

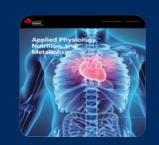


Canadian 24-Hour Movement Guidelines for Adults aged 65 years or older: An Integration of Physical Activity, Sedentary Behaviour, and Sleep.

Queen's Retiree Association September 26th, 2024

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

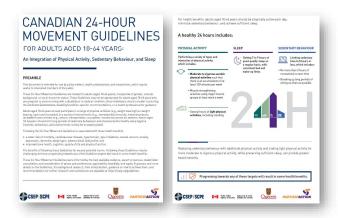
Chairperson
Canadian 24-Hour Movement Guidelines for Adults





World First 24-Hour Movement Guidelines for Adults

CANADIAN 24-HOUR MOVEMENT GUIDELINES

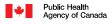




Adults Aged 18-64 Years

Adults Aged 65 Years or Older











Canadian 24-Hour Movement Guidelines: An Integration of Physical Activity, Sedentary Behaviour, and Sleep



Early Years 0-4 Years

ifants, 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 Content Expert-Methodologists / STEERING COMMITTEE



Content Expert (PA) Lora Giangregorio, PhD



Methodology Expert Michelle Kho, PhD



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Dissemination Expert Jennifer Tomasone, PhD

4









Canadian 24-Hour Movement Guidelines for Adults **Consensus Panel Members**











Content Expert (INT) Valerie Carson, PhD







Dissemination Expert Guy Faulkner, PhD











International Consultant Kenneth Powell, PhD









CFN Stakeholder Amanda Lorbergs, PhD

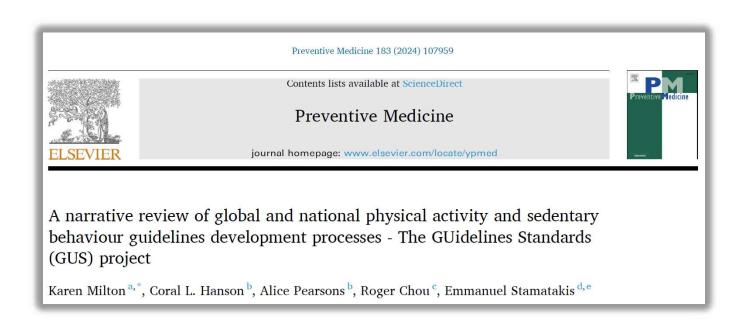












"Evaluated against the selected criteria, the strongest processes were undertaken by WHO and Canada"



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'



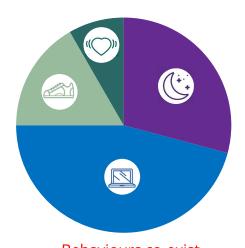
What is unique to the 24-Hour Movement Guidelines?

Past Guidelines



Focus on single behaviour Example: 30 min of daily MVPA

24-Hour Movement Guidelines

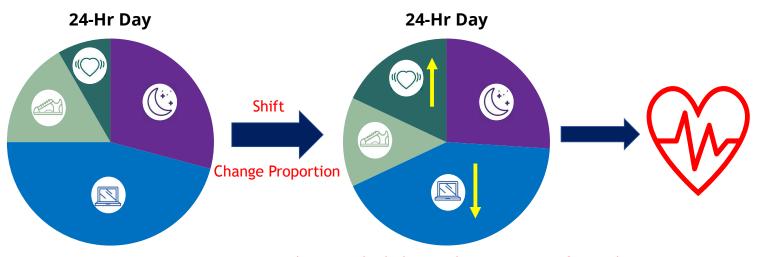


Behaviours co-exist

Composition of movement behaviours matters



Integrated movement behaviour approach

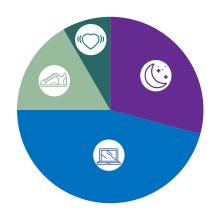


Changing the behavioral composition of your day

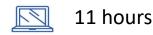
The Whole Day Matters!



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





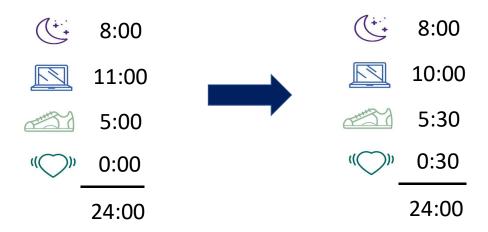


4 hours

24 hours



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





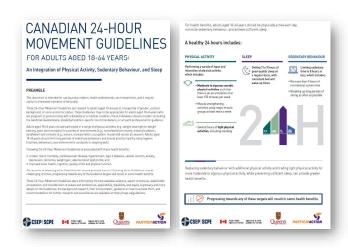


Principle Assertion

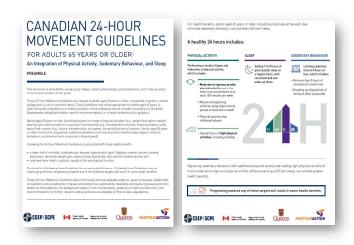
Healthy physical activity, sedentary behaviour and sleep *interact* to promote and protect the health of all adults regardless of age.



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



Adults Aged 18-64 Years



Adults Aged 65 Years or Older



Adults aged 18-64 and 65 years and older

Recommendation



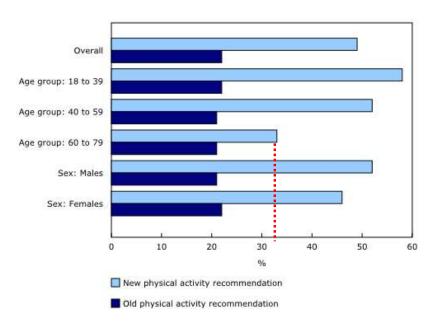
Moderate to vigorous aerobic physical (MVPA) activities such that there is an accumulation of at least 150 minutes per week.

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.

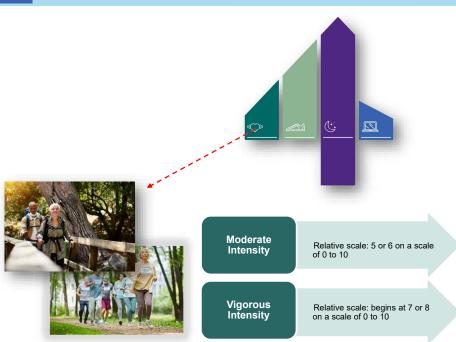


'Old' guidelines recommended 150 minutes of moderate-to-vigorous physical activity (MVPA) <u>per week in sessions of 10 minutes or more</u>.

'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)

Canadian Health Measures Survey, Cycle 6 (2018 and 2019)

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.



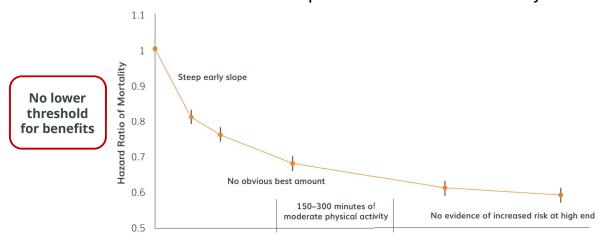
Key Observations (())

- MVPA is associated with a substantial reduction in health risk.
- 2 Any amount of MVPA counts
- 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



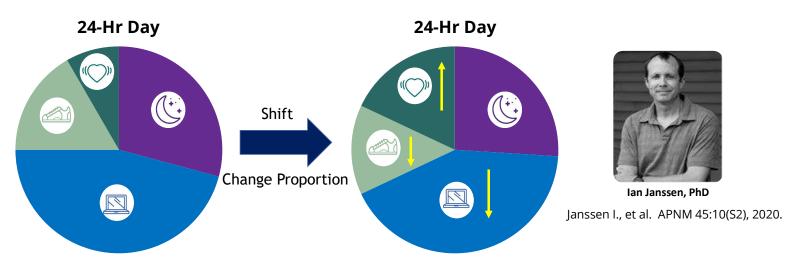
Information adapted from the Physical Activity Guidelines for Americans, 2nd Edition, available at health.gov/PA Guidelines



3

Reallocate time into MVPA

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



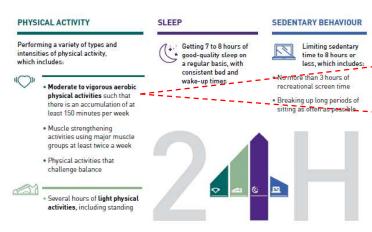








A healthy 24 hours includes:



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

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.

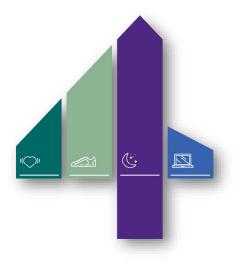


Progressing towards any of these targets will result in some health benefits.

Any amount of daily MVPA counts!

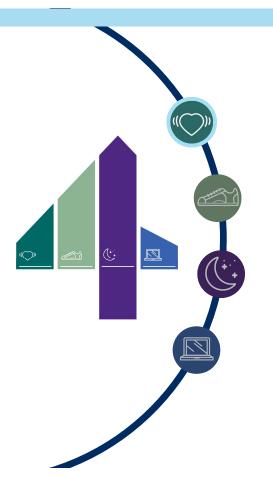


Implications for Public Health ((()))



Participation in MVPA <u>of any length</u> provides additional options for adults of any age which <u>facilitates engagement</u> 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

Recommendation

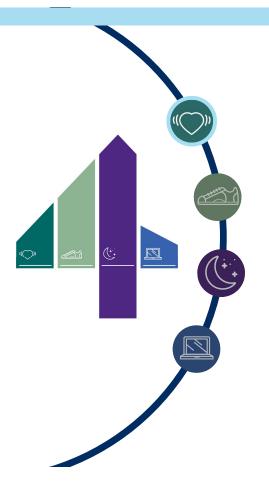


Moderate to vigorous aerobic physical (MVPA) activities such that there is an accumulation of at least 150 minutes per week.

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).



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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, LIPA

Recommendation 2001



Several hours of light intensity physical activities, including standing.

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

Light Intensity Physical Activity (LIPA)







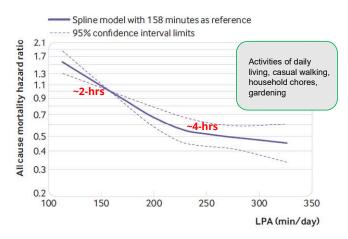
LIPA-Key Observations

- LIPA is associated with substantial reduction in health 1 risk in a dose-response manner.
- Any amount of LIPA counts 2
- Reallocating some sedentary time into any of the other movement behaviours, including LIPA, is associated with health benefits.



1

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

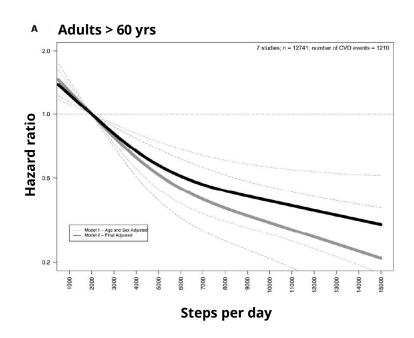


All intensities of *device measured* physical activity, including light intensity, are associated with a substantially reduced risk of death in a dose-response manner.

Ecklund U. et al. BMJ 2019



What about Steps per Day?



ORIGINAL RESEARCH ARTICLE

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

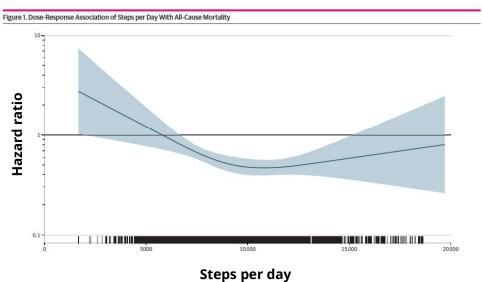
Among older adults, taking ≈6000 to 9000 steps per day was associated with 40% to 50% lower risk of cardiovascular disease, compared with taking ≈2000 steps per day.

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?



steps per day

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.

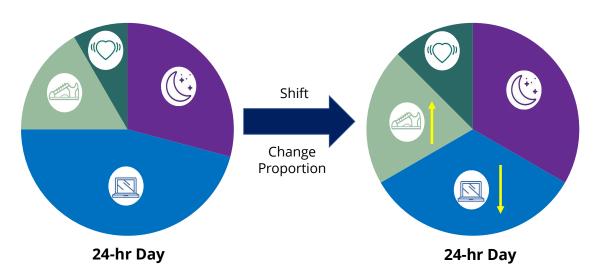
The name derives from the Japanese words "man" meaning 10,000, "po" meaning steps, and "kei" meaning system.



LIPA-Key Observations 2003



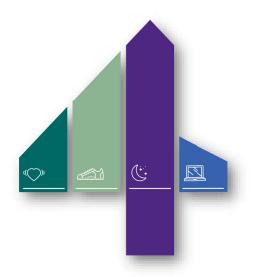
Reallocating some sedentary time into light physical activity is associated with health benefits.





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 <a>

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

No more than 3 hours of <u>recreational</u> 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)

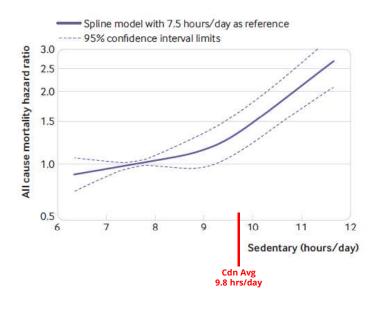


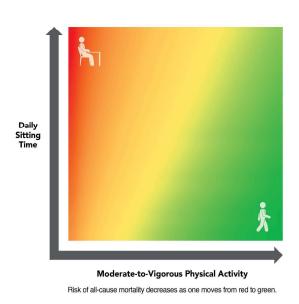
- Sitting
- Screen and non-screen
- Occupational, educational and recreational
- Canadian adults spend 9-10 hours/day engaging in sedentary behaviours





Sedentary Behaviour and Health Risk

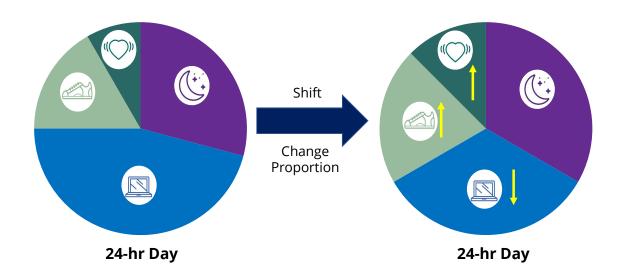




Ecklund U. et al. BMJ 2019



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





Recommendation (5)

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"

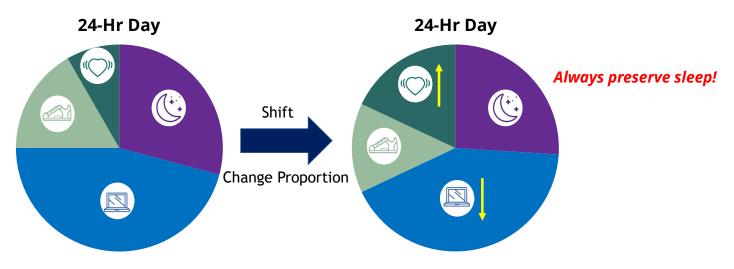
Journal of Applied Physiology, Nutrition, and Metabolism 2020, Volume 45, Number 10 (Suppl 2)





Reallocate time into MVPA

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

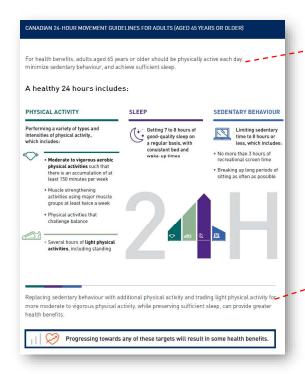












For health benefits, adults should be physically active each day, minimize sedentary behaviour, and achieve sufficient sleep.

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

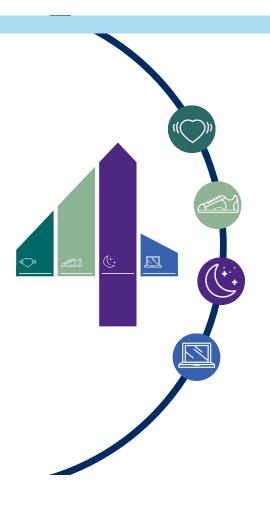


Opportunities to engage in movement behaviours in a way that reflect and respect the individuality, variability, and personal preferences of Canadians.

Movement options for Canadians
Counselling options for Practitioners



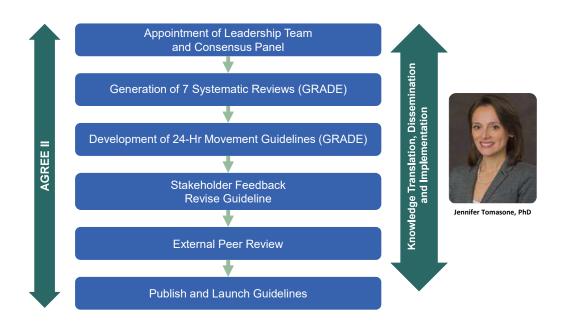
Summary....



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

nfants, 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







https://csepguidelines.ca/promo-material

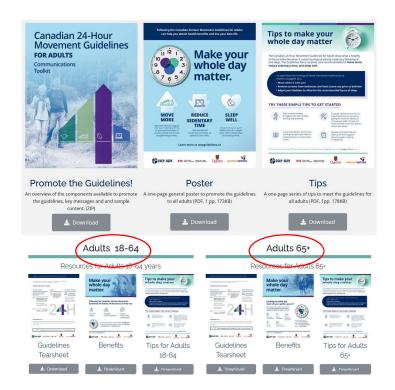
Communications Toolkit

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/





Post-Launch - Translation of Guidelines to Punjabi

Entire toolkit is available (download for free) in Punjabi



ਵਧੇਰੇ ਹਿਲਜੂਲ 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।



ਗਤੀਵਿਧੀਆਂ ਕਰੋ। ਕਈ ਘੰਟਿਆਂ ਦੀ ਹਲਕੀ







ਬੈਠਣ ਦਾ ਸਮਾਂ ਘਟਾਓ

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



ਅਨੋਰੰਜਨ ਲਈ ਸਕਰੀਨ (ਟੀਵੀ/ਮੋਬਾਈਲ/ਕੰਪਿਊਟਰ) ਦੇ ਸਾਹਮਣੇ 3 ਘੰਟੇ ਤੋਂ ਵੱਧ ਨਹੀਂ ਬੈਠਣਾ ਚਾਹੀਦਾ। ਜਿੰਨਾ ਹੋ ਸਕੇ ਬੈਠਣ ਦੇ ਲੰਬੇ ਹੋਰ ਜਾਣਕਾਰੀ ਲਈ



ਸਮੇਂ ਨੂੰ ਖੜ੍ਹੇ ਹੋ ਕੇ ਤੋੜੋ (ਬਰੇਕ ਲਓ)।





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



csepguidelines.ca ਵੈੱਬਸਾਈਟ 'ਤੇ ਜਾਓ।















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

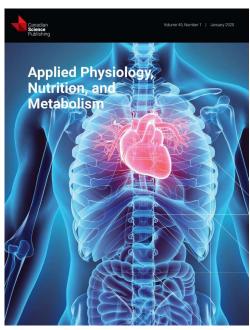
Approach for Overviews of Reviews, Michelle Kho, PhD

Knowledge Translation Manuscripts

Knowledge Translation Process, Jennifer Tomasone, PhD Dissemination/Implementation, Jennifer Tomasone, PhD 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) / Supplement 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

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Scientific Director, Cancer Epidemiology and Prevention Research
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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 (50ppl. 2) pp. yest

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. Glangregorio, lan Janssen, Travis J. Saunders, Michelle E. Kho. Veronica J. Poitras, Jennifer R. Tomasone, 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. Khodes, Amanda Ross-White, Frank Welsh, Juane Willumsen, and Mark S. Tremblay
Vol. 45 No. 10 (Suppl. 2) pp. 557-5102





To access the 24-hr movement guidelines please visit

csepguidelines.ca

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