



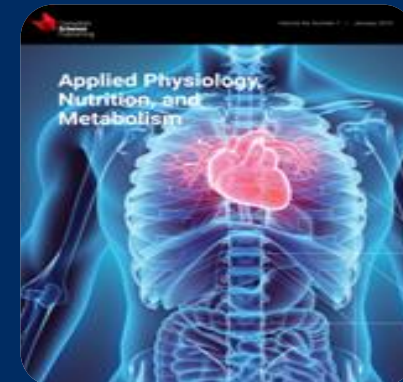
Canadian 24-Hour Movement Guidelines for Adults aged 65 years or older: An Integration of Physical Activity, Sedentary Behaviour, and Sleep.



**Stroke Network of Southeastern Ontario
April 30th, 2024**

Robert Ross, PhD, FAHA, FCASM, FACSM, FCSEP
Professor, Queen's University, School of Kinesiology and Health Studies

Chairperson
Canadian 24-Hour Movement Guidelines for Adults





World First 24-Hour Movement Guidelines for Adults

CANADIAN 24-HOUR MOVEMENT GUIDELINES FOR ADULTS AGED 18-64 YEARS:

An Integration of Physical Activity, Sedentary Behaviour, and Sleep

PREAMBLE

This document is intended for use by policy makers, health professionals, and researchers, and it may be useful to interested members of the public.

These 24-Hour Movement Guidelines are relevant to adults (aged 18-64 years), irrespective of gender, cultural background, or socio-economic status. These Guidelines may not be appropriate for adults aged 18-64 years who are pregnant or persons living with a disability or a medical condition; these individuals should consider consulting the Get Active Questionnaire, disability/condition-specific recommendations, or a health professional for guidance.

Adults aged 18-64 years should participate in a range of physical activities (e.g., weight bearing/non-weight bearing, sport and recreation) in a variety of environments (e.g., home/work/community, indoors/outdoors; land/water) and contexts (e.g., leisure, transportation, occupation, household) across all seasons. Adults aged 18-64 years should limit long periods of sedentary behaviours and should practice healthy sleep hygiene (routines, behaviours, and environments conducive to sleeping well).

Following the 24-Hour Movement Guidelines is associated with these health benefits:

- a lower risk of mortality, cardiovascular disease, hypertension, type 2 diabetes, several cancers, anxiety, depression, dementia, weight gain, adverse blood lipid profile, and
- improved bone health, cognition, quality of life and physical function.

The benefits of following these Guidelines far exceed potential harms. Following these Guidelines may be challenging at times; progressing towards any of the Guideline targets will result in some health benefits.

These 24-Hour Movement Guidelines were informed by the best available evidence, expert consensus, stakeholder consultation, and consideration of values and preferences, applicability, feasibility, and equity. A glossary and more details on the Guidelines, the background research, their interpretation, guidance on how to achieve them, and recommendations for further research and surveillance are available at <https://csep.ca/guidelines>.



For health benefits, adults aged 18-64 years should be physically active each day, minimize sedentary behaviour, and achieve sufficient sleep.

A healthy 24 hours includes:

PHYSICAL ACTIVITY

Performing a variety of types and intensities of physical activity, which includes:

- Moderate to vigorous aerobic physical activities such that there is an accumulation of at least 150 minutes per week
- Muscle strengthening activities using major muscle groups at least twice a week
- Several hours of light physical activities, including standing

SLEEP

Getting 7 to 9 hours of good-quality sleep on a regular basis, with consistent bed and wake-up times

SEDENTARY BEHAVIOUR

- Limiting sedentary time to 8 hours or less, which includes:
 - No more than 3 hours of recreational screen time
 - Breaking up long periods of sitting as often as possible



Replacing sedentary behaviour with additional physical activity and trading light physical activity for more moderate to vigorous physical activity, while preserving sufficient sleep, can provide greater health benefits.

Progressing towards any of these targets will result in some health benefits.



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Adults Aged 18-64 Years

Adults Aged 65 Years or Older



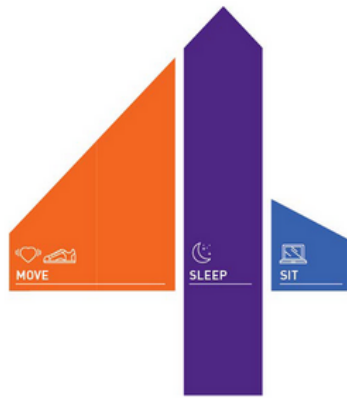
Public Health
Agency of Canada

Agence de la santé
publique du Canada



Canadian 24-Hour Movement Guidelines:

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Early Years 0-4 Years

Infants, toddlers and preschoolers need to Move, Sleep and Sit the right amounts.



Children & Youth 5-17 Years

Guidelines encourage kids to Sweat, Step, Sleep and Sit the right amounts each day.



Adults 18-64 Years

Guidelines to help adults move more, reduce sedentary time, and sleep well.



Adults 65 Years and Older

Guidelines to help adults move more, reduce sedentary time, and sleep well.

To access the 24-hr movement guidelines please visit

csepguidelines.ca



Canadian 24-Hour Movement Guidelines for Adults

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Sharon Marr, MD



Member of Public
Bill Kennedy



Contents lists available at [ScienceDirect](#)

Preventive Medicine

journal homepage: www.elsevier.com/locate/ypmed



A narrative review of global and national physical activity and sedentary behaviour guidelines development processes - The GUielines Standards (GUS) project

Karen Milton^{a,*}, Coral L. Hanson^b, Alice Pearsons^b, Roger Chou^c, Emmanuel Stamatakis^{d,e}

“Evaluated against the selected criteria, the strongest processes were undertaken by WHO and Canada”



Take Home Messages

All movement behaviours are associated with substantial health benefit in a dose-response manner. All movement matters!

24-Hour Movement Guidelines provide movement opportunities for individual adults, and counselling options for practitioners.

24-Hour Movement Guidelines provide opportunities to engage in movement behaviours in a way that reflect and respect the *individuality*, *variability*, and *personal preferences* of Canadian adults.



Why the move to 24-hr movement guidelines?

Practitioner concern that multiple guidelines are cumbersome, confusing, not easily implemented

Facilitate interpretation, dissemination and uptake of a single guideline

Increasing recognition of the importance of sleep behaviour

Facilitate counselling by practitioners, teachers, pediatricians etc.

That movement behaviours are co-dependent, not independent, they co-exist

Simplify the public health message – *'whole day matters'*



What is unique to the 24-Hour Movement Guidelines?

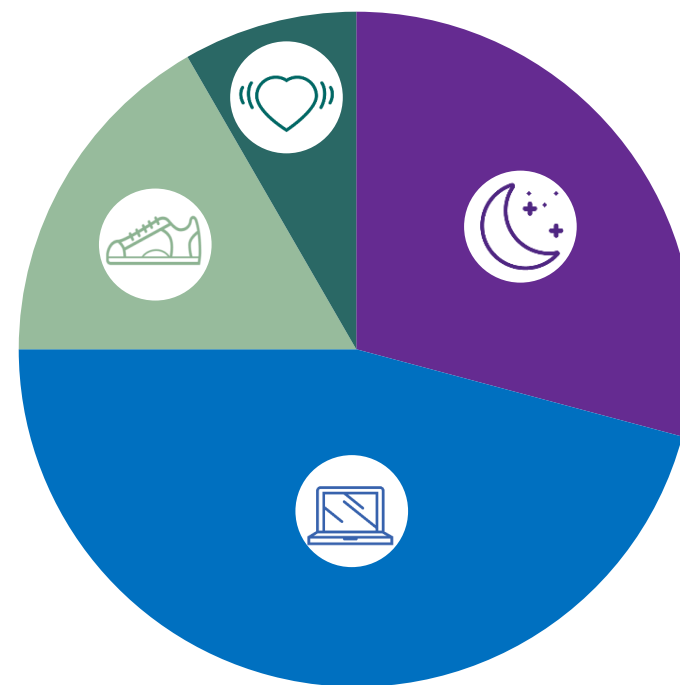
Past Guidelines



Behaviours in isolation

Focus on single behaviour
Example: 30 min of daily MVPA

24-Hour Movement Guidelines

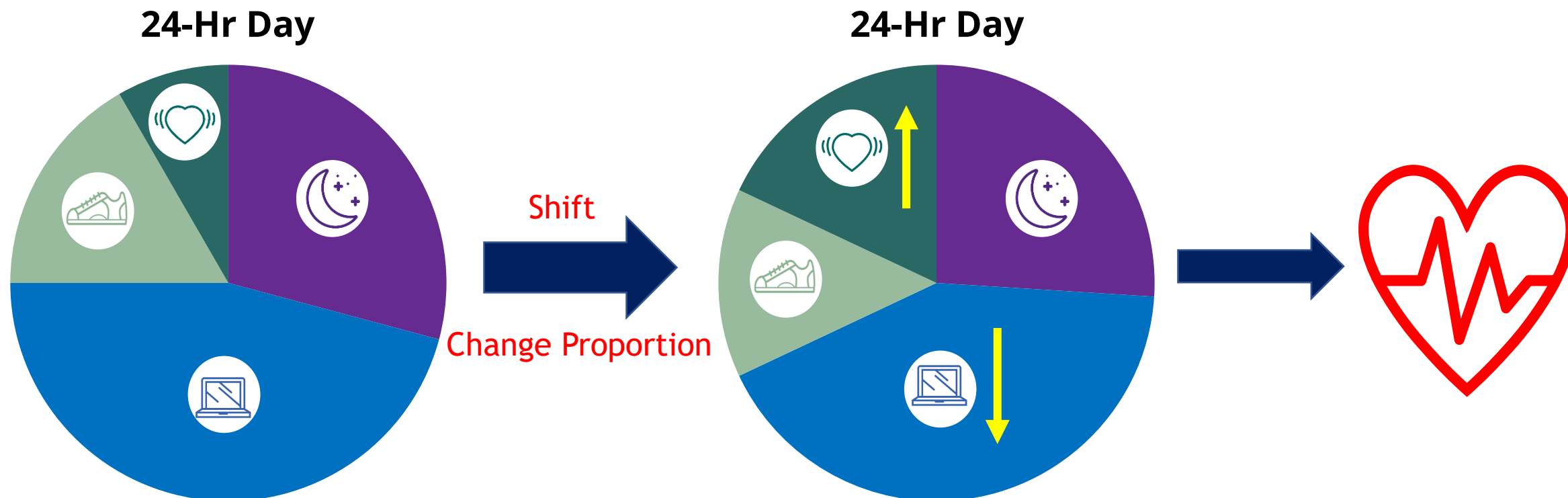


Behaviours co-exist

Composition of movement behaviours matters



Integrated movement behaviour approach

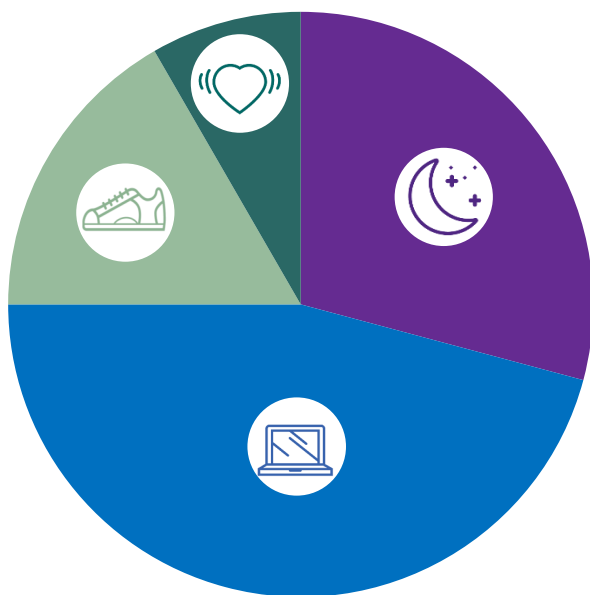


Changing the behavioral composition of your day

The Whole Day Matters!





Movement behaviours are part of a finite whole that must equal 24 hours



	7 hours
	11 hours
	4 hours
	2 hours
<hr/>	
24 hours	



Changing time in one movement behaviour results in an equal but opposite change in the others

	8:00			8:00
	11:00			10:00
	5:00			5:30
	0:00			0:30
	<hr/>			<hr/>
	24:00			24:00



Following the Canadian 24-Hour Movement Guidelines for Adults can help you obtain health benefits and live your best life.



Make your whole day matter.



MOVE MORE

Add movement throughout your day, including a variety of types and intensities of physical activity and muscle strengthening activities.



REDUCE SEDENTARY TIME

Limit recreational screen time and break up sedentary time often.



SLEEP WELL

Set yourself up for good-quality sleep on a regular basis, with consistent bed and wake-up times.

Learn more at csepguidelines.ca

Principle Assertion

Healthy physical activity, sedentary behaviour and sleep *interact* to promote and protect the health of all adults regardless of age.



What are the recommendations within the 24-Hr Movement Guidelines?

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FOR ADULTS AGED 18-64 YEARS:

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A healthy 24 hours includes:

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Adults Aged 18-64 Years

CANADIAN 24-HOUR MOVEMENT GUIDELINES

FOR ADULTS 65 YEARS OR OLDER:

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Adults aged 18-64 and 65 years and older

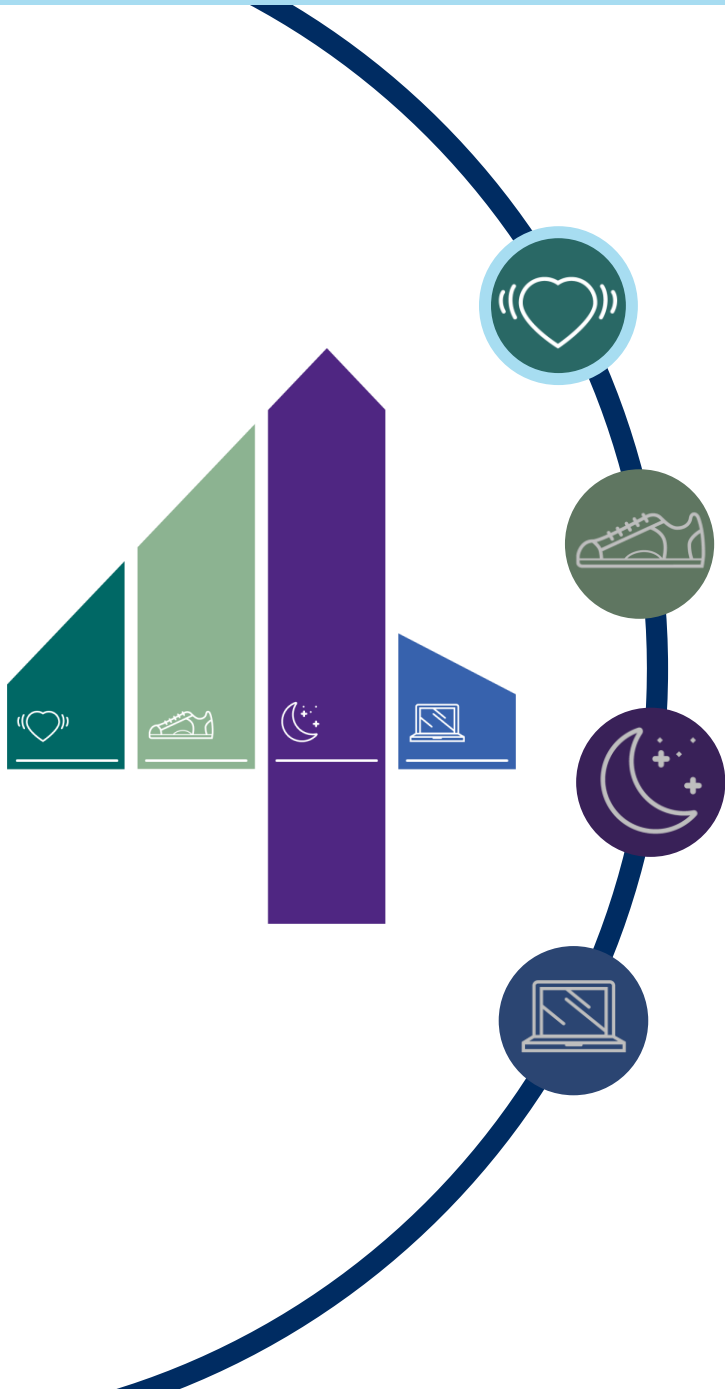
Recommendation

Moderate to vigorous aerobic physical (MVPA) activities such that there is an accumulation of at least 150 minutes per week.

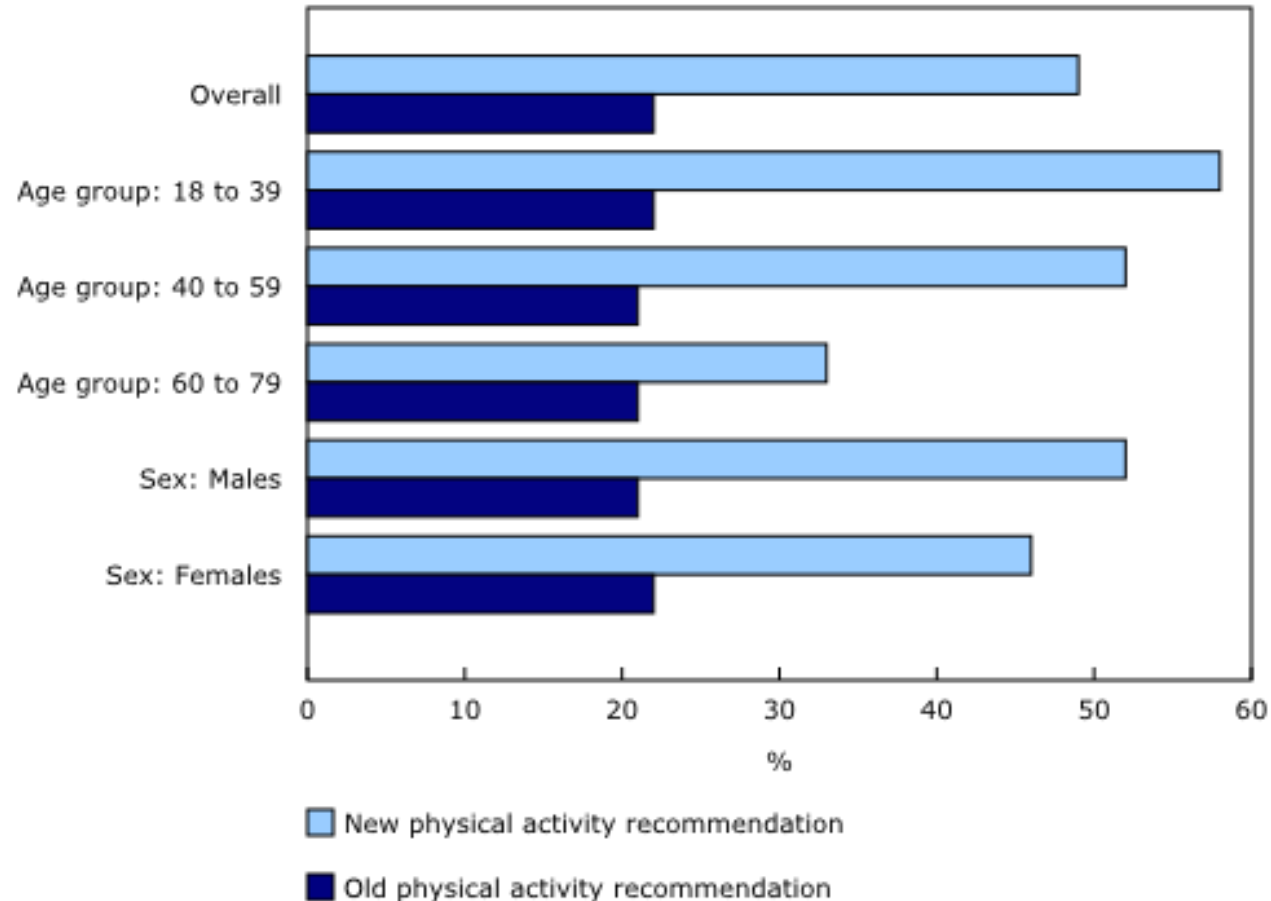
No longer a requirement that MVPA minutes be acquired in no less than 10 min bouts.

Muscle strengthening activities using major muscle groups at least twice a week.

Physical activities that challenge balance **(65 years and older).**



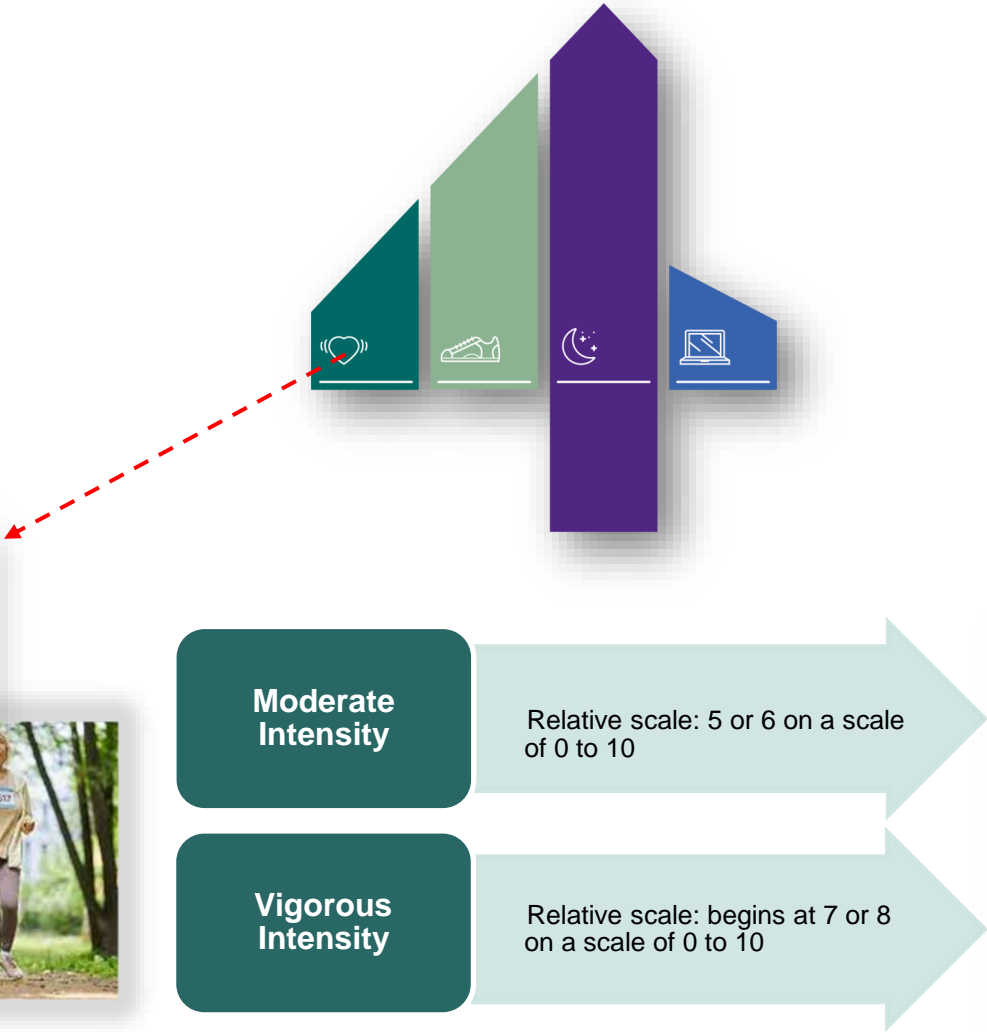
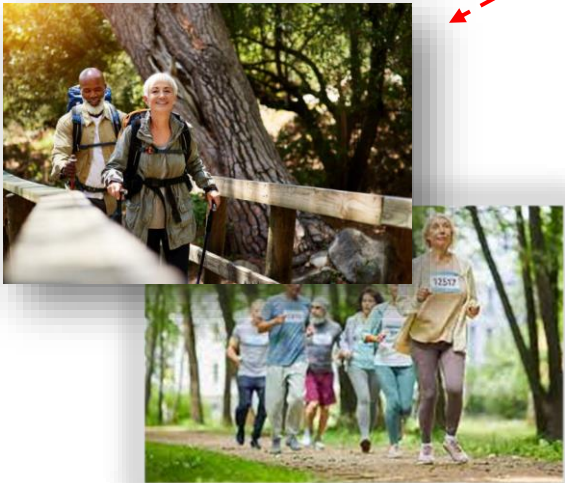
Percentage of adults meeting the new and old weekly moderate-to-vigorous physical activity (MVPA) recommendation.



'Old' guidelines recommended 150 minutes of moderate-to-vigorous physical activity (MVPA) per week in sessions of 10 minutes or more.

'New' physical activity recommendation (*24-Hour Movement Guidelines*) recommend an accumulation of at least 150 minutes of MVPA per week (without the 10-minute session requirement)

Moderate to Vigorous Physical Activity (MVPA) «♥»



Talk Test

As a rule of thumb, a person doing moderate-intensity aerobic activity can talk, but not sing, during the activity. A person doing vigorous-intensity activity cannot say more than a few words without pausing for a breath.



Key Observations

1

MVPA is associated with a substantial reduction in health risk.

2

Any amount of MVPA counts

3

Reallocating more time into MVPA from any of the other movement behaviours is associated with health benefits.

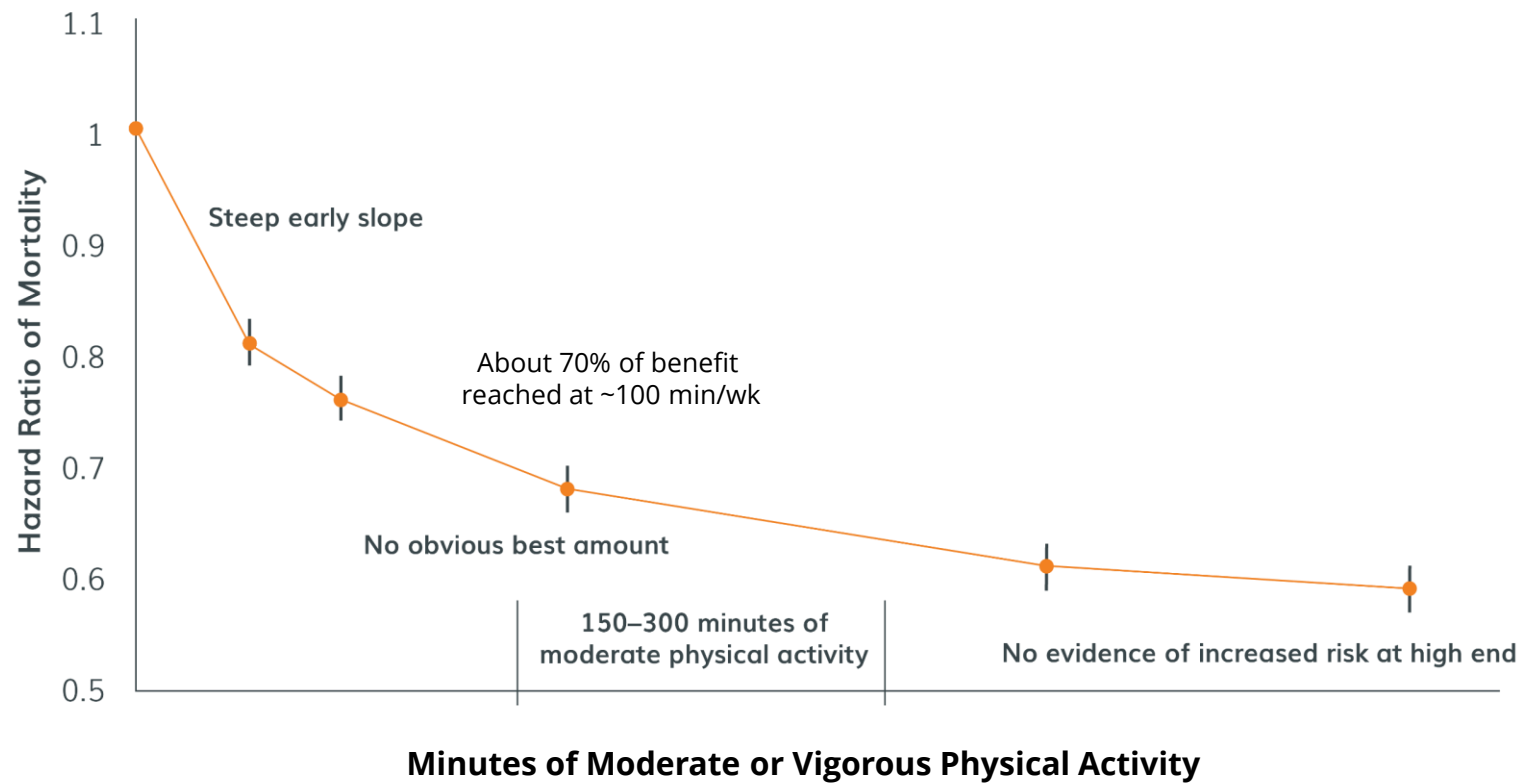


2

Any amount of MVPA counts!

Relationship between MVPA to All-Cause Mortality

No lower threshold for benefits

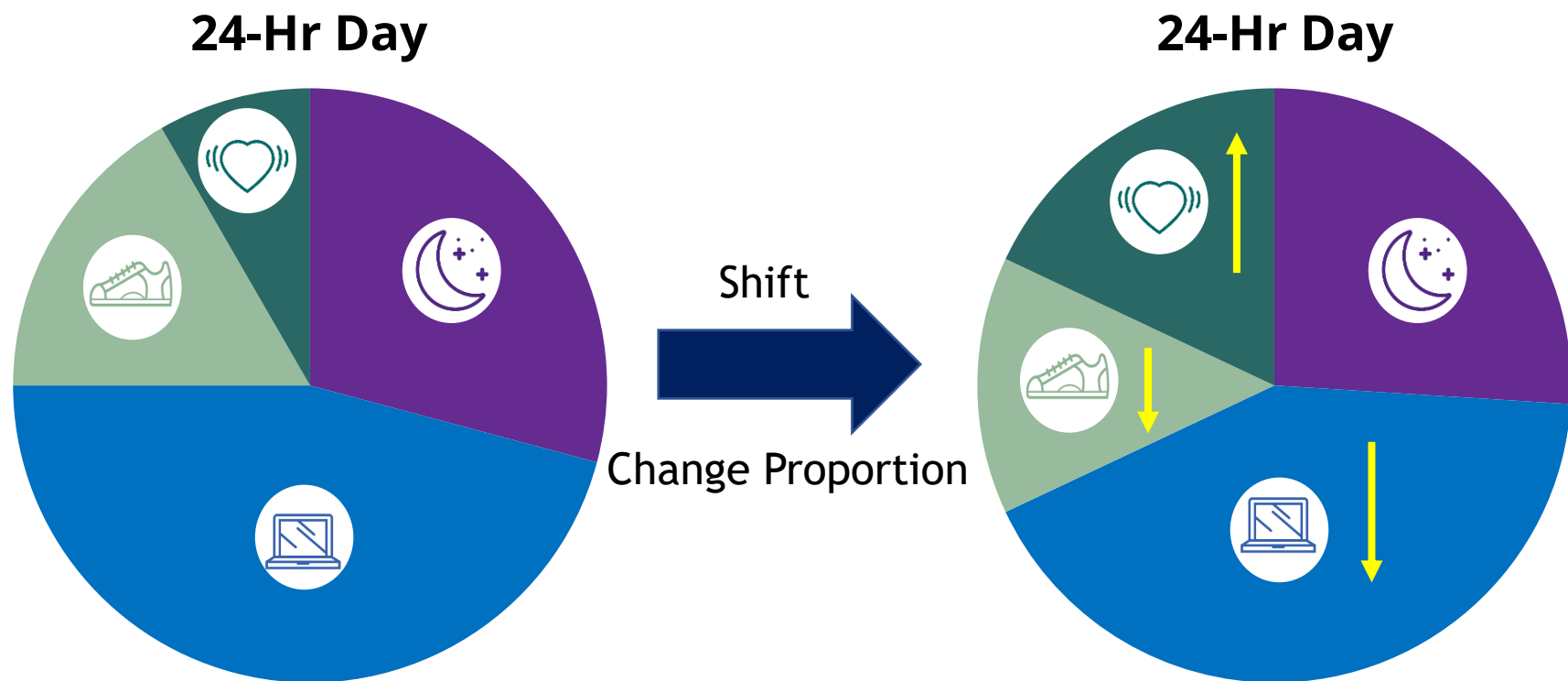




3

Reallocate time into MVPA

Reallocating more time into MVPA from any of the other movement behaviours is associated with health benefits.



Ian Janssen, PhD

Janssen I., et al. APNM 45:10(S2), 2020.



A healthy 24 hours includes:

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- Physical activities that challenge balance



- Several hours of **light physical activities**, including standing

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Replacing sedentary behaviour with additional physical activity and trading light physical activity for more moderate to vigorous physical activity, while preserving sufficient sleep, can provide greater health benefits.



Progressing towards any of these targets will result in some health benefits.

Any amount of daily MVPA counts!



Implications for Public Health



Participation in MVPA of any length provides additional options for adults of any age which facilitates engagement and promotes opportunities to increase movement behavior.

This is important for individuals who may be unable or unwilling to engage in MVPA bouts that are ≥ 10 minutes in duration.

Adults aged 18-64 and 65 years and older

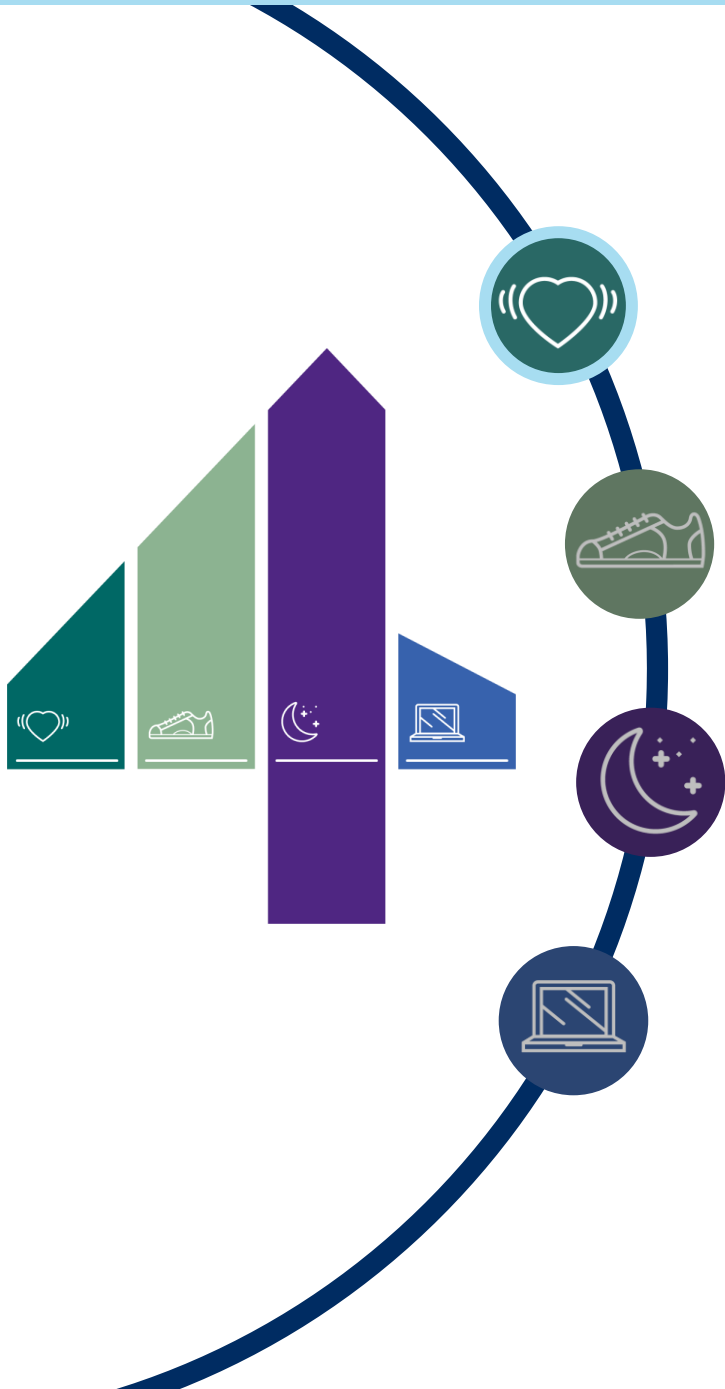
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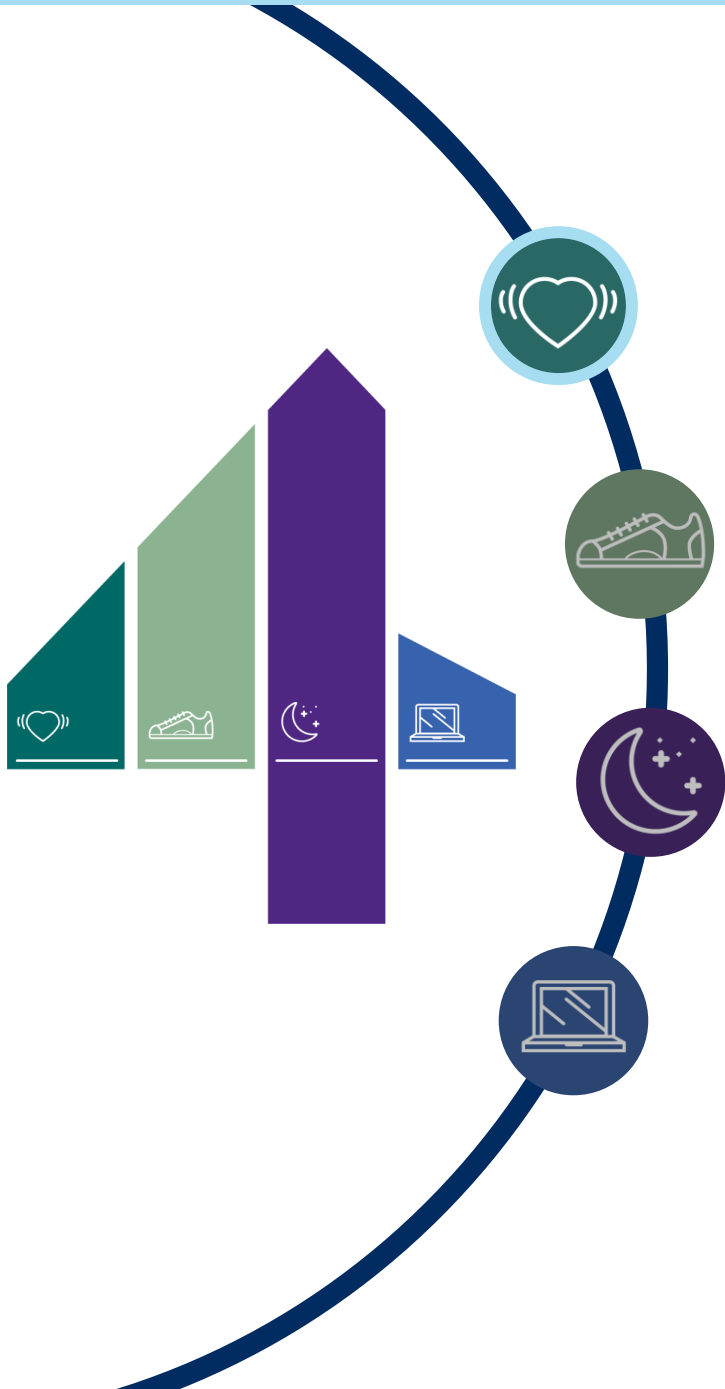
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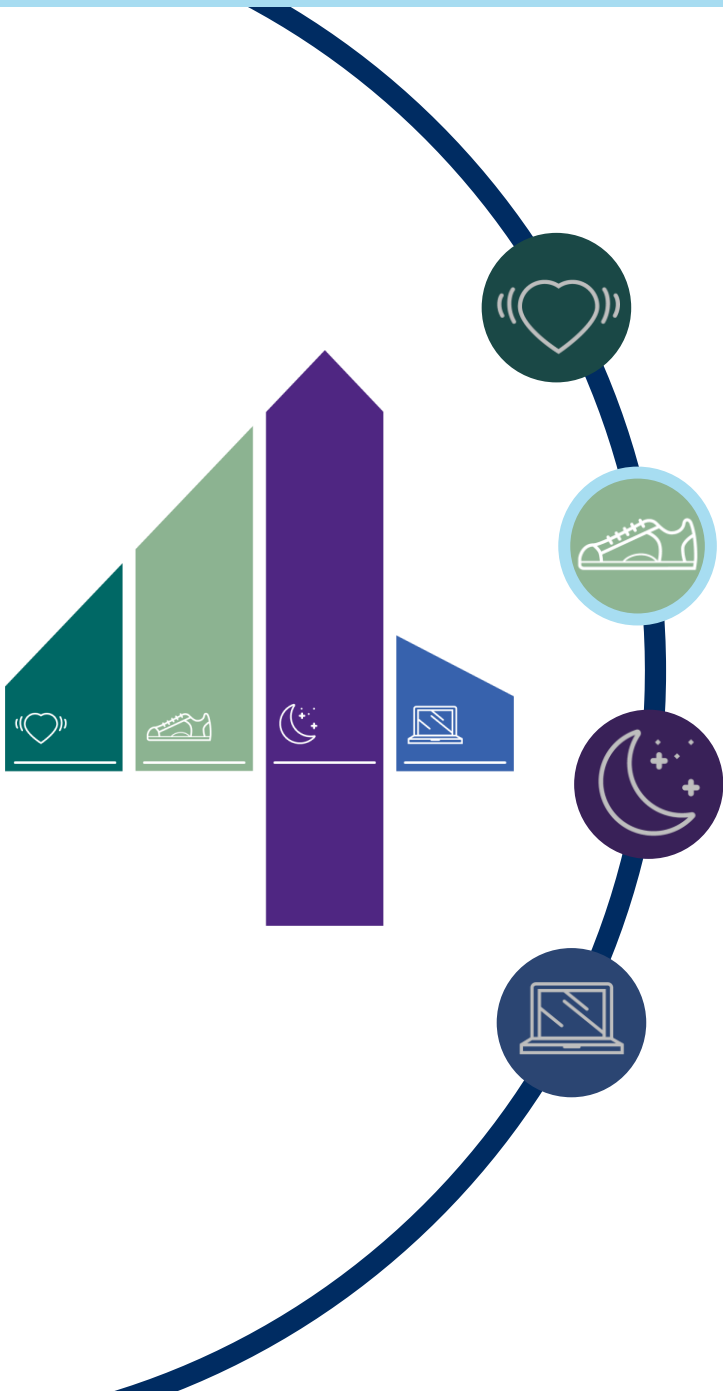
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Muscle strengthening activities using major muscle groups at least twice a week.

Physical activities that challenge balance **(65 years and older).**

McLaughlin EC, et al. Balance and Functional Training and Health in Adults and Older Adults: An Overview of Systematic Reviews. Appl. Physiol. Nutr. Metab. Vol. 45(10): Suppl. 2: S180–S196, 2020.





Adults aged 18-64 and 65 years and older, **LPA**

Recommendation

Several hours of light intensity physical activities, including standing.

First recognition of the health benefits associated with light physical activity.

Light Intensity Physical Activity (LPA)



LIPA-Key Observations

1

LIPA is associated with substantial reduction in health risk in a dose-response manner.

2

Any amount of LIPA counts

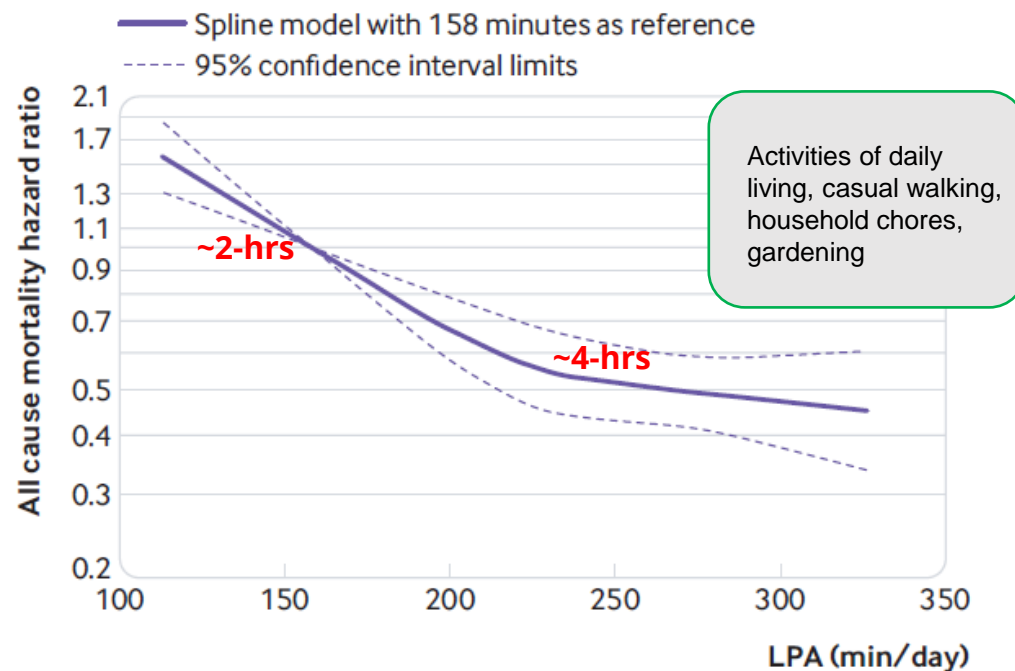
3

Reallocating some sedentary time into any of the other movement behaviours, including LIPA, is associated with health benefits.



1

LPA is associated with substantial reduction in health risk in a dose-response manner.

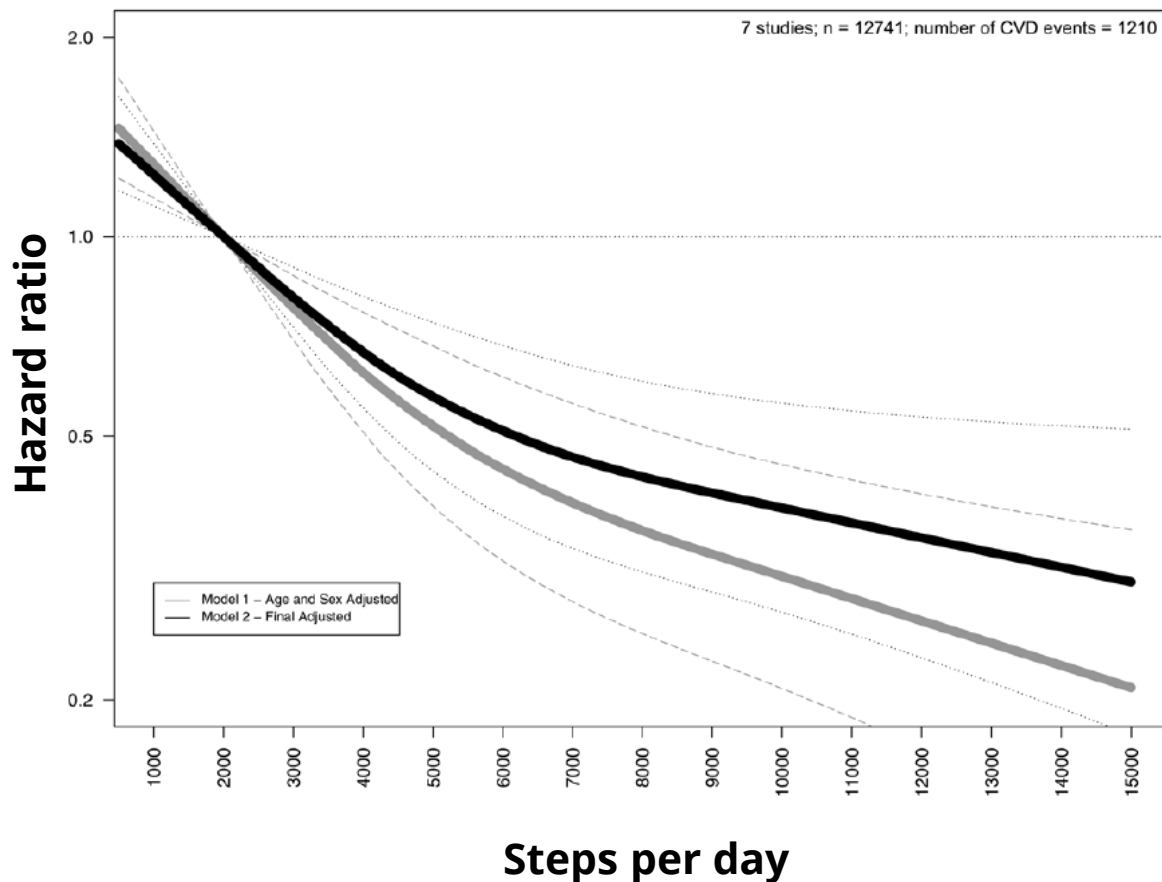


All intensities of **device measured** physical activity, including light intensity, are associated with a substantially reduced risk of death in a dose-response manner.



What about Steps per Day?

A Adults > 60 yrs



ORIGINAL RESEARCH ARTICLE

Prospective Association of Daily Steps With Cardiovascular Disease: A Harmonized Meta-Analysis

Among older adults, taking ≈ 6000 to 9000 steps per day was associated with 40% to 50% lower risk of cardiovascular disease, compared with taking ≈ 2000 steps per day.

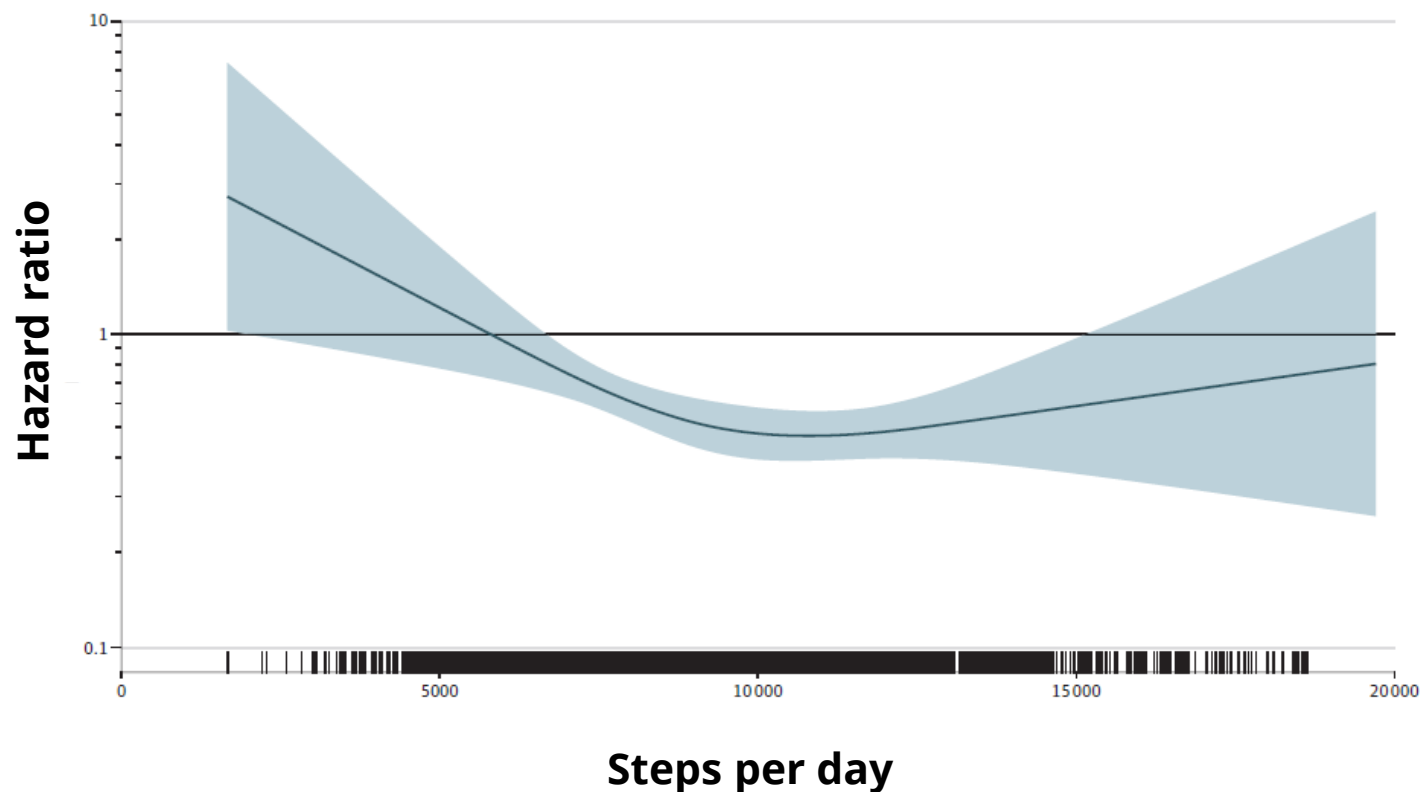
Monitoring and promoting steps per day can be a simple, easy to interpret metric used for clinician–patient communication and population health to reduce the risk of cardiovascular disease events.

Circulation. 2023;147:122–131



What about Steps per Day?

Figure 1. Dose-Response Association of Steps per Day With All-Cause Mortality



Among Black and White men and women in middle adulthood, participants who took approximately 7000 steps/d or more experienced lower mortality rates compared with participants taking fewer than 7000 steps/d. There was no association of step intensity with mortality.



Fun Fact

Origin of the 10,000 Steps per day 'rule'?



To capitalize on the popularity of the 1964 Tokyo Olympic Games, a Japanese company called Yamasa Clock created a personal-fitness pedometer called the Manpo-kei.

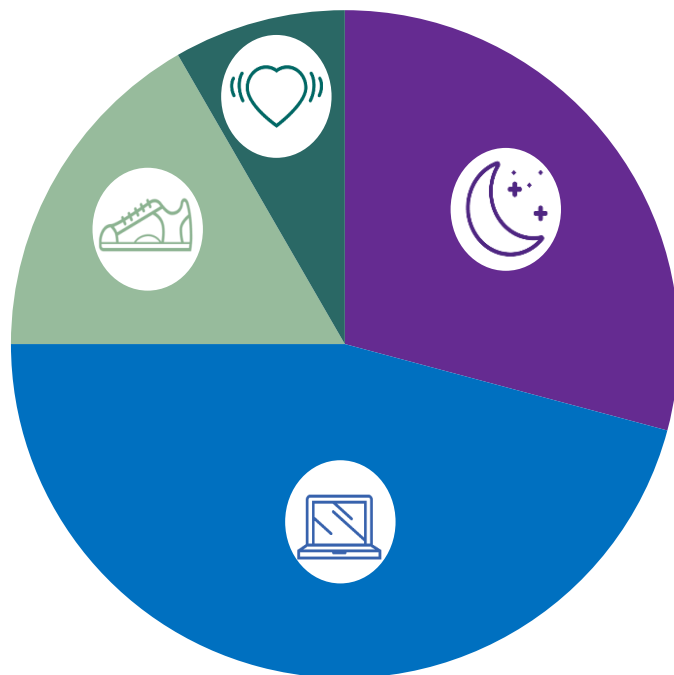
The name derives from the Japanese words “man” meaning 10,000, “po” meaning steps, and “kei” meaning system.



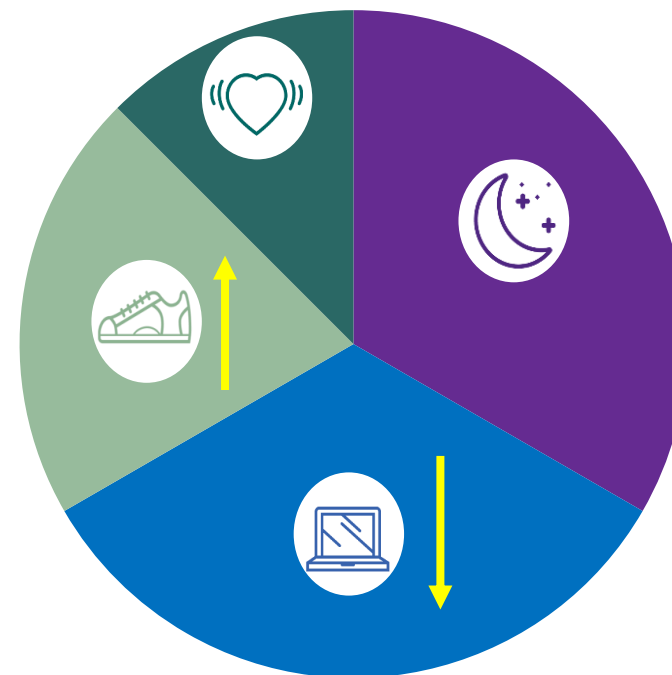
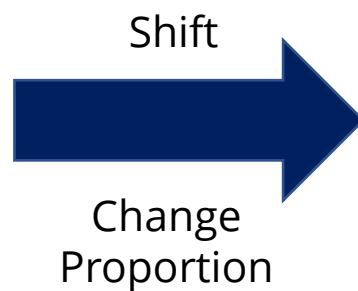
LIPA-Key Observations

3

Reallocating some sedentary time into light physical activity is associated with health benefits.



24-hr Day



24-hr Day



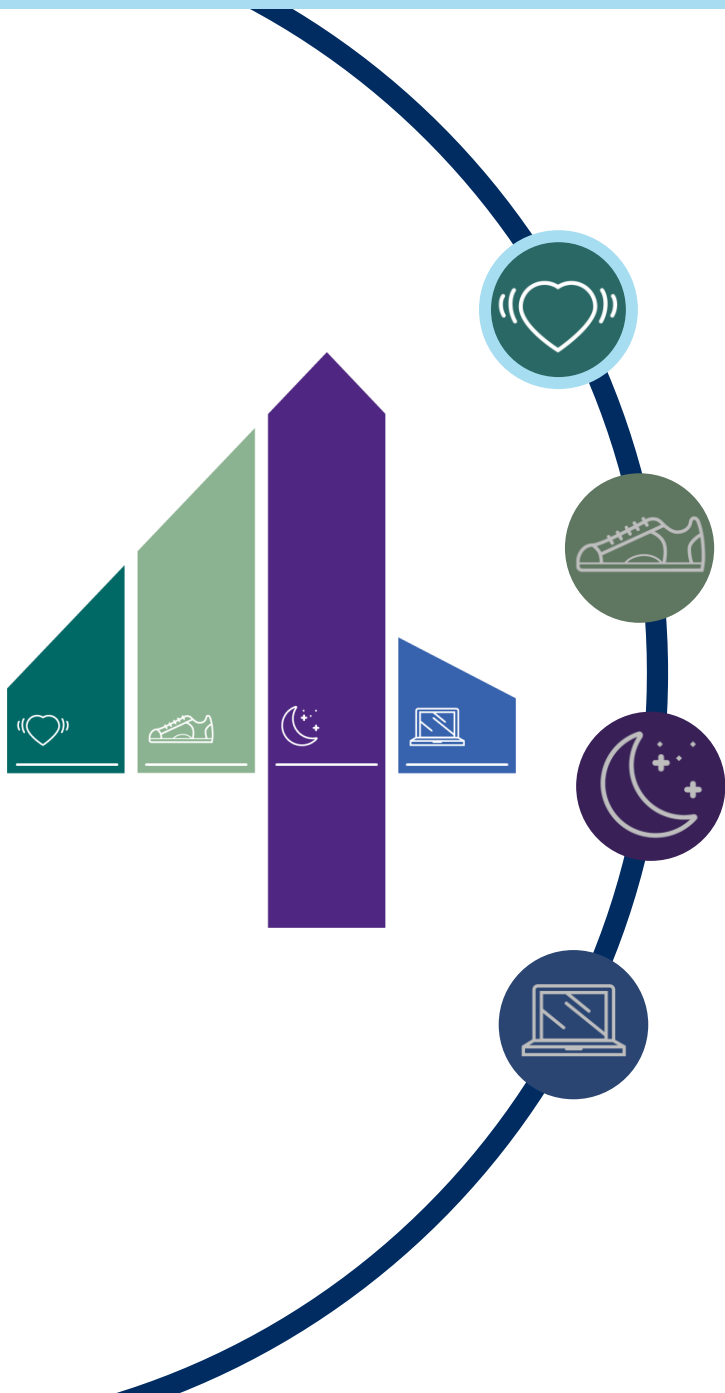
Implications for Public Health



Participation in routine activities of daily living at home, work or commuting is not onerous.

Engaging in LIPA is feasible for most if not all adults regardless of age.

Supports public health initiatives that advocate for engaging in quiet standing (instead of sitting), and routine activities of daily living such as casual walking and doing household or gardening chores.



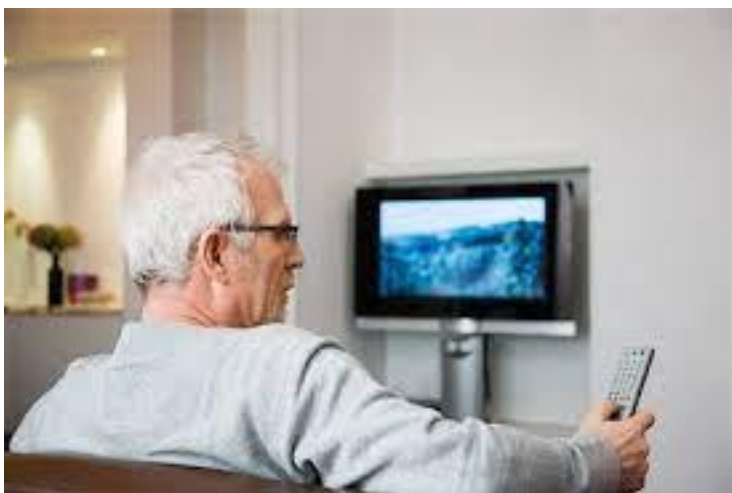
Adults aged 18-64 and 65 years and older

Recommendation

Limit sedentary time to 8 hours or less, which includes:

No more than 3 hours of recreational screen time

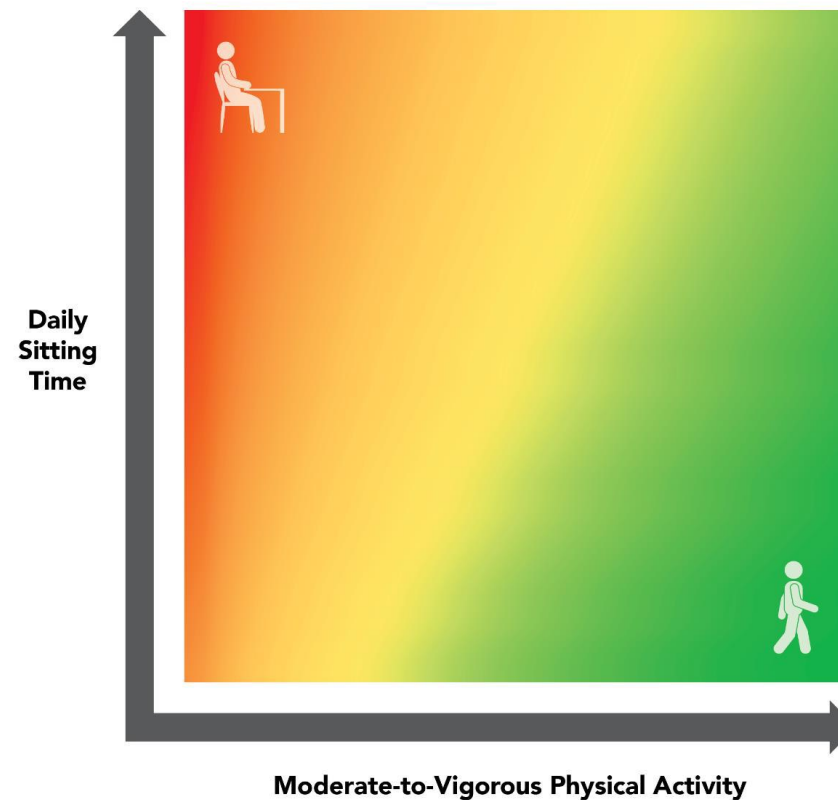
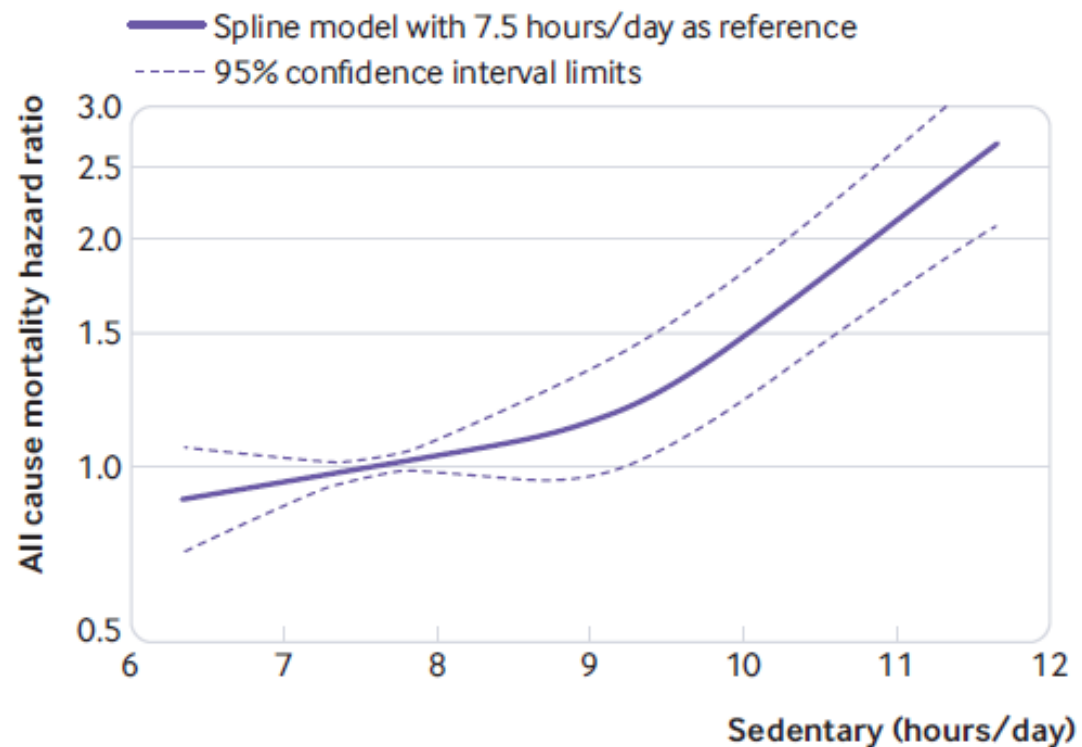
Breaking up long periods of sedentary time as often as possible



- Sedentary behaviour refers to waking behaviours “characterized by energy expenditure ≤ 1.5 metabolic equivalents (METs), while in a sitting, reclining or lying posture” (Tremblay et al., 2017)
- Includes
 - Sitting
 - Screen and non-screen
 - Occupational, educational and recreational
- Canadian adults spend 9-10 hours/day engaging in sedentary behaviours



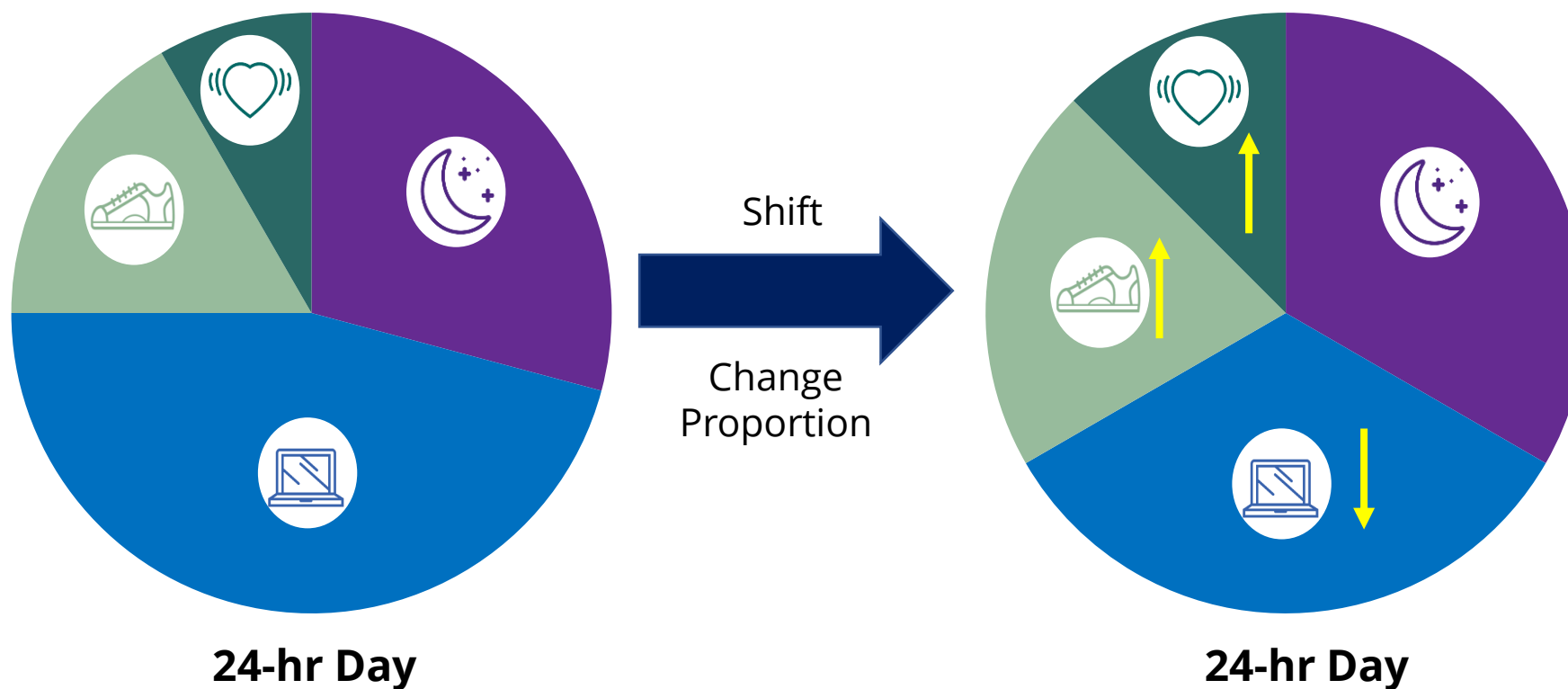
Sedentary Behaviour and Health Risk

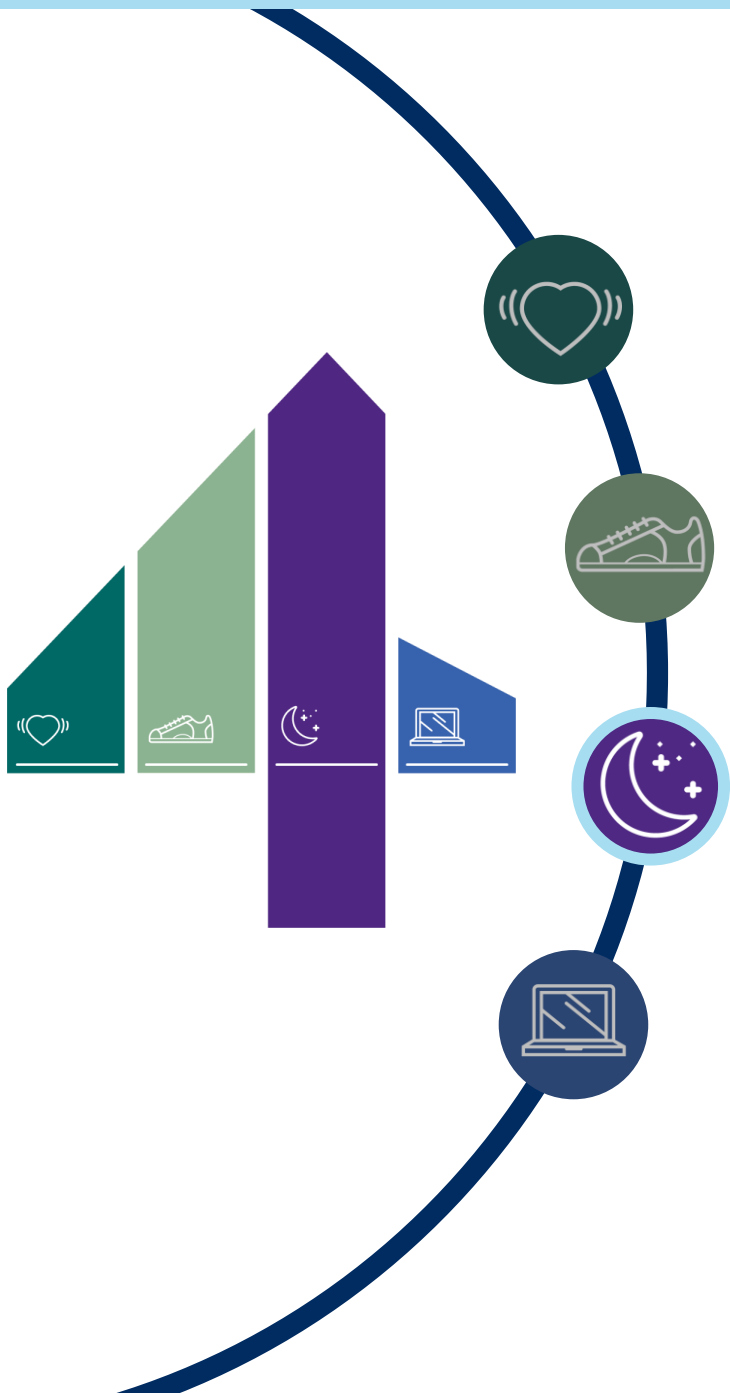


Risk of all-cause mortality decreases as one moves from red to green.



Reallocating some sedentary time into light or moderate physical activity is associated with health benefits.





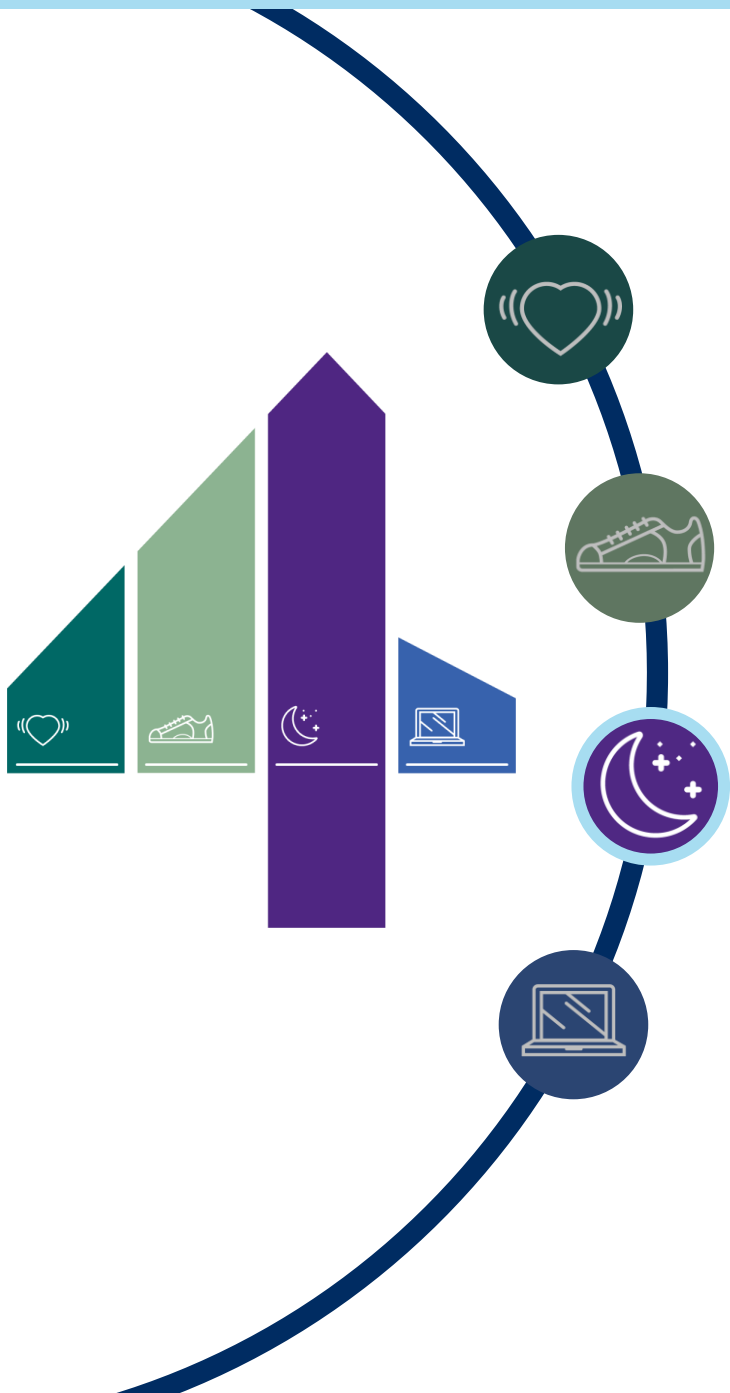
Recommendation

Adults 18 to 64 Years

Get 7 to **9** hours of good-quality sleep on a regular basis, with consistent bed and wake-up times.

Adults 65 years and older

Get 7 to **8** hours of good-quality sleep on a regular basis, with consistent bed and wake-up times.



Jean-Philippe Chaput, PhD

Sleep Content Expert
Canadian 24-Hour Movement Guidelines
for Adults

CHEO Research Institute

“Sleep timing, sleep consistency, and health in
adults: a systematic review”

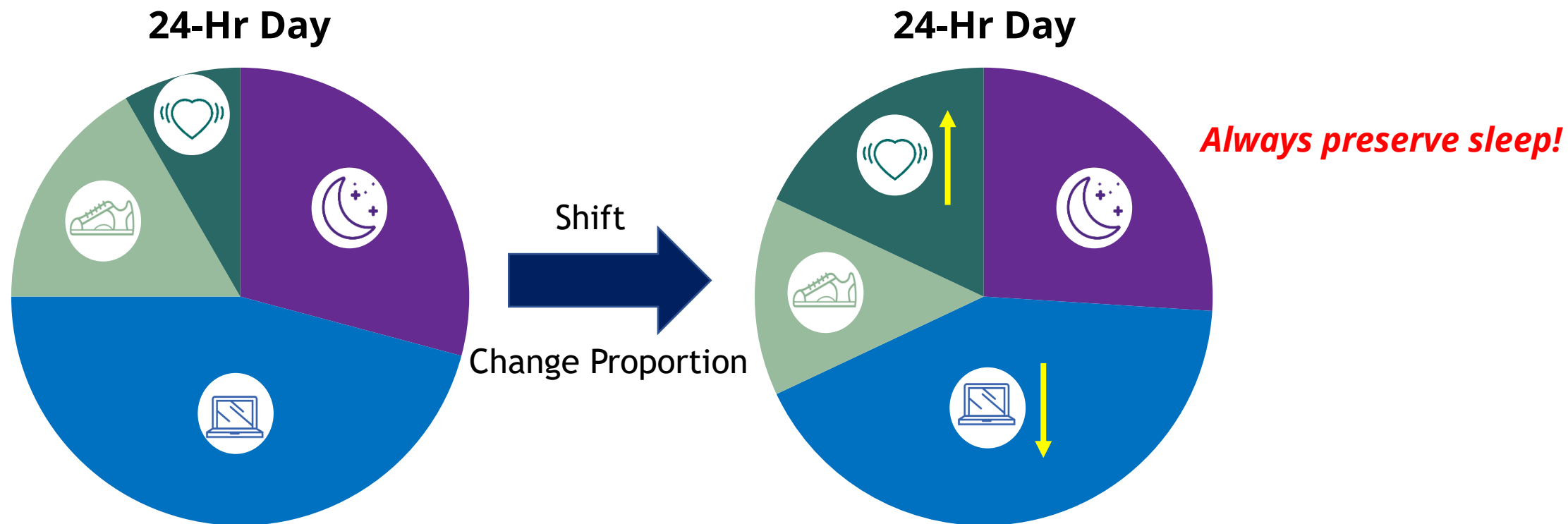
Journal of Applied Physiology, Nutrition, and Metabolism
2020, Volume 45, Number 10 (Suppl 2)



3

Reallocate time into MVPA

Reallocating more time into MVPA from any of the other movement behaviours is associated with health benefits.





CANADIAN 24-HOUR MOVEMENT GUIDELINES FOR ADULTS (AGED 65 YEARS OR OLDER)

For health benefits, adults aged 65 years or older should be physically active each day, minimize sedentary behaviour, and achieve sufficient sleep.

A healthy 24 hours includes:

PHYSICAL ACTIVITY

Performing a variety of types and intensities of physical activity, which includes:



- **Moderate to vigorous aerobic physical activities** such that there is an accumulation of at least 150 minutes per week

- Muscle strengthening activities using major muscle groups at least twice a week

- Physical activities that challenge balance



- Several hours of **light physical activities**, including standing

SLEEP



Getting 7 to 8 hours of good-quality sleep on a regular basis, with consistent bed and wake-up times

SEDENTARY BEHAVIOUR



Limiting sedentary time to 8 hours or less, which includes:

- No more than 3 hours of recreational screen time
- Breaking up long periods of sitting as often as possible



Replacing sedentary behaviour with additional physical activity and trading light physical activity for more moderate to vigorous physical activity, while preserving sufficient sleep, can provide greater health benefits.



Progressing towards any of these targets will result in some health benefits.

→ For health benefits, adults should be physically active each day, minimize sedentary behaviour, and achieve sufficient sleep.

Move more, reduce sedentary time, sleep well

→ Replacing sedentary behaviour with additional physical activity and trading light physical activity for more moderate to vigorous physical activity, while preserving sufficient sleep, can provide greater health benefits.



Public Health Implications

Integration of movement behaviours provides unique opportunities to:

*Engage in movement behaviours in a way that reflects and respects **your** individuality and **your** preferences.*

Empower the many Canadians who cannot meet a single guideline recommendation.





24-Hour Movement Guidelines speak to Individual Canadians

Following the Canadian 24-Hour Movement Guidelines for Adults can help you obtain health benefits and live your best life.



Make your whole day matter.



**MOVE
MORE**

Add movement throughout your day, including a variety of types and intensities of physical activity and muscle strengthening activities.



**REDUCE
SEDENTARY
TIME**

Limit recreational screen time and break up sedentary time often.



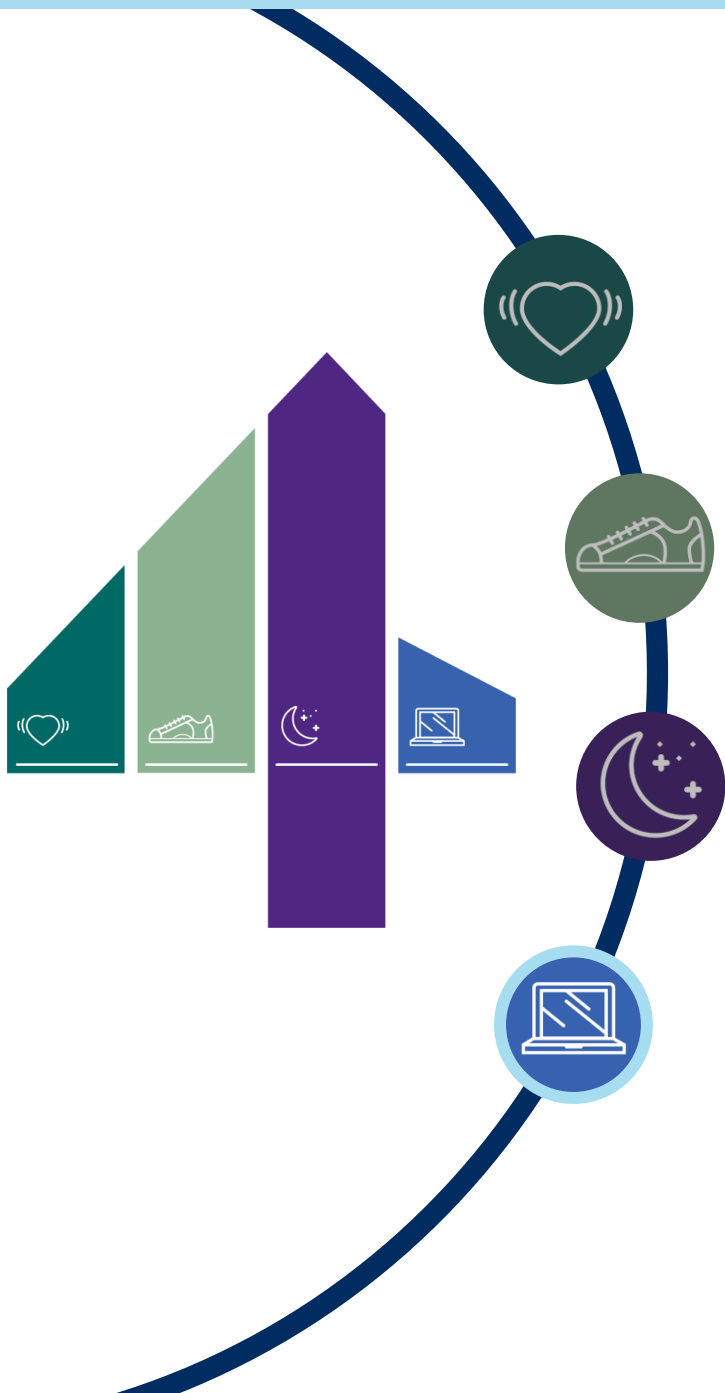
**SLEEP
WELL**

Set yourself up for good-quality sleep on a regular basis, with consistent bed and wake-up times.

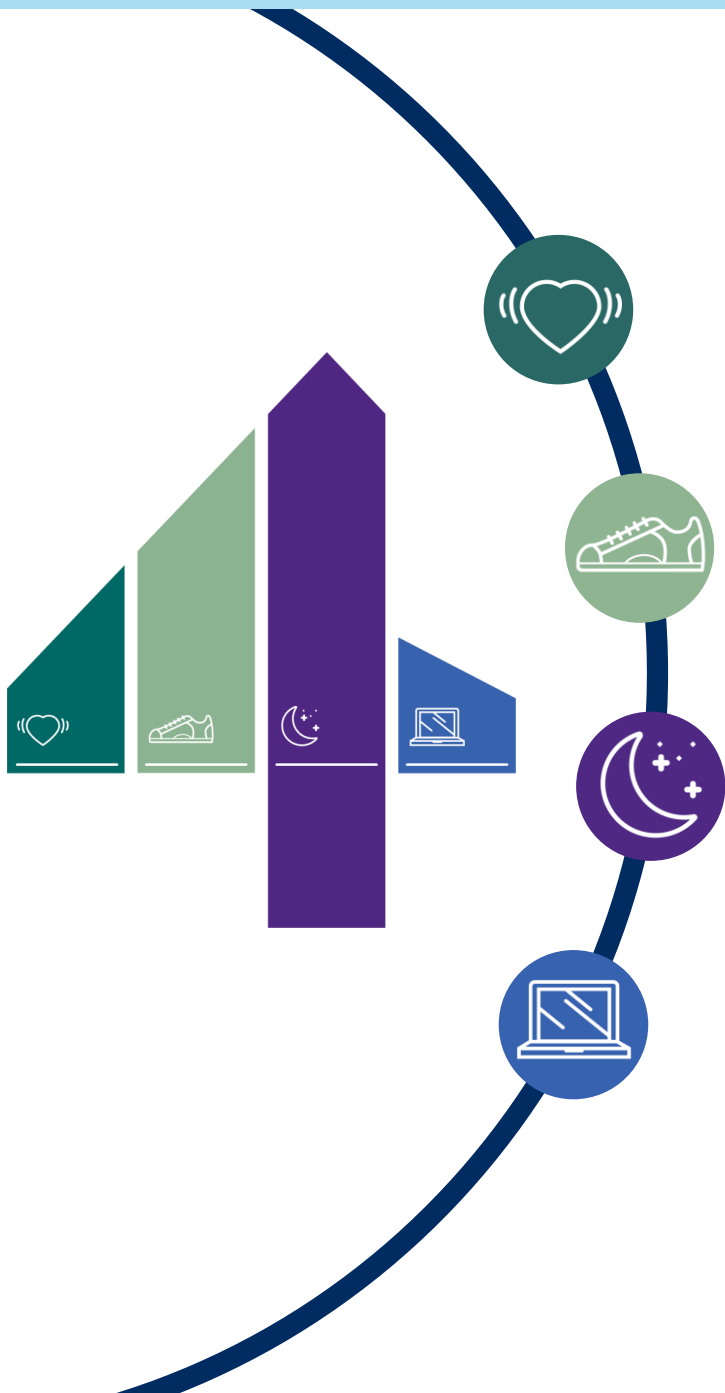
Learn more at csepguidelines.ca

Opportunities to engage in movement behaviours in a way that reflect and respect the **individuality**, **variability**, and **personal preferences** of Canadians.

Movement options for Canadians
Counselling options for Practitioners



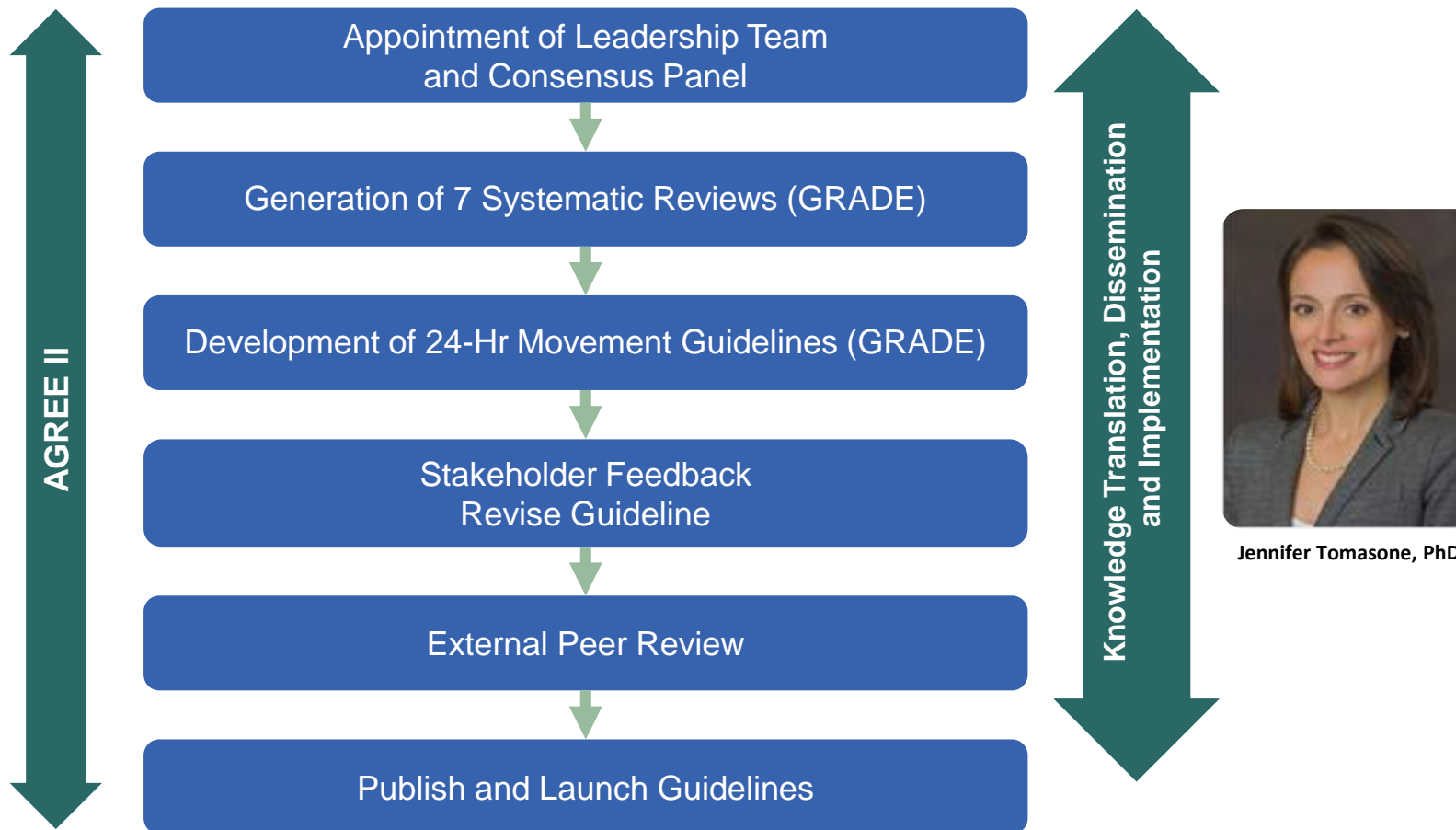
Summary....



Dissemination/implementation.....?



Dissemination of 24-Hour Movement Guidelines in Canada



Canadian 24-Hour Movement Guidelines:

An Integration of Physical Activity, Sedentary Behaviour, and Sleep



Early Years 0-4 Years

Infants, toddlers and preschoolers need to Move, Sleep and Sit the right amounts.

[Read More](#)



Children & Youth 5-17 Years

Guidelines encourage kids to Sweat, Step, Sleep and Sit the right amounts each day.

[Read More](#)



Adults 18-64 Years

Guidelines to help adults move more, reduce sedentary time, and sleep well.

[Read More](#)



Adults 65 Years and Older

Guidelines to help adults move more, reduce sedentary time, and sleep well.

[Read More](#)

<https://csepguidelines.ca/>

Communications Toolkits

Make your whole day matter.

Following the Canadian 24-Hour Movement Guidelines for Adults (18-64 years) can help you:



Improve fitness



Strengthen muscles and bones



Improve mental health and well-being



Get the most out of your whole day by **moving more** (e.g., cycling, walking, yoga and swimming), **limiting sedentary time** and **sleeping well**.

Learn more at csepguidelines.ca



Make your whole day matter.



Move More. Reduce Sedentary Time. Sleep Well.

Following the Canadian 24-Hour Movement Guidelines for Adults can help you obtain health benefits and live your best life.



Make your whole day matter.



MOVE MORE

Add movement throughout your day, including a variety of types and intensities of physical activity and muscle strengthening activities.



REDUCE SEDENTARY TIME

Limit recreational screen time and break up sedentary time often.



SLEEP WELL

Set yourself up for good-quality sleep on a regular basis, with consistent bed and wake-up times.

Learn more at csepguidelines.ca

REDUCE SEDENTARY TIME



Make your whole day matter.



SLEEP WELL



Make your whole day matter.



MOVE MORE



Make your whole day matter.

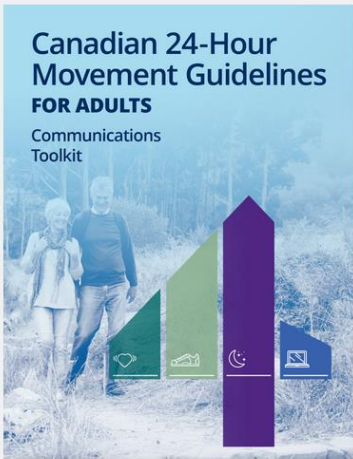


Below are several resources to download and promote the 24-Hour Movement Guidelines for Adults 18-64 years and Adults 65 years and older.


 Download The Complete Communications Toolkit (ZIP)

Communications Toolkit

<https://csepguidelines.ca/promo-material/>



Canadian 24-Hour Movement Guidelines FOR ADULTS
Communications Toolkit



Following the Canadian 24-Hour Movement Guidelines for Adults can help you obtain health benefits and live your best life.


Make your whole day matter.

MOVE MORE
Add movement throughout your day, including a variety of types and intensities of physical activity and muscle-strengthening activities.

REDUCE SEDENTARY TIME
Limit recreational screen time and break up sedentary time often.

SLEEP WELL
Set yourself up for good-quality sleep on a regular basis, with consistent bed and wake-up times.

Learn more at csepguidelines.ca



Tips to make your whole day matter

The Canadian 24-Hour Movement Guidelines for Adults show what a healthy 24 hours looks like when it comes to physical activity, sedentary behaviours and sleep. The Guidelines focus on three core recommendations: **move more, reduce sedentary time, and sleep well.**

To optimize the timing of these movement behaviours, experts suggest you:


- Move when it suits you
- Remove screens from bedrooms and limit screen use prior to bedtime
- Adjust your bedtime to allow for the recommended hours of sleep

TRY THESE SIMPLE TIPS TO GET STARTED


- Take movement breaks throughout the day, including standing and stretching.
- If you get up early to exercise, try to go to bed early so that you're getting the recommended hours of sleep each night. The key is to make sure your active time doesn't disrupt your sleep.
- Avoid responding to work emails, scrolling through social media or watching shows on screens prior to bed.
- Maintain consistent bed and wake-up times throughout the entire week, including on weekends.

To learn more about the 24-Hour Movement Guidelines for all age groups, visit csepguidelines.ca


Promote the Guidelines!
An overview of the components available to promote the guidelines, key messages and sample content. (ZIP)

 Download

Poster
A one-page general poster to promote the guidelines to all adults (PDF, 1 pp, 173KB)


 Download

Tips
A one-page series of tips to meet the guidelines for all adults (PDF, 1pp, 178KB)


 Download


Adults 18-64

Resources for Adults 18-64 years





Guidelines Tearsheet

 Download




Benefits

 Download




Tips for Adults 18-64


 Download


Adults 65+

Resources for Adults 65+





Guidelines Tearsheet

 Download




Benefits

 Download



Tips for Adults 65+

 Download

ਆਪਣੇ ਦਿਨ ਦੇ ਹਰੇਕ ਪਲ ਨੂੰ ਜਿਉਣਾ ਸਿੱਖੋ।

18-64 ਸਾਲ ਦੇ ਵਿਅਕਤੀਆਂ ਨੂੰ ਕੋਨੋਡੀਅਨ 24-ਘੰਟੇ ਸਰੀਰਕ ਗਤੀਵਿਧੀਆਂ ਦਿਸ਼ਾ-ਨਿਰਦੇਸ਼ਾਂ ਅਨੁਸਾਰ ਸਰੀਰਕ ਕਸਰਤ, ਲਗਾਤਾਰ ਬੈਠਣ ਅਤੇ ਨੀਂਦ ਲਈ ਕੁਝ ਅਸੂਲਾਂ ਦਾ ਪਾਲਨ ਕਰਨਾ ਚਾਹੀਦਾ ਹੈ।
ਦਿਸ਼ਾ-ਨਿਰਦੇਸ਼ਾਂ ਦੀ ਪਾਲਣਾ ਕਰਨ ਨਾਲ ਤੁਹਾਨੂੰ ਸਿਹਤ ਲਾਭ ਪ੍ਰਾਪਤ ਕਰਨ ਅਤੇ ਆਪਣੀ ਜ਼ਿੰਦਗੀ ਵਧੀਆ ਜੀਉਣ ਵਿੱਚ ਮਦਦ ਮਿਲ ਸਕਦੀ ਹੈ।



ਵਧੇਰੇ ਹਿਲਜੁਲ ਕਰੋ

ਸਰੀਰਕ ਗਤੀਵਿਧੀਆਂ ਦੀਆਂ ਕਈ ਕਿਸਮਾਂ ਅਤੇ ਤੀਬਰਤਾਵਾਂ ਰਾਹੀਂ, ਆਪਣੇ ਸਰੀਰ ਨੂੰ ਦਿਨ ਭਰ ਹਿਲਾਓ:



ਹਰ ਹਫ਼ਤੇ ਘੱਟੋ-ਘੱਟ 150 ਮਿੰਟ ਦਰਮਿਆਨੀ ਤੋਂ ਜ਼ੋਰਦਾਰ ਸਰੀਰਕ ਗਤੀਵਿਧੀਆਂ ਕਰੋ।



ਹਫ਼ਤੇ ਵਿੱਚ ਘੱਟੋ-ਘੱਟ ਦੋ ਵਾਰ ਮਾਸਪੇਸ਼ੀਆਂ ਨੂੰ ਮਜ਼ਬੂਤ ਕਰਨ ਵਾਲੀਆਂ ਗਤੀਵਿਧੀਆਂ ਕਰੋ।



ਕਈ ਘੰਟਿਆਂ ਦੀ ਹਲਕੀ ਸਰੀਰਕ ਗਤੀਵਿਧੀ ਕਰੋ, ਜਿਵੇਂ ਕਿ ਖੜ੍ਹੇ ਹੋਣਾ।



ਬੈਠਣ ਦਾ ਸਮਾਂ ਘਟਾਓ

ਇੱਕ ਦਿਨ ਵਿੱਚ ਕੁੱਲ ਬੈਠਣ ਦੇ ਸਮੇਂ ਨੂੰ 8 ਘੰਟੇ ਜਾਂ ਘੱਟ ਤੱਕ ਸੀਮਤ ਕਰੋ।



ਮਨੋਰੰਜਨ ਲਈ ਸਕਰੀਨ (ਟੀਵੀ/ਮੋਬਾਈਲ/ਕੰਪਿਊਟਰ) ਦੇ ਸਾਹਮਣੇ 3 ਘੰਟੇ ਤੋਂ ਵੱਧ ਨਹੀਂ ਬੈਠਣਾ ਚਾਹੀਦਾ।



ਜਿੰਨਾ ਹੋ ਸਕੇ ਬੈਠਣ ਦੇ ਲੰਬੇ ਸਮੇਂ ਨੂੰ ਖੜ੍ਹੇ ਹੋ ਕੇ ਤੋੜੋ (ਬਰੇਕ ਲਓ)।



ਚੰਗੀ ਨੀਂਦ ਲਓ

ਰੋਜ਼ਾਨਾ 7 ਤੋਂ 9 ਘੰਟੇ ਦੀ ਚੰਗੀ ਗੁਣਵੱਤਾ ਵਾਲੀ ਨੀਂਦ ਲਈ ਆਪਣੇ ਆਪ ਨੂੰ ਤਿਆਰ ਕਰੋ, ਜਿਵੇਂ ਕਿ ਇੱਕੋ ਸਮੇਂ 'ਤੇ ਸੌਣਾ ਅਤੇ ਜਾਗਣਾ।

ਹੋਰ ਜਾਣਕਾਰੀ ਲਈ csepguidelines.ca ਵੈੱਬਸਾਈਟ 'ਤੇ ਜਾਓ।

ਵਧੇਰੇ ਸਿਹਤ ਲਾਭ ਲਈ ਵਾਧੂ ਸਰੀਰਕ ਗਤੀਵਿਧੀਆਂ ਨਾਲ ਬੈਠਣ ਵਾਲੇ ਵਿਵਹਾਰ ਨੂੰ ਬਦਲਣਾ, ਅਤੇ ਹਲਕੀ ਸਰੀਰਕ ਕਸਰਤ ਦੀ ਬਜਾਏ ਮੱਧਮ-ਤੋਂ-ਜ਼ੋਰਦਾਰ ਸਰੀਰਕ ਕਸਰਤ ਦਾ ਵਿਵਹਾਰ ਕਰਨਾ, ਜ਼ਿਆਦਾ ਨੀਂਦ ਨੂੰ ਸੁਰੱਖਿਅਤ ਰੱਖਦੇ ਹੋਏ।

Post-Launch – Translation of Guidelines to Punjabi

Entire toolkit is available (download for free) in Punjabi



Primary Process Paper

Guideline Development Process, Robert Ross, PhD

Systematic Reviews

Sleep Duration, *Jean-Phillippe Chaput, PhD*

Sleep Quality, *Jean-Phillippe Chaput, PhD*

Sedentary Behaviour, *Travis Saunders, PhD*

Resistance Exercise, *Rasha El-Kotob, MSc*

Balance and Functional Training, *Emily McLaughlin, BSc.*

Compositional Analysis, *Ian Janssen, PhD*

Methodology Review

Approach for Overviews of Reviews, *Michelle Kho, PhD*

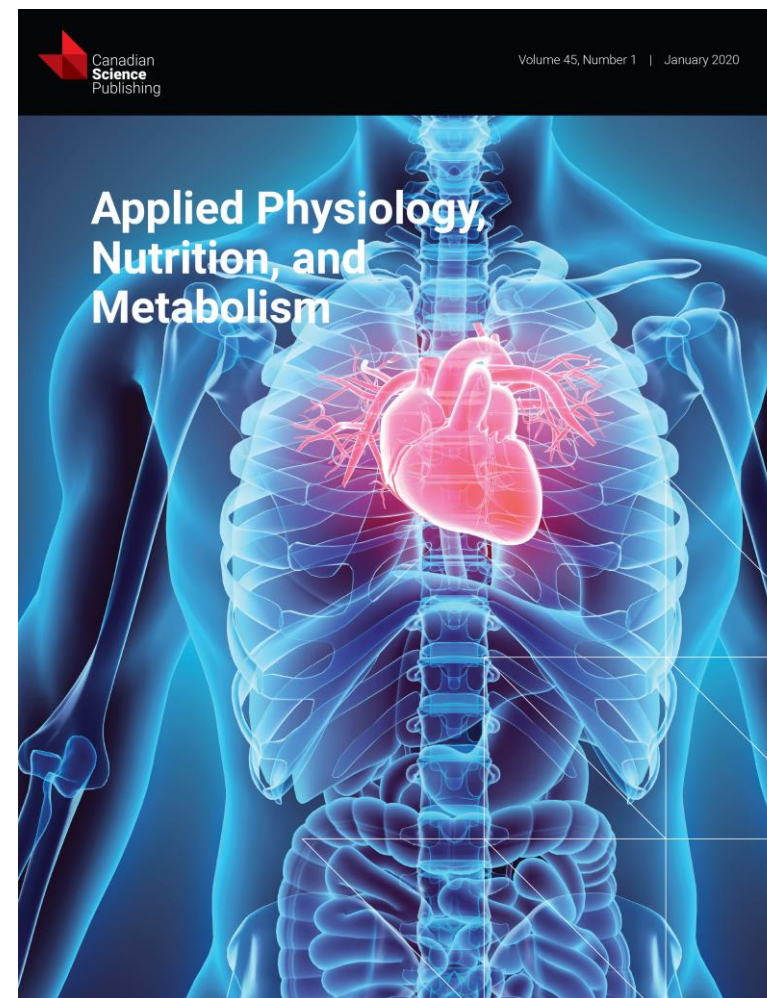
Knowledge Translation Manuscripts

Knowledge Translation Process, *Jennifer Tomasone, PhD*

Dissemination/Implementation, *Jennifer Tomasone, PhD*

Optimal Messaging, *Emma Faught, BScH*

Volume 45, Number 10 (Suppl 2)



Guest Editor:

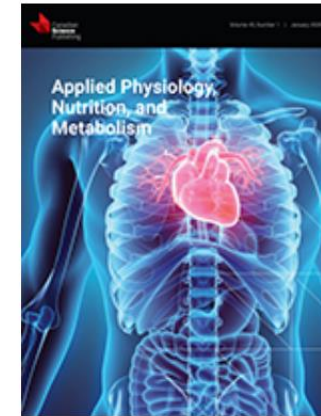
Christine Friedenreich, PhD, FCAHS, FRSC

*Scientific Director, Cancer Epidemiology and Prevention
Cumming School of Medicine and Faculty of Kinesiology
University of Calgary*

Journal Supplement

Evidence to support the 24-Hour Movement Guidelines for Adults aged 18-64 and Adults 65 years and older has been published in a special supplement of *Applied Physiology, Nutrition, and Metabolism (APNM)*.

Volume 45 • Number 10 (Suppl. 2) • October 2020
CSEP Special Supplement: Canadian 24-Hour
Movement Guidelines for Adults aged 18–64 years and
Adults aged 65 years or older (online only) /
Supplément spécial de la SCPE : Directives canadiennes
en matière de mouvement sur 24 heures pour les
adultes âgés de 18 à 64 ans et les adultes âgés de 65
ans et plus (électronique seulement)



Guest Editor

Christine Friedenreich, PhD, FCAHS, FRSC
Scientific Director, Cancer Epidemiology and Prevention Research
Cancer Care Alberta, Alberta Health Services
Adjunct Professor and Division Head, Preventive Oncology
Departments of Oncology, Community Health Sciences
Interim Scientific Director, O'Brien Institute of Public Health
Cumming School of Medicine and Faculty of Kinesiology
University of Calgary

Introduction

Introduction to the Canadian 24-Hour Movement Guidelines for Adults aged 18–64 years and Adults aged 65 years or older: an integration of physical activity, sedentary behaviour, and sleep

Robert Ross and Mark Tremblay

[Vol. 45 No. 10 \(Suppl. 2\) pp. v–xi](#)

Articles

Canadian 24-Hour Movement Guidelines for Adults aged 18–64 years and Adults aged 65 years or older: an integration of physical activity, sedentary behaviour, and sleep

Robert Ross, Jean-Philippe Chaput, Lora M. Giangregorio, Ian Janssen, Travis J. Saunders, Michelle E. Kho, Veronica J. Poitras, Jennifer R. Tomason, Rasha El-Kotob, Emily C. McLaughlin, Mary Duggan, Julie Carrier, Valerie Carson, Sebastien F. Chastin, Amy E. Latimer-Cheung, Tala Chulak-Bozzer, Guy Faulkner, Stephanie M. Flood, Mary Kate Gazendam, Genevieve N. Healy, Peter T. Katzmarzyk, William Kennedy, Kirstin N. Lane, Amanda Lorbergs, Kaleigh Maclaren, Sharon Marr, Kenneth E. Powell, Ryan E. Rhodes, Amanda Ross-White, Frank Welsh, Juana Willumsen, and Mark S. Tremblay

[Vol. 45 No. 10 \(Suppl. 2\) pp. S57–S102](#)



**To access the 24-hr movement guidelines
please visit**

csepguidelines.ca

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