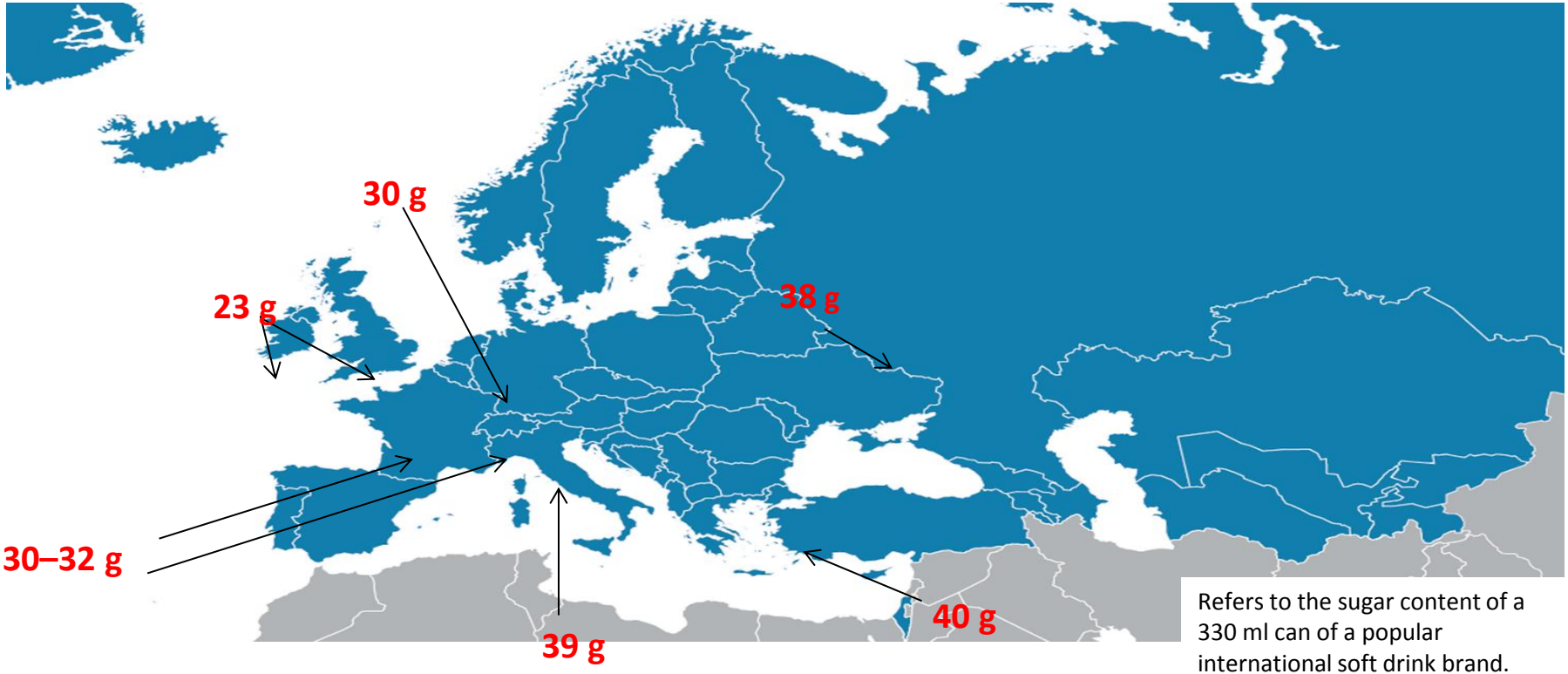
Eat less salt and sugars

5 keys to a healthy diet

Key 5
Minimize

- Diets high in sodium/salt are linked to high blood pressure, and hence risk of heart disease and stroke.
- Diets high in sugars are linked to overweight or obesity and tooth decay
- Limit added salt and high-sodium condiments (e.g. soy sauce and fish sauce) when cooking and preparing foods.
- Avoid foods and snacks high in salt and sugars.
- Limit soft drinks or soda and other drinks high in sugars (e.g. fruit juices, cordials and syrups, flavoured milks and yoghurt drinks).
- Choose fresh fruits instead of sweet snacks such as cookies, cakes and chocolate.

Sugar content of soda



Refers to the sugar content of a 330 ml can of a popular international soft drink brand.
Source: Action on Sugar, 2015

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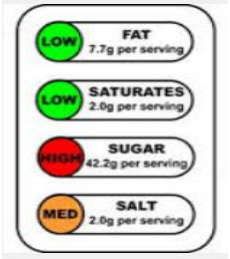
Food product labelling … A useful tool?



Nutrition Information		
	Per 100 g	
Energy	485 kJ / 117 kcal	
Fat	8 g	
Of which Saturates	3,7 g	
Carbohydrate	9 g	
Of which Sugars	8 g	
Protein	1,4 g	
Salt	0,02 g	
Vitamin C	14,81 mg	19% RI*

Salt content is exclusively due to the presence of naturally occurring sodium.

*Reference intake of an average adult (8 400 kJ / 2 000 kcal)

- How useful is food labelling in your country as a guide for consumers to identify healthier options?
- Can you help patients to understand food labels?
- What might help patients?

Cooking and food preparation skills

- Cooking and food preparation courses aim to improve knowledge, confidence and skills to support people in making their own healthy, low-cost meals.
- Such courses may reduce the use of pre-prepared, packaged and convenience foods by teaching recipes that participants can replicate at home.
- The evidence on the short- and long-term impacts of community cooking skills programmes remains mixed.

Summary of evidence-based healthy eating for weight management

1. Reduce portion size.
2. Reduce sugary drinks and other products with added sugars.
3. Try to avoid high-salt foods, such as savoury snacks.
4. Choose vegetable oils over animal fats.
5. Have regular breakfast.
6. Use rescue strategies (after setbacks, holidays, etc.).
7. Do meal and (healthy) snack planning.

What aspects of the diet should you ask about?

Look for themes or trends:

- food groups
- frequency of consumption
- meal patterns
- portion size
- macro-nutrients?
- accuracy …

The purpose of eliciting information on current lifestyle is to capture an overall picture of dietary habits, not to make a precise evaluation of food groups/nutrients/calories.

Sensitive discussion of dietary habits can be a good entry point to encourage self-monitoring.

Different assessment tools and resources are available: e.g. https://www.nutritools.org.

Workshop B

Conveying nutritional information

Exercise B1 – role play

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Exercise B1

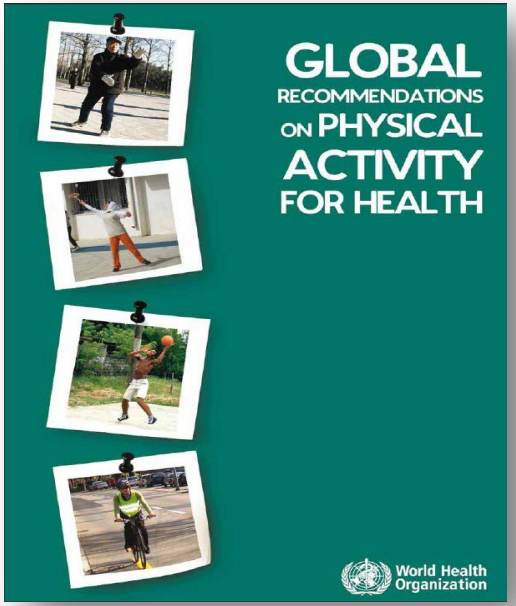
Explaining nutritional information

- Work in pairs – one as a patient, the other as a health professional.
- Choose one of the four case examples – try explaining some healthy nutrition principles that would be relevant in each case.
- Swap around and try a different case example.
- Do you think a nutrition assessment tool is helpful?

Physical activity (PA)

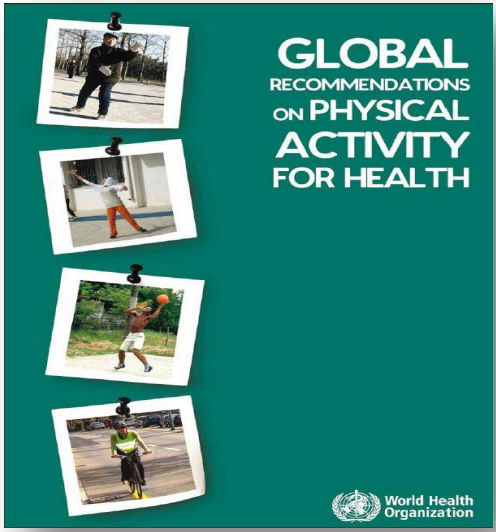
PA recommendations – adults

- Minimum of 30 min/day of moderate PA on at least 5 days/week. Or:
- Minimum of 20 min/day of vigorous PA on at least 3 days/week. Or:
- Five or more days of any combination of moderate and vigorous PA achieving a minimum of 600 equivalent min/week.
- Higher levels of PA contribute to additional health benefits.
- Better to do a small amount than nothing at all!



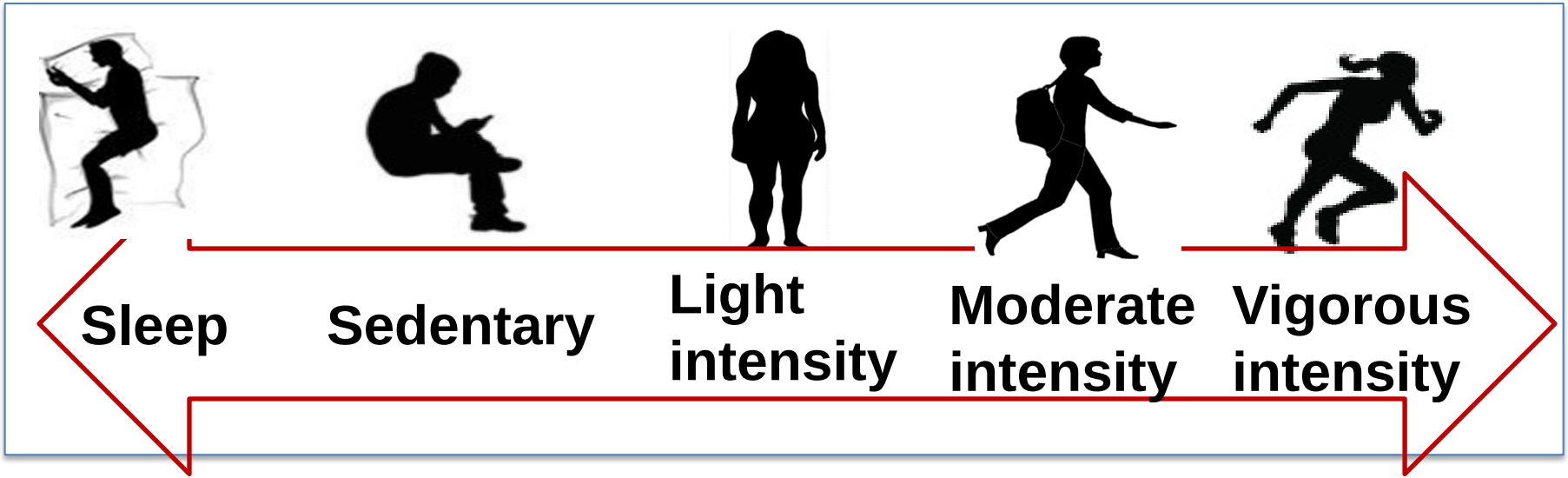
PA recommendations – children and adolescents (5–17 years of age)

- At least 60 minutes/day of moderate- to vigorous-intensity PA.
- At least 3 times/week, including activities that strengthen muscles and bones.
- PA maintains bones, weight, psychological well-being and social inclusion, self-esteem and positive body image.
- Schools play an important role – secondary-school levels of exercise predict adult levels (team sport and exercise at age 70+).
- Parental support correlates well.



Physical activity (PA): what counts?

PA is defined as “any bodily movement produced by skeletal muscles that requires energy expenditure”.



Tremblay MS, Colley RC, Saunders TJ, Healy GN, Owen N. Physiological and health implications of a sedentary lifestyle.
Appl Physiol Nutr Metab. 2010;35(6):725–40.

Types of physical activity

Moderate-intensity activity	Vigorous exercise	Muscle-strengthening activities
Able to talk while doing moderate-intensity activity.	Getting out of breath; heart rate is racing afterwards.	Might leave muscles feeling achy for a while afterwards.
Examples: walking, washing the car, playing in the garden, skate-boarding, riding a scooter, cycling on the flat, table tennis.	Examples: running, skipping, gymnastics, trampolining, martial arts, fast cycling, swimming, energetic dancing, football.	Examples: rope or tree-climbing, swinging on playground bars, sit-ups or press-ups, gymnastics, rugby, tennis, football.

Physical activity reduces risk of the following conditions by at least 20%

PA contribution to reduction in risk of mortality and long-term conditions		
Disease	**Risk reduction**	**Strength of evidence**
Death	20–35%	Strong
CHD and stroke	20–35%	Strong
Type 2 diabetes	35–40%	Strong
Colon cancer	30–50%	Strong
Breast cancer	20%	Strong
Hip fracture	36–68%	Moderate
Depression	20–30%	Strong
Hypertension	33%	Strong
Alzheimer's disease	20–30%	Moderate
Functional limitation, elderly	30%	Strong
Prevention of falls	30%	Strong
Osteoarthritis disability	22–80%	Moderate

Start Active, Stay Active (2011) based on US Department of Health and Human Services Physical Activity Guidelines Advisory Committee Report (2008

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Physical activity treats as well as prevents

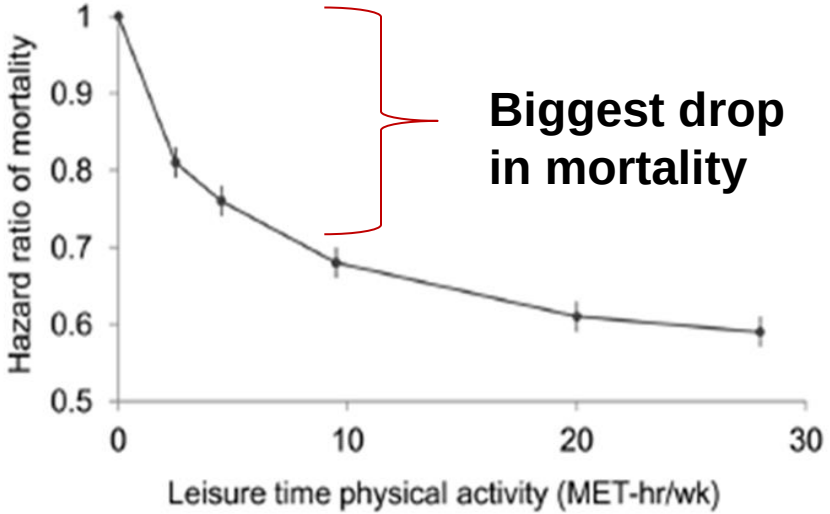
In addition to prevention, physical activity has been proven to improve outcomes in:

- cancer
- diabetes
- cardiovascular disease
- osteoarthritis and lower back pain
- COPD and asthma
- depression and anxiety.

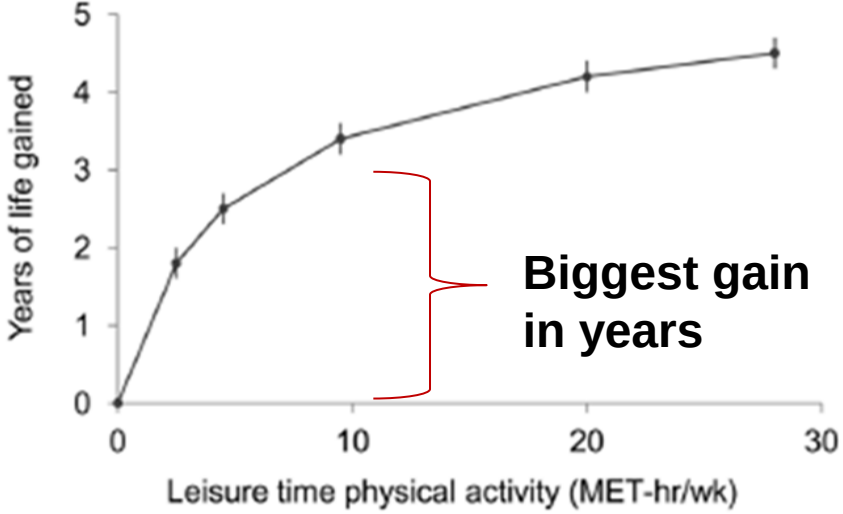
Not “wear and tear”, but “wear and repair”.

Physical activity: who gains the most?

Mortality after age 40



Years gained after age 40



"More is better. Some is <u>much</u> better than none."

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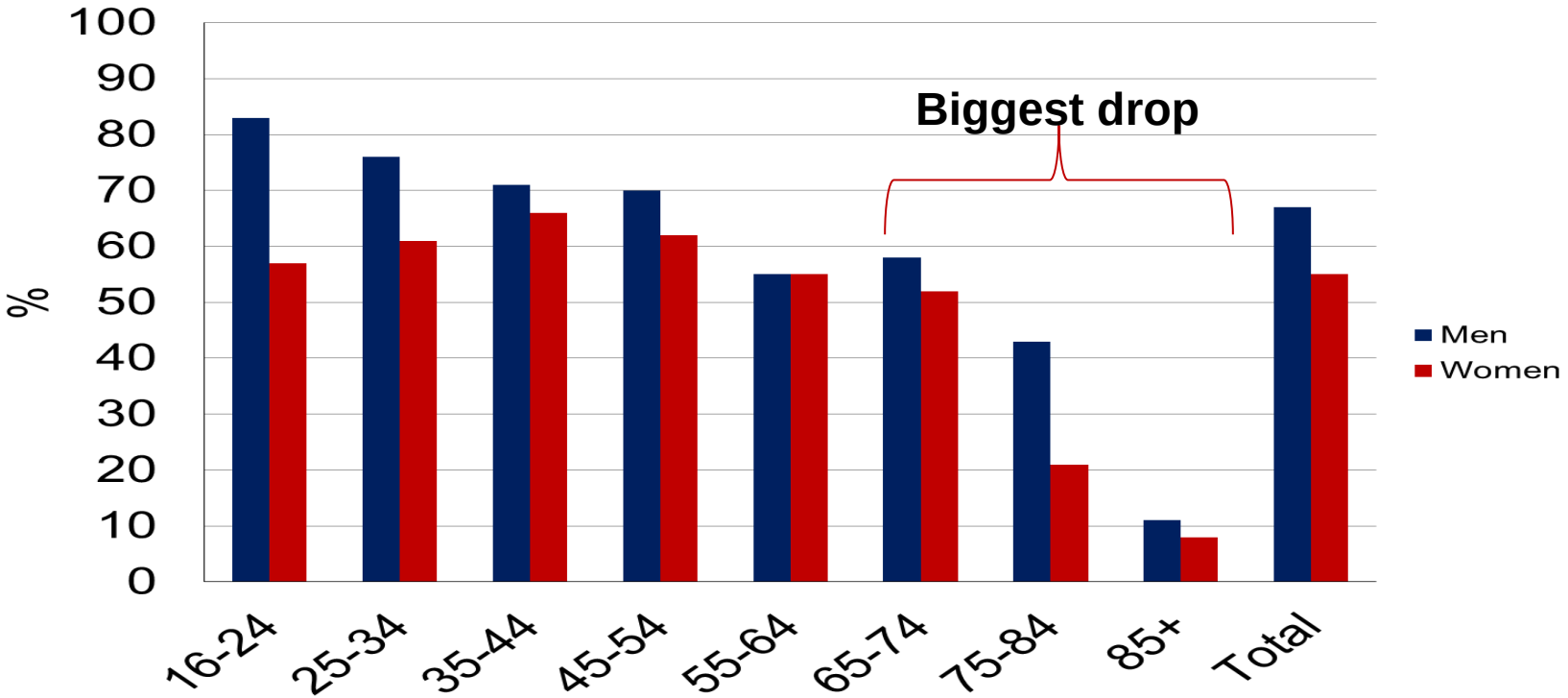
Lee IM, Skerrett PJ. Physical activity and all-cause mortality: what is the dose-response relation? Med Sci Sports Exerc. 2001;33(6 Suppl):S459-71; discussion S493-4.

Moore SC, Patel AV, Matthews CE, et al. Leisure time physical activity of moderate to vigorous intensity and mortality: a large pooled cohort analysis. PLoS Med. 2012;9(11):e1001335.

We do less activity as we age…
% achieving at least moderate activity



(based on 2012 data).

Why are we physically inactive?

At least 20% of men and 27% of women are insufficiently active to promote good health (2010). Why?

- Lack of PA in leisure time; leisure pursuits commonly have low activity element, e.g. watching rather than playing sports.
- Sedentary behaviours at work and home – mechanization of manual jobs.
- Communications – e.g. online shopping, banking, socializing.
- Transportation – greater accessibility of cars, public transport.
- Environmental factors – lack of parks, traffic, pollution, child safety concerns.
- Cultural factors.

Physical activity and the elderly

- Chronic disease has a major impact on quality of life of the elderly. **Stay active** to maintain strength, cognitive function and independence.
- Cardiovascular and muscle strength exercises help prevent falls and improve mobility and independent living.
- Weight-bearing (e.g. walking) and non-weight-bearing exercise (e.g. swimming) are both beneficial.
- Group exercises help to alleviate loneliness, anxiety, depression and slow cognitive decline.

Exercise in pregnancy and postpartum

- Physical: PA may improve cardiovascular fitness and help reduce risk of gestational diabetes, varicosities, weight gain, pre-eclamptic toxaemia, back pain and body fat.
- Psychological: PA may reduce risk of anxiety and depression.
- Fetal outcomes are improved.
- Contact or risky sports should be avoided in pregnancy.
- Pregnancy experience: labour length, analgesic requirements and risk of delivery complications are reduced.
- Recovery after pregnancy and childbirth is improved, e.g. incontinence – begin pelvic floor exercises promptly.

Statement No. 4 (January 2006).

PA and weight management

- When people see PA only as a means to lose weight, they are usually disappointed, and this can lead them to give up.
- It is important to make the benefits of PA clear: improvement of health and maintaining a fat-free mass during weight reduction.
- The exercise dose required to reduce weight is not feasible for most individuals who do not have a high fitness level.
- The PA dose necessary for weight loss can be difficult to achieve over the long term.

Benefits of PA in obesity management

- PA can improve weight maintenance and/or prevent weight regain; however, the exact amount of exercise required to prevent weight regain varies greatly from individual to individual.
- During weight reduction, people lose both fat mass and fat-free mass.
- PA may mitigate the loss of lean mass during obesity management interventions.

PA and weight management

- 30 minutes of PA per day or 150 minutes per week (recommended amount) might not be attainable for some individuals.
- It is important to assess patients with obesity for mobility issues prior to recommending a PA programme.

Weight bias barriers to PA

- Evidence suggests that some people with obesity avoid PA activities in public facilities for fear of shame and blame.
- Fitness centres can exclude people based on economic, social and appearance factors (McLaren et al., 2012).
- Some fitness professionals also have weight bias and endorse negative stereotypes and beliefs that people with obesity are lazy and to blame for their weight (Puhl & Wharton, 2007).

McLaren L, Rock MJ, McElgunn J. Social inequalities in body weight and physical activity: exploring the role of fitness centers. Res Q Exerc Sport. 2012;83(1):94–102.

Puhl RM, Wharton CM. Weight bias: a primer for the fitness industry. ACSMS Health Fit J. 2007;11(3):7–11.

Welcoming PA environments

- Are fitness and wellness services available, accessible and acceptable for persons with obesity?
  - Facilities should be accessible, non-discriminatory and unintimidating.
- Are the fitness professionals working in these facilities versed in techniques and communications skills that foster positive PA experiences for persons with obesity?
- Are the interactions with persons with obesity without presumption and with special effort to understand the person's experience? Do the fitness professionals show non-judgment, openness and empathy?
- Does the programme support positive lifestyle changes with or without weight loss?

Puhl RM, Wharton CM. Weight bias: a primer for the fitness industry. ACSMS Health Fit J. 2007;11(3):7–11.

PA and pregnancy

- Exercise promotes healthy growth and development of the fetus, as well as the woman's physical and mental health. Reducing sedentary time may also be beneficial in pregnancy.
- 150–300 minutes of moderate exercise per week; intensity depends on the woman's pre-pregnancy fitness level.
- The "Talk Test" is a great way to check exercise intensity: for moderate intensity, the goal is to be able to talk, but not sing, during the exercise.
- PA that has a low risk of loss of balance or trauma: walking/jogging/ running, swimming or stationary cycling.
- Strength training twice a week (use own body weight or light weights).
- If a woman was not exercising before pregnancy, it is important that she talks to her health care provider prior to engaging in exercise.

PA in children and youth with obesity

- Children and young people should be encouraged and supported to stay active.
- Kids are not adults trapped in small bodies.
- PA for children needs to be child-led, unorganized, spontaneous, free fun.

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PA and weight management references

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Summary:
More is better; some is much better than none

- Encourage physical activity in **all consultations** (at least as often as smoking).
- Retirement means “time to be active”!
- Physical activity helps prevention **and** treatment of numerous conditions, including cancer.
- “Moderate activity” means different things to different people – it may be light walking for previously sedentary adults; explore how to make it **achievable.**
- “Exercise is medicine” and benefits all ages.

Explain need for long-term strategy

- Relapse is virtually inevitable when any intervention stops.
- This means that all management strategies must be feasible and sustainable.
- The focus should be on stabilizing the situation and improving behaviours.
- Interventions involving “quick fixes” and unsustainable strategies will result in an inability to maintain health behaviours.

Self-monitoring

- Self-monitoring is one of the most important components of the behavioural treatment of obesity. It is very useful for patients to monitor their weight, diet, physical activity, thoughts and/or behaviours regarding food and physical activity.
- Record-keeping can help identify barriers and opportunities:
  - food diaries
  - expanded food diaries (time, places, feelings)
  - physical activity records.
- Forcing someone who is not motivated to keep records is counterproductive.

Workshop D. Promoting physical activity

Exercise D1

In small groups, discuss each case considering the following questions.

1. How would increasing physical activity help in each of these cases?
2. How could you help to overcome the perceived barriers to being more active?
3. What types of support or service might help in each of these situations?

Exercise D2

In role play pairs, use motivational interviewing techniques in each case; try out the importance and confidence rulers. Can you discuss physical activity without generating the “Yes, but …” response?

Quiz – true or false?

Clinicians play a very important role in setting goals for the patients.