

## 12 RECOMMENDATIONS TO SLEEP SOUNDLY AS WE GET OLDER

1. Adopt a regular sleep-wake cycle.
2. Create an optimal environment for sleep: a quiet and dark room, comfortable ambient temperature.
3. Reduce or eliminate alcohol, caffeine and nicotine intake.
4. Diminish stressful experiences and worries before bedtime as much as you can.
5. Don't eat too much or exercise near bedtime.
6. Try to stay away from night-work or night shifts if possible.
7. Be active, eat well and exercise: good health is strongly associated with good sleep.
8. Discuss sleep difficulties with your family doctor. Let him/her know if you think you have a sleep disorder that is interfering with your sleep.
9. If you take medication, discuss its potential side effects on your sleep with your pharmacist or physician.
10. If you have night sweats or hot flashes that interfere with your sleep, discuss it with your physician.
11. If you experience jet lag, allow yourself some time to adjust to the new time zone.
12. Don't be too stressed, age-related sleep changes are normal unless they are drastic and have a negative impact on your life.

### ADDITIONAL PATIENT BROCHURES BY SLEEP EXPERTS

- Dental Appliances
- Sleep in Aging
- Sleep Bruxism
- Drowsy Driving
- Insomnia
- Human Circadian Rhythms
- Strategies for Night Shift Workers
- Narcolepsy and Cataplexy
- Dreams and Nightmares
- Obstructive Sleep Apnea
- Patient Guide to Sleep Studies
- Positional Therapy for Obstructive Sleep Apnea
- Children
- Restless Legs Syndrome
- Sleep and Post- Traumatic Stress Disorder
- Normal Sleep

Please note that the content of these brochures are copyrighted by Canadian Sleep Society, unless otherwise indicated. Rev 15/05/2020

### “HEALTHY SLEEP FOR HEALTHY CANADIANS”

The Canadian Sleep Society is a national organization committed to improving sleep for all Canadians through: support for research, promotion of high quality clinical care, education of professionals and the public, and advocacy for sleep and sleep disorders medicine.

For more information visit [www.canadiansleepsociety.com](http://www.canadiansleepsociety.com) or email [info@css-scs.ca](mailto:info@css-scs.ca)

Canadian Sleep Society



Société Canadienne du Sommeil

- **Restless legs syndrome:** overwhelming urge to move the legs usually caused by uncomfortable or unpleasant sensations in the legs
- **REM sleep behaviour disorder:** Presence of abnormal muscle tone during REM sleep resulting in apparent acting out of dream content

The prevalence of these sleep disorders starts to increase significantly in middle age. The National Sleep Foundation estimates that 35% or more of people aged 65 years and older experience periodic limb movements in sleep. Other experts have estimated that 4% of men and 2% of women over the age of 50 have sleep apnea in addition to experiencing excessive daytime sleepiness.

REM sleep behaviour disorder is usually diagnosed after age 50 and restless legs syndrome symptoms often worsen with aging. Older people who suspect that they have a specific sleep disorder should consult their physician. For more information on sleep disorders, consult other brochures from the Canadian Sleep Society.

### OTHER FACTORS THAT MAY CONTRIBUTE TO AGE-RELATED SLEEP DIFFICULTIES IN AGING

Many variables have been proposed as potentially significant contributors to an increased vulnerability to disturbances in the aging sleep-wake system. These include stimulants consumption, menopause, nocturia and stress.

#### The effects of caffeine on sleep in older adults

Caffeine is the most widely used central nervous system stimulant in North America and older people regularly consume it. Caffeine mimics some of the effects of aging on sleep. It decreases deep sleep and increases wakefulness during the night. Not surprisingly, it is quite possible that caffeine leads to more important sleep disruption in older people than in younger adults. It should be consumed with moderation.

#### Menopause and sleep

About half of menopausal women complain about their sleep. Compared to pre-menopausal women, menopausal women are twice as inclined to use

pill, as they sleep less and suffer more often from insomnia symptoms. However, not every woman will have sleep problems throughout menopause. Very few studies have evaluated the effect of menopausal status on objective sleep parameters in the laboratory and the ones that did show inconsistent results.

Evidently, more studies are needed to define and understand the factors associated with sleep quality in menopausal women. The effects of vasomotor symptoms, such as night sweats and hot flashes, on sleep parameters remain to be determined. However, these symptoms seem to play a role in the subjective complaints of women. Finally, the effects of hormonal replacement therapy on polysomnographic sleep parameters require clarification.



#### Nocturia

The need to urinate multiple times during the night (nocturia) is reported by 20 to 50% of older adults. Nocturia is associated with disruption of sleep.

#### The effects of stress on sleep in older adults

Several other factors, such as stress, have been proposed to significantly increase the vulnerability of the sleep-wake cycle to the effects of aging. For example, a similar stress experience may have a greater negative impact on sleep in older people than in younger adults.

#### Responsibilities and work load

The middle-aged population may be particularly at risk of suffering from disturbances of the sleep-wake cycle due to their multiple social, familial and professional responsibilities.

These responsibilities not only limit the strategies people can adopt to alleviate their sleep and alertness problems (e.g., fewer opportunities to nap, to change sleep-wake schedules, etc.), but they can also increase the consequences of such problems (lower productivity level, higher risk for accidents, mood changes, etc.).



Société Canadienne du Sommeil



Canadian Sleep Society

# Sleep in Aging

SLEEP CHANGES DURING AGING

CHALLENGES FOR THE SLEEP/WAKE CYCLE

SLEEP DISORDERS IN OLDER PEOPLE

12 RECOMMENDATIONS TO SLEEP SOUNDLY

Maude Bouchard, Ph.D.  
Caroline Drapeau, Ph.D.  
Julie Carrier, Ph.D.  
Department of Psychology,  
Université de Montréal,  
Montréal, QC, CANADA

[www.canadiansleepsociety.com](http://www.canadiansleepsociety.com)

Atlantic Sleep Centre  
Saint John Regional Hospital  
506-648-6178







## SLEEP CHANGES DURING AGING

Important modifications of the sleep-wake cycle occur despite “optimal aging”. So, even if you do not suffer from specific sleep disorders, medical or psychological problems, your sleep will change as you age. These modifications are normal and may or may not have an impact on your daily living.

For example, compared to younger adults, older people show:

1. **Earlier bedtimes and earlier wake-up times**
2. **More sleep during the day (naps)**
3. **Less sleep during the night**
4. **More awakenings during their sleep, especially in the second half of the night**
5. **Lighter sleep; less time spent in deep sleep and more time spent in lighter sleep**



Deep sleep decreases abruptly between 20 and 40 years of age whereas the amount of wakefulness during the sleep will increase more gradually starting in middle age (around 40 years old).

1

## AGE-RELATED SLEEP CHANGES AND ITS CONSEQUENCES FOR THE QUALITY OF LIFE OF OLDER PEOPLE

For many healthy people, age-related sleep modifications will not induce sleep or vigilance problems and therefore may go unnoticed. In some people, aging is associated with a reduced need for sleep. In other words, less sleep would be required as the person gets older.

However, it is also possible that age-related changes in the sleep-wake cycle have negative effects on the daily lives of older people. A better understanding of the effects of age-related changes in sleep is important for the planning, implementation and evaluation of treatment.



## CHALLENGES FOR THE SLEEP/WAKE CYCLE

Starting in middle age (around 40 years old), older adults become more sensitive to challenges imposed upon their sleep-wake cycle. For example, older people often adapt more slowly to jetlag. Adjusting to shift work can also be more difficult as one gets older.

Conjointly, older people may have more difficulties or take more time to recover from sleep deprivation. Thus, the sleep-wake cycle often becomes more fragile with aging. It is then important to take extra care of it!

2

## CHANGES IN THE SIGNAL FROM THE BIOLOGICAL CLOCK

The timing of the sleep-wake cycle is regulated by the biological clock. Aging is accompanied by a weakening and an earlier timing of the signal from the biological clock which may affect the sleep schedule. Hence, compared to younger adults, older people often show earlier bed time and wake-up times.

These changes in the signal from the biological clock often translate into early morning awakenings in the older population.



## NAPPING

As a rule, sleeping during the day may affect nighttime sleep. However, napping does not necessarily have negative effects in older people unless they suffer from insomnia. However, it is important to note that always feeling sleepy every day might signal an underlying problem.

Some health situations or sleep disorders can cause extreme sleepiness during the day and it is preferable to speak to a doctor about it.

3

## PHYSICAL AND MENTAL HEALTH STATUS ARE CLOSELY RELATED TO SLEEP PROBLEMS IN OLDER PEOPLE

The interrelationships between health and sleep are of great importance for the older people. In fact, older adults with newly identified illnesses are more likely to have a complaint of chronic insomnia within the next few years than are older adults who do not develop such medical illnesses.

Cardiovascular diseases, pulmonary diseases, chronic pain conditions, and dementia are all associated with poor nocturnal sleep quality and/or daytime sleepiness. Elderly individuals frequently take medication. Advanced age and frailty may increase the susceptibility to the adverse effects of medication. Finally, psychiatric disorders also include acute symptoms that might contribute to sleep difficulties. For example, the association between major depression and insomnia is now well established.

Aging can come with other important life changes like retirement, loss of a loved one or reduced social contact. These major life changes can have an impact on health, and therefore on sleep.

“These major life changes can have an impact on health, and therefore on sleep.”



## SLEEP DISORDERS IN OLDER PEOPLE

It is now well established that older adults have a higher proportion of sleep disorders than younger people.

### Specific sleep disorders associated with aging:

- **Sleep apnea syndrome:** repeated pauses in breathing during sleep accompanied by decreases in oxygen saturation
- **Periodic limb movements:** repetitive limb movements during sleep that may induce microarousals

4