

Overview of the 2019 Physical Activity Guidelines and implementation plans

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CMO Physical activity guidelines

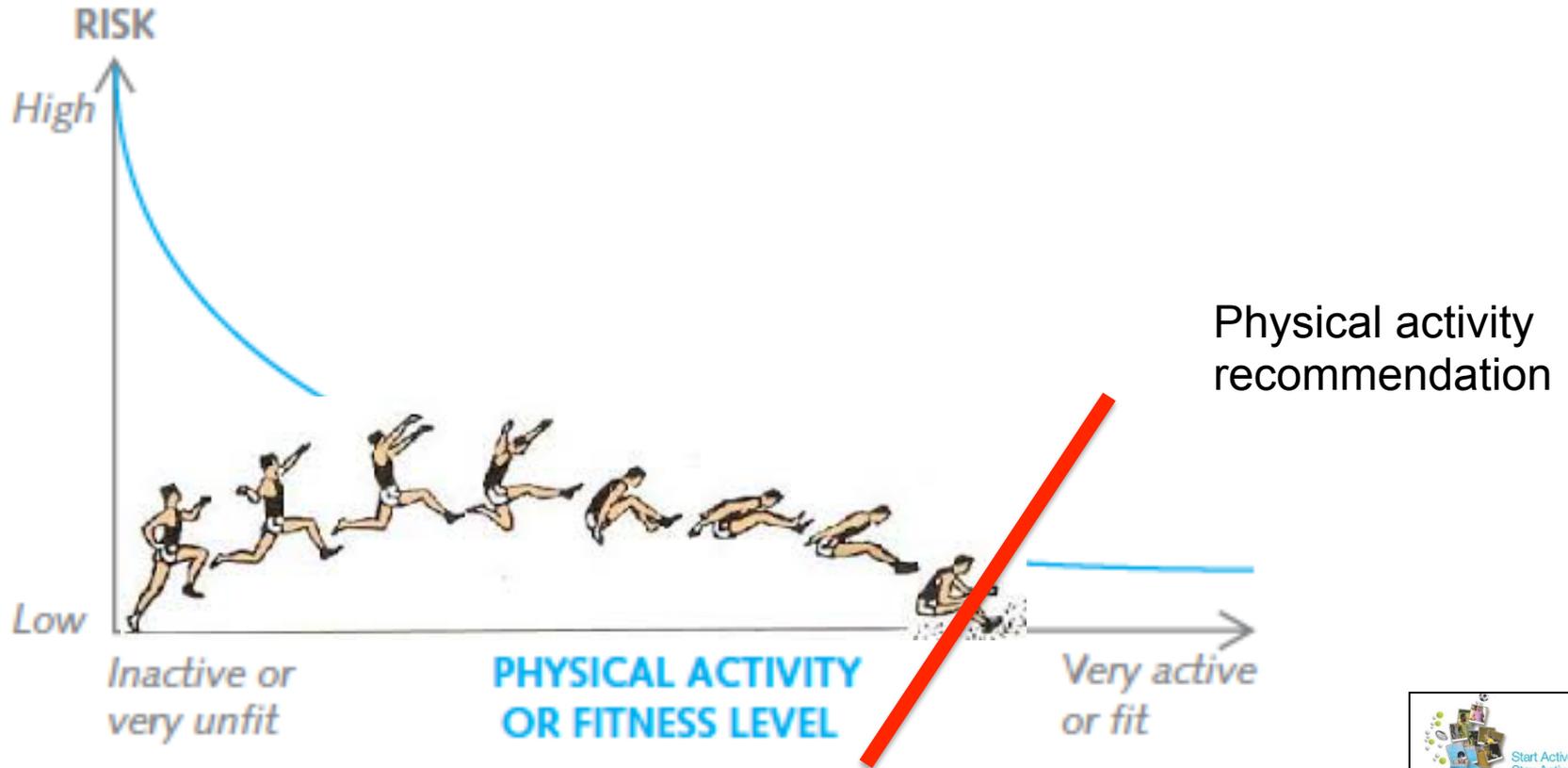
- To briefly outline the history of CMO Physical activity guidelines
- To remind colleagues of the rationale and process for CMO guidelines
- To share the draft recommendations for all ages groups
- To consider next steps for implementation and communication next



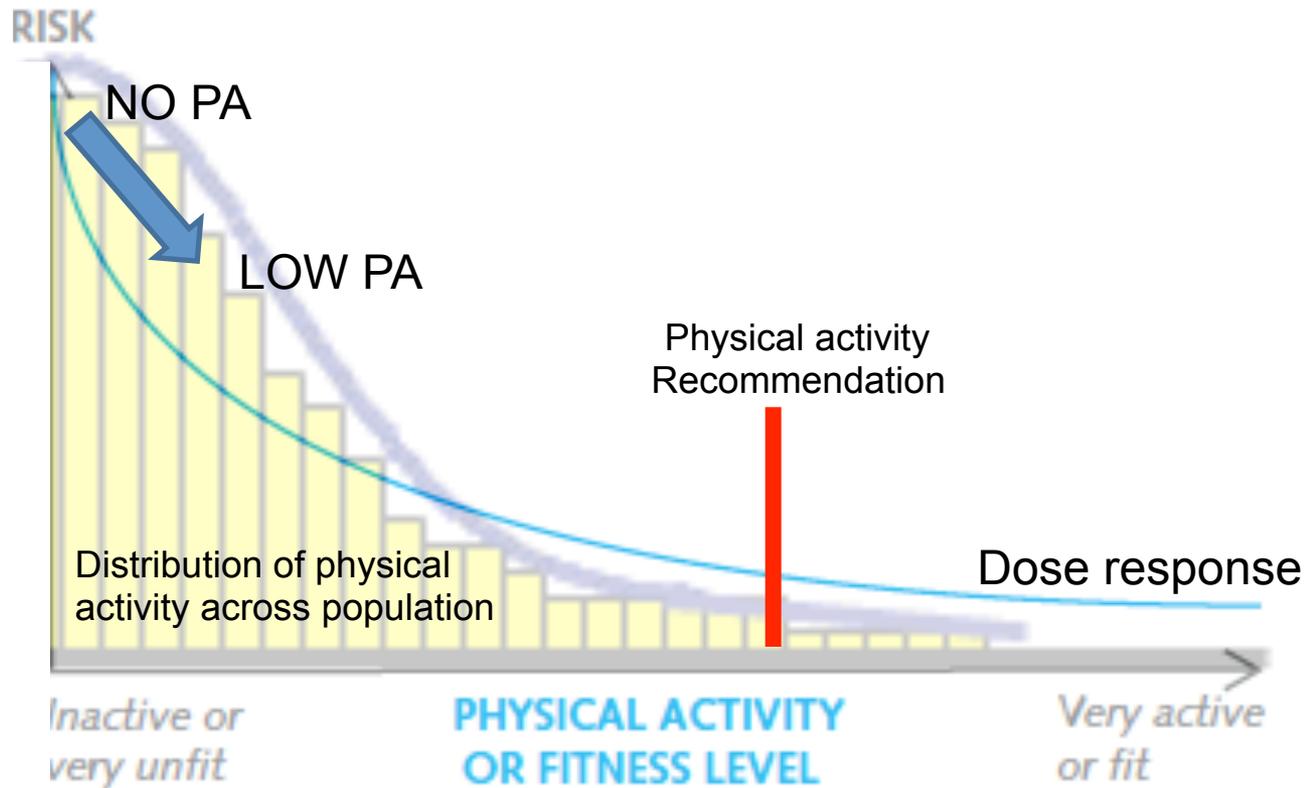
What are national physical activity recommendations?

- They are statements of levels of physical activity based on epidemiological thresholds where optimal behaviour is associated with a significantly reduced risk of a range of conditions, diseases and mortality

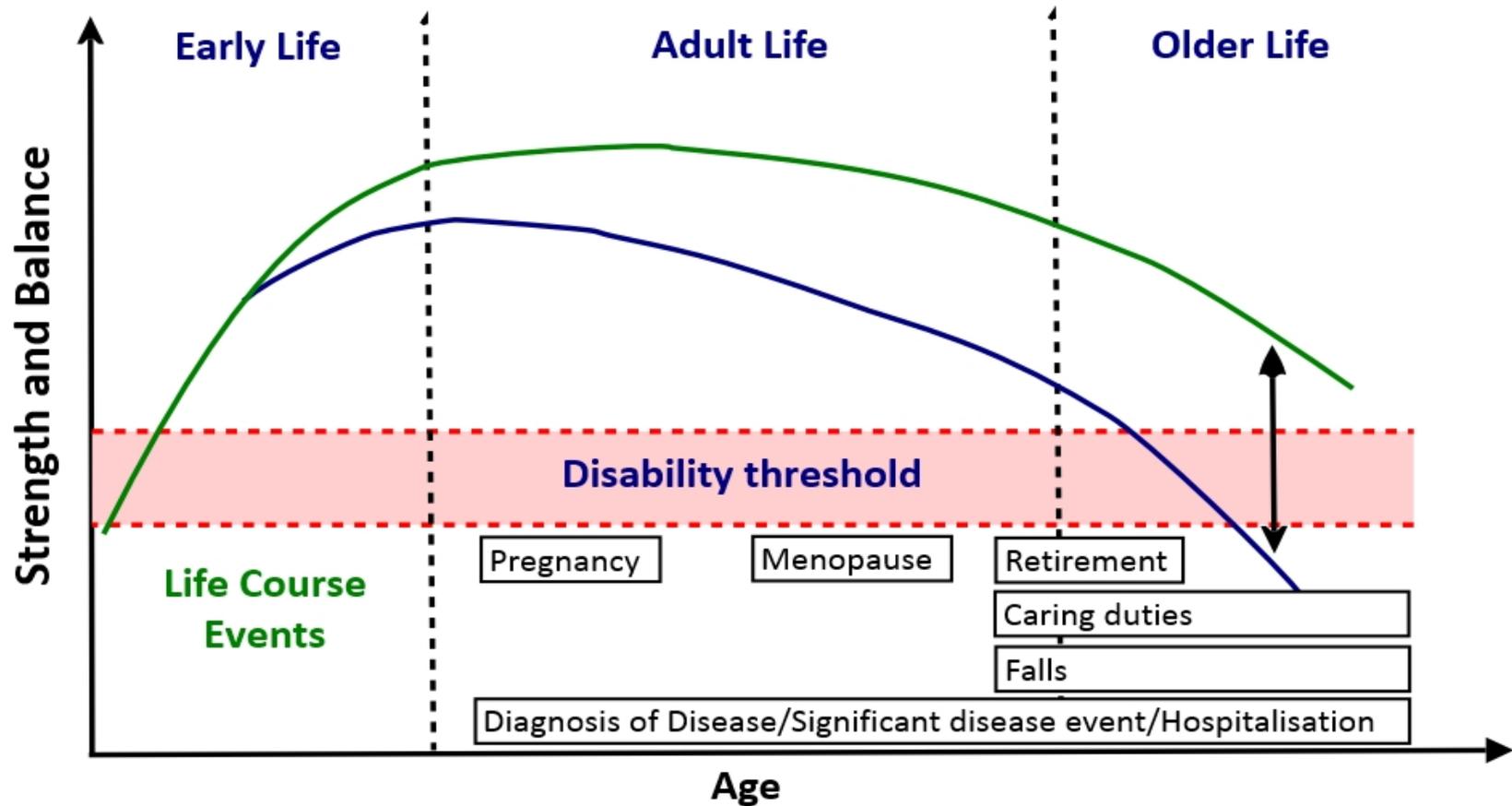
Dose-response Curve



Dose-response & Distribution Curve



Strength and balance ability over life course and factors impacting on decline with age



Physical activity guidelines across life

Physical activity for pre...

- Helps to control weight gain
- Improves fitness

Not active?
Start gradually

Do muscle strengthening activities twice a week

No evidence of harm

UK Chief Medical Officers

Physical activity (birth - 5)

Active children are school ready and

- BUILDS RELATIONSHIPS & SOCIAL SKILLS
- MAINTAINS HEALTHY WEIGHT
- IMPROVES SLEEP
- DEVELOPS MUSCLE & BONE

Every movement counts

Aim for at least **3 Hours** across everyday

- PLAY
- OBJECT PLAY
- TUMMY TIME
- SWIM
- DANCE
- WALK

UK Chief Medical Officers' Guidelines 2011 **Start Active, Stay Active: www.bit.ly/startactive**

Physical activity for children aged 5-16

BUILDS CONFIDENCE & SOCIAL SKILLS

DEVELOPS CO-ORDINATION

IMPROVES CONCENTRATION & LEARNING

Be physically active

Spread activity throughout the day

- PLAY
- RUN/WALK
- SWIM
- SKATE
- SKIP
- CLIMB

Include strength activities

Sit less

Find ways to help all children at least 60 minutes of

UK Chief Medical Officers' Guidelines 2011 **Start Active, Stay Active: www.bit.ly/startactive**

Physical activity benefits for adults and older adults

- BENEFITS HEALTH
- IMPROVES SLEEP
- MAINTAINS HEALTHY WEIGHT
- MANAGES STRESS
- IMPROVES QUALITY OF LIFE

REDUCES YOUR CHANCE OF:

Type 2 Diabetes	-40%
Cardiovascular Disease	-35%
Falls, Depression and Dementia	-30%
Joint and Back Pain	-25%
Cancers (Colon and Breast)	-20%

What should you do?

- For a healthy heart and mind: **Be Active**
- To keep your muscles, bones and joints strong: **Sit Less**
- To reduce your chance of falls: **Build Strength**
- Improve Balance**

Be Active

VIGOROUS	MODERATE
RUN	WALK
SPORT	CYCLE
STAIRS	SWIM

Sit Less

- TV
- COMPUTER

Build Strength

- GYM
- YOGA
- CARRY BAGS

Improve Balance

- DANCE
- TAI CHI
- BOWLS

MINUTES PER WEEK

75 OR 150

VIGOROUS INTENSITY (BREATHING FAST, DIFFICULTY TALKING) OR A COMBINATION OF BOTH

MODERATE INTENSITY (INCREASED BREATHING, ABLE TO TALK)

BREAK UP SITTING TIME

2 DAYS PER WEEK

Something is better than nothing

Start small and build up gradually: just 10 minutes at a time provides benefit.

MAKE A START TODAY: it's never too late!

UK Chief Medical Officers' Guidelines 2011 **Start Active, Stay Active: <http://www.bit.ly/startactive>**

Development of UK Physical Activity Guidelines

	1996	2004	2011	2019
Under 5			✓	✓
Children & Young People	1998	✓	✓	✓
Adults	✓	✓	✓	✓
Older Adults			✓	✓
Pregnancy				✓
Disability				✓ Adults Only
Communication & Surveillance	✓		✓ ✓	✓ ✓

Under 5s

2011 guidelines - Daily	2018 guidelines – 24 hours		
	Infants (less than 1 year)	Toddlers (1-2 years)	Pre-schoolers (3-4 years)
Be active daily for at least 180 mins spread throughout the day	Be physically active several times. 30 mins of tummy time	Be active daily for at least 180 mins spread throughout the day Variety of activities at any intensity	Be active daily for at least 180 mins spread throughout the day At least 60 mins of MVPA
PA through floor-based play and water-based activities	Interactive floor-based activities	Active and outdoor play	Active and outdoor play
Minimise time being sedentary (being restrained or sitting) for extended periods	<ul style="list-style-type: none"> Minimise time restrained Screen time not recommended E.g.'s given for sedentary time (reading/storytelling) 	<ul style="list-style-type: none"> Not being restrained for extended periods Screen time: ≤1 hr E.g.'s given for sedentary time (reading/storytelling) 	<ul style="list-style-type: none"> Not being restrained for extended periods Screen time: ≤1 hr E.g.'s given for sedentary time (reading/storytelling)
No guidelines on sleep	0-3 months: 14-17 hrs 4-11 months: 12-15 hrs	11-14 hrs. Avoid screens 1 hr before bed	10-13 hrs. Avoid screens 1 hr before bed

Children and Young People

2011 guidelines	2018 guidelines
Aerobic guidelines	Aerobic guidelines
At least	An average
60 mins	60 Mins
MVPA	MVPA
Every day	Per day across the week
Strength guidelines	Strength guidelines
Vigorous intensity	Variety of types and intensities
Including those that strengthen muscle & bone	To develop movement skills, muscular fitness and strength
3 days / week	Across the week

Children and Young People

Children and young people (5-18 years of age) should engage in moderate-to-vigorous intensity physical activity for an average of 60 minutes per day across the week. (This activity can include all forms of activity such as physical education, active travel, activity after-school school, play and sports).

Children and young people (5-18 years of age) should engage in a variety of types and intensities of physical activity to develop movement skills, muscular fitness, and bone strength across the week.

Adults

2011 guidelines	2018 guidelines
Aerobic guidelines	Aerobic guidelines
150 mins	150 mins
Moderate intensity	Moderate intensity plus stress the value of PA below MPA
Per week	Per week
10 min bouts or more	Removed
Alternatively: <ul style="list-style-type: none"> • 75 mins VPA • Combination - MVPA 	Alternatively: <ul style="list-style-type: none"> • 75 mins VPA • Combination - MVPA • Higher intensity for shorter time
Strength guidelines	Strength guidelines
PA to improve muscle strength	PA to improve muscle strength Include high intensity activity, impact exercise & balance training Specific examples of resistance training

*2018 guidelines should also indicate that regular PA can contribute to weight maintenance (incl. weight loss, prevention of weight gain & reduction in body fat)

Adults

For good physical and mental health, adults aged 19-64 should aim to be physically active.

One way to be active is to do 150 minutes of moderate intensity activity, such as brisk walking or cycling, a week. Other ways are 75 minutes of vigorous intensity activity, such as running or playing tennis, even shorter durations of very vigorous intensity activity, such as sprinting or hard circuit training, or a combination of moderate, vigorous and very vigorous intensity activity. However, it is important to remember that any activity is better than none, and more is better still.

Adults should also do activities to develop or maintain strength in the major muscle groups. These activities could include heavy gardening, carrying heavy shopping, or resistance exercise. Muscle strengthening activities should be done twice a week, but any strengthening activity is better than none.

Older adults

2011 guidelines	2018 guidelines
Aerobic guidelines	Aerobic guidelines
Some is better than none, more is better. Any amount of PA will gain health benefits.	Some is better than none, more is better. Any amount of PA will gain health benefits. Develop strategies to re-engage with PA
150 mins	150 mins
Moderate intensity	Moderate Intensity Stress the value of PA below MPA. Increasing volume & frequency of light activities and reducing sedentary behaviour also has benefits
Per week	Per week
10 min bouts or more	Removed
If already active at moderate intensity: <ul style="list-style-type: none"> • 75 mins VPA • Combination - MVPA 	Alternatively: <ul style="list-style-type: none"> • 75 mins VPA • Combination - MVPA • Higher intensity for shorter time
Strength guidelines	Strength guidelines
PA to improve muscle strength At risk of falls: PA to improve balance & co-ordination	PA to improve muscle strength At risk of falls: PA to improve balance & co-ordination Include high intensity activity, impact exercise, balance & flexibility training Specific examples of resistance training
2 days / week	2 days per week

*2018 guideline s should also indicate that regular PA can contribute to weight maintenance (incl. weight loss, prevention of weight gain & reduction in body fat)

Older Adults

Older adults who participate in any amount of physical activity gain some health benefits, including maintenance of good physical and mental health, wellbeing, and social functioning. It is recommended that all older adults aim to be active every day. Some physical activity is better than none, even light activity brings some health benefits compared to sedentary behaviour, and more physical activity provides greater health and social benefits.

Older adults can maintain or improve their physical function if they undertake activities aimed at improving muscle strength, balance and flexibility on at least two [preferably non-consecutive] days a week. These could be incorporated within the same sessions with a mix of multi-component activities.

In addition, for maintenance of physical and mental health, and reduced risk of dementia and cognitive decline, building to 150 minutes of moderate intensity activity over the week is recommended. Weight-bearing activities which create an impact through the body help maintain bone health. For those who are already regularly active a combination of moderate and vigorous activity brings greater benefit

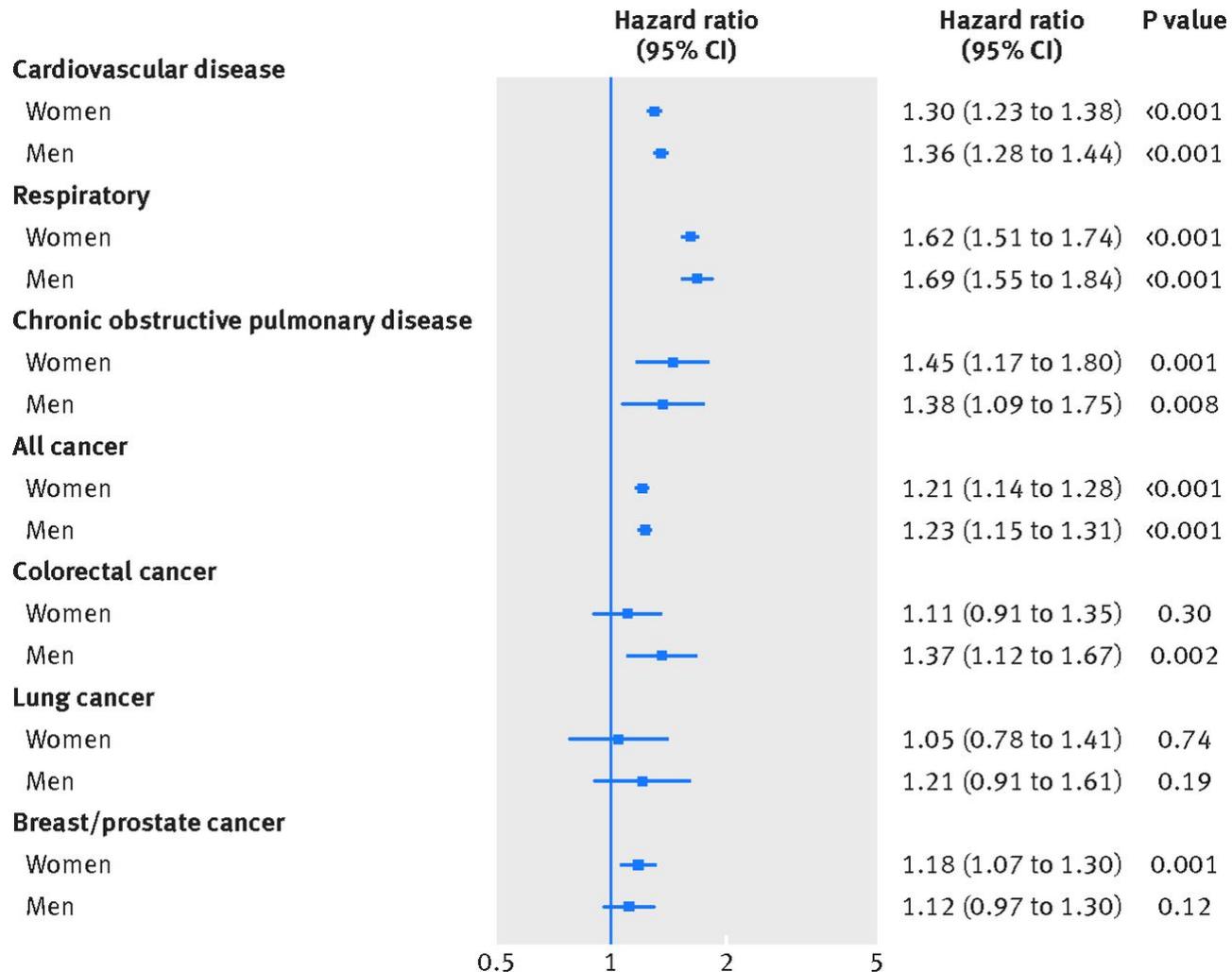
Sedentary behaviour

2011 guidelines		2018 guidelines
Under 5s	Minimise amount of time spent being sedentary (restrained or sitting)	See Under 5s recommendations
	Extended periods (except sleeping)	
Children and Young People	Minimise amount of time spent being sedentary (sitting)	Minimise amount of time spent being sedentary Removal of the term 'sitting'
Adults	Extended periods	Break up long periods with light PA
Older Adults		

Sedentary Behaviour

Children and Young people (5-18yrs) and all adults should aim to minimise the amount of time spent being sedentary and should break up long periods of sitting with light physical activity.

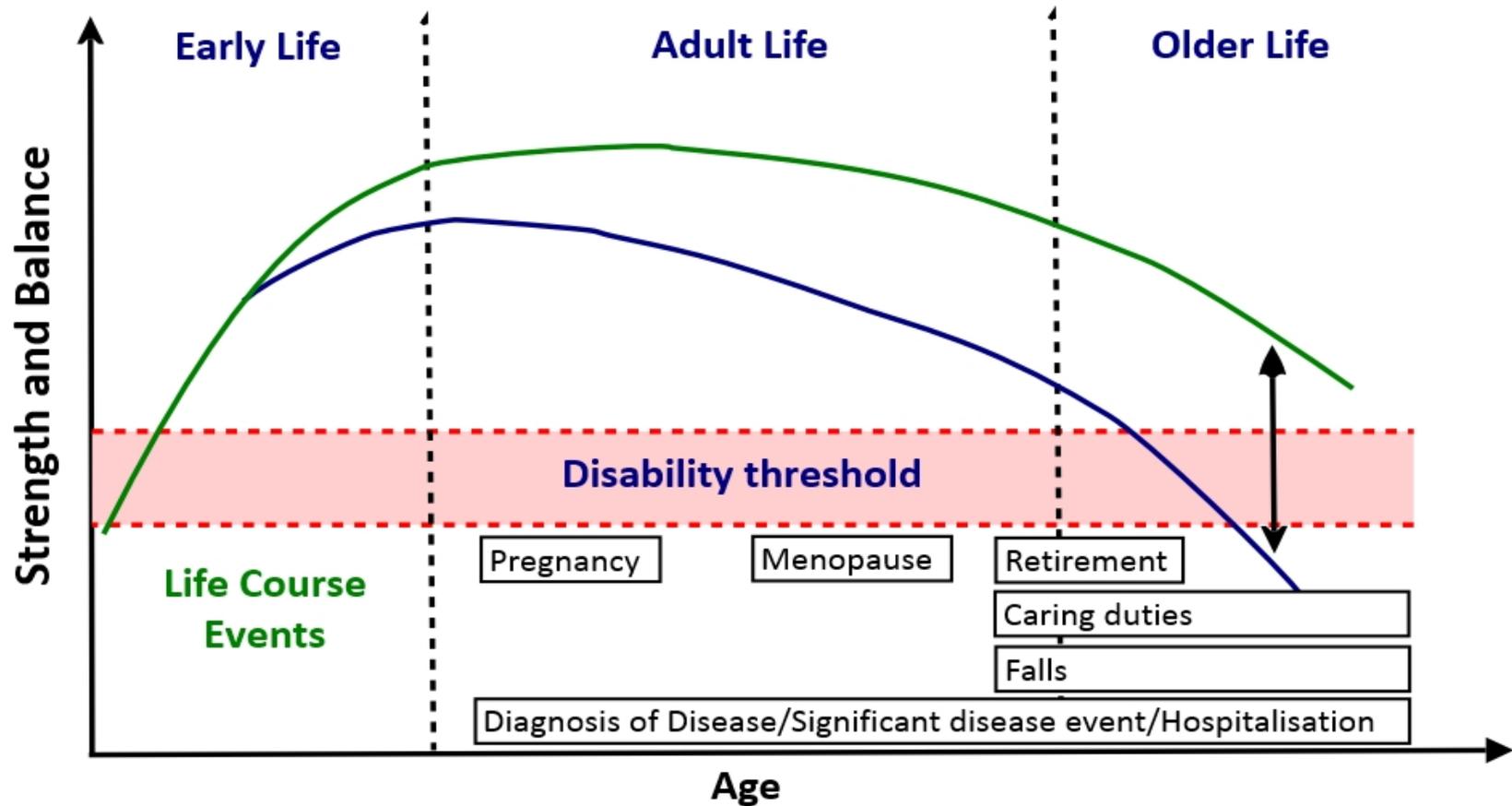
Hazard for cause specific incidence in women and men by FNIH Sarcopenia cut-off points for muscle weakness.



Carlos A Celis-Morales et al. BMJ 2018;361:bmj.k1651



Strength and balance ability over life course and factors impacting on decline with age



Impact of activities on strength and balance

Type of Sport, Physical Activity or Exercise	Improvement in Muscle Function	Improvement in Bone Health	Improvement in Balance
Running	x	xx	x
Resistance training	xxx	xxx	xx
Aerobics, circuit training	xxx	xxx	xx
Ball Games	xx	xxx	xxx
Racquet Sports	xx	xxx	xxx
Yoga, Tai Chi	x	x	x
Dance	x	xx	x
Walking	x	x	O
Nordic Walking	xx	NK	xx
Cycling	x	x	x

xxx = Strong effect; xx = medium; x = low; O = no effect; NK = not known.

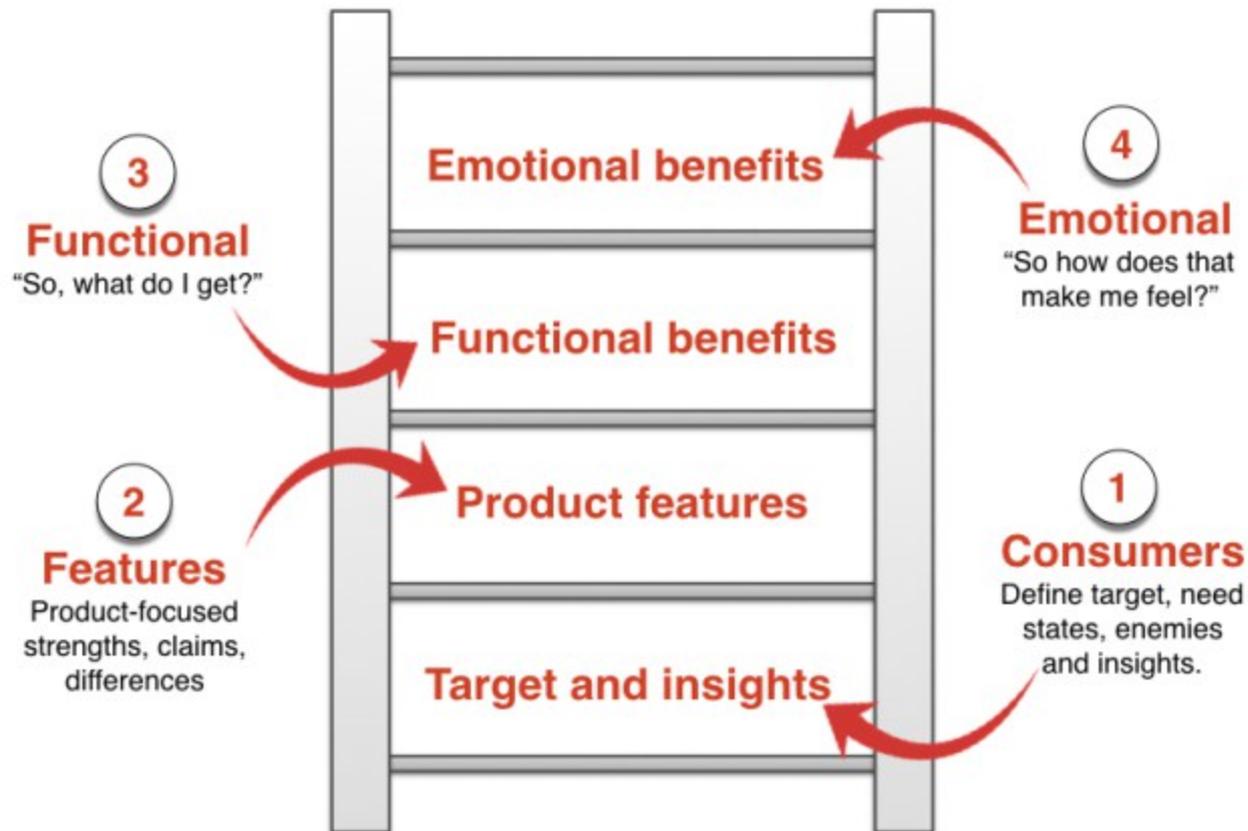
Adapted from Heinonen & Kujala, in Kokko *et al.* 2011.

Foster C, Armstrong MEG (2018) What types of physical activities are effective in developing muscle and bone strength and balance? *JFSF* 3(2):58-65

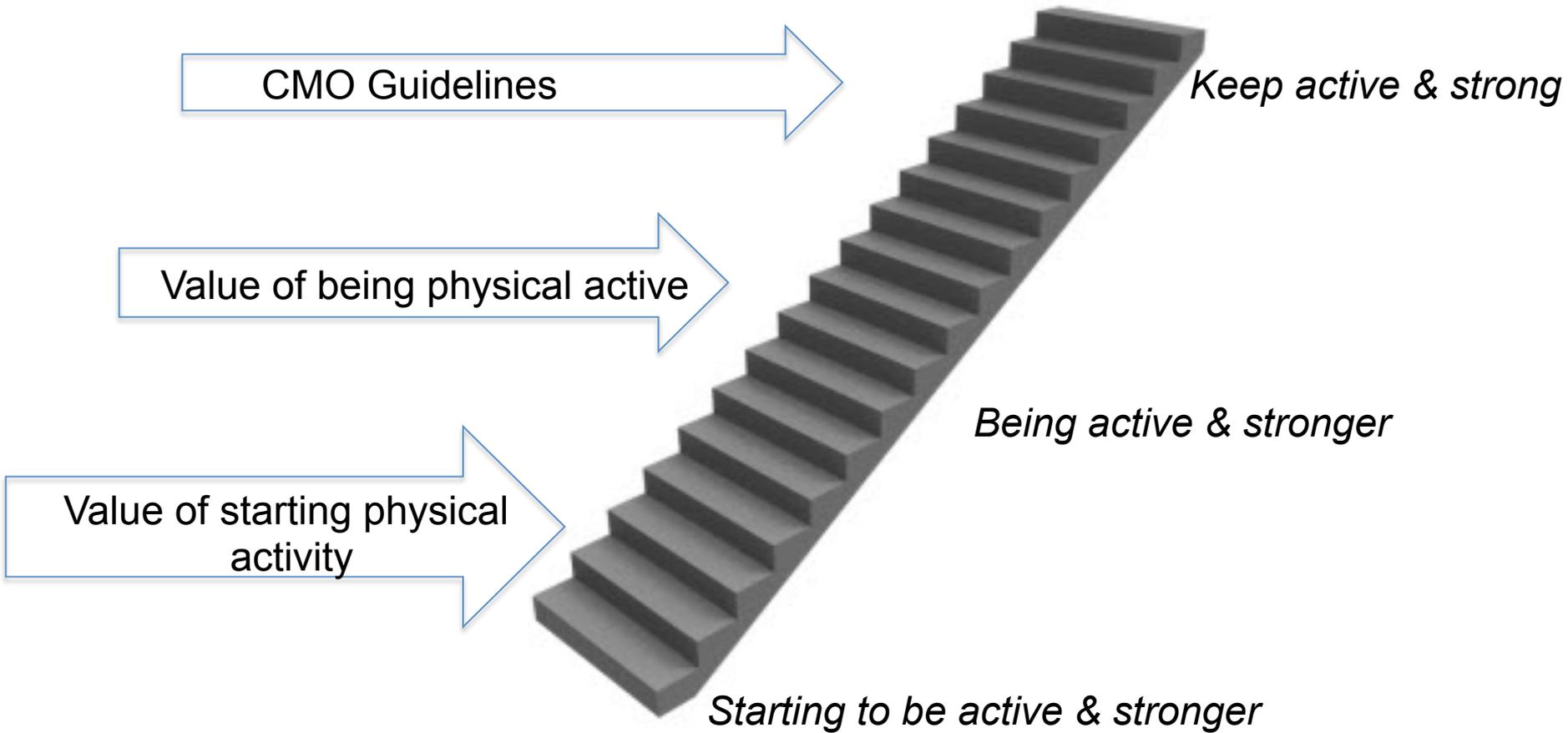
Impact of new guidelines

- Change of recommendations
 - Under 5s x 3 development stages
 - Children daily to mean
 - Adults – emphasise below threshold
 - All adults strength & balance
- Inclusion of disabled adults
- Communication of guidelines
- Communication of physical activity messages

Consumer Benefits Ladder



Ladder of physical activity messaging



Next Steps

- Make final report to UK CMOs on suggested new changes December 2018
- UK CMOs make final recommendations and publish new guidelines in early 2019
- *Dissemination of new guidelines to key stakeholders*
- *Communication of physical activity (guidelines) to public*
 - *This is not the same as the CMO guidelines!*