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Top
Longevity
Actions for
Every *Adult*
Age Cohort

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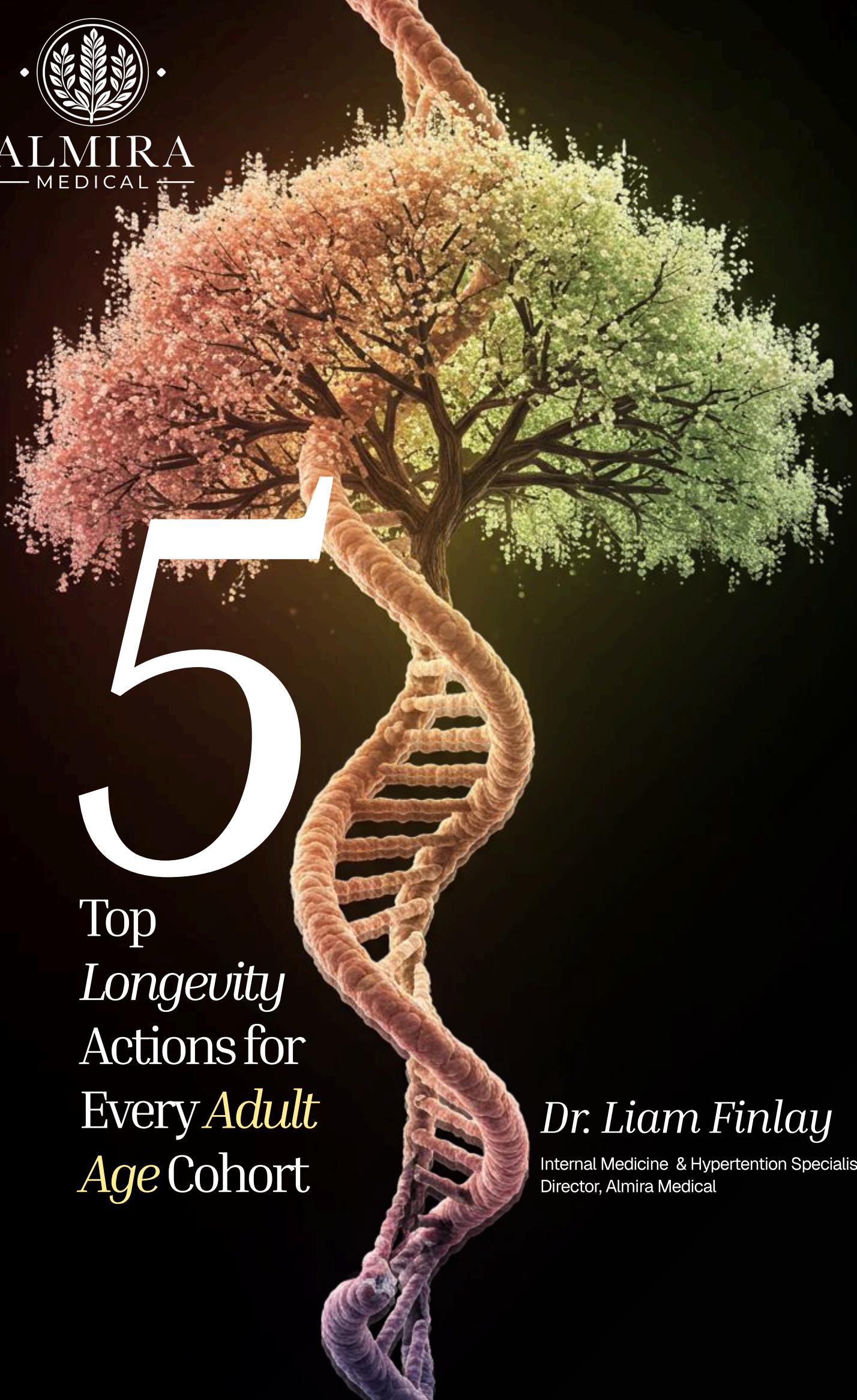


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Introduction:

One's health and potential longevity is in many respects comparable to a retirement savings account. For those who are disciplined in saving from an early age, stick to simple yet tested methods such as low-cost index funds, and minimize excessive expenditures, compounding results are likely to yield a strong financial position later in life. Conversely, for those who wait until the age of 60 to start saving, are prone to over-spending and impulse purchasing, and invest in highrisk equities that they do not fully understand, disaster awaits. Despite the best marketing efforts of the supplement industry, living longer and healthier is not about how many vitamins and other compounds you can take: this capitalizes on our human nature to seek shortcuts instead of making hard changes.

To truly maximize one's longevity, one must prioritize early preventative actions before it is too late. The good news: the strongest longevity levers we have at our disposal are simple and either low or no-cost. The bad news: the actions that truly move the longevity needle the most involve daily discipline in a few key domains: optimizing our exercise, nutrition, and sleep while avoiding many of the excesses prevalent in our modern society. The following guide attempts to summarize the highest-yield actions that an average individual can take to best ensure their future longevity. It is divided into 5 age groups: 18 – 34, 35 – 49, 50 – 64, 65 – 79, and over 80. The actions discussed are Dr. Finlay's opinions and are generalized at a population level: consult with your regular health provider for individualized medical advice.

Age 18–34 *Laying Health Foundations*

Most adults in their 20's and early 30's have high functional status and minimal health concerns. For this reason, it is easy for health to take a back-seat to other major considerations such as establishing a career, finding a life partner, starting a family, and simply enjoying the independence of youth. However, just like compound interest, major future gains can be made for those who start to prioritize their health from an early age. For patients of mine in this age group, I recommend the following health actions:

- 1. Establish an Exercise Routine:** For those looking for a 'longevity drug', look no further than regular exercise. The significant benefits of exercising regularly span the domains of cardiovascular health, metabolic health, mental health, sleep regulation, falls prevention, and more. In an ideal world, individuals at any age would incorporate a mix of endurance training, high-intensity training, resistance training, and stability work. For those at this young age with limited time to exercise, considering that falls and frailty are hopefully far-off concerns, endurance-type training likely provides the largest relative longevity benefit. I encourage individuals to incorporate exercise that they enjoy and can build into a weekly routine. To increase motivation and accountability, consider signing up for a sporting challenge such as a local running or bike race.
- 2. Learn how to Cook Healthy Meals:** For busy students and young professionals, it is all-too-easy to rely on quick, grab-and-go meals, take-out, and restaurant meals. This can easily lead to relative over-consumption of sugar and carbohydrates, sodium, saturated fat, ultra-processed foods, and excess total calories. By learning to prepare health meals for oneself, comprised of whole foods of fruits, colourful vegetables, and lean protein, one can lay the foundations for long-term nutritional success and save money in the process.

- 3. Eliminate Toxins & DNA Damage:** Smoking remains the leading avoidable risk factor for cancer, chronic lung diseases, and a host of other serious chronic illnesses.¹ For those of you who are smoking regularly: now is the time to stop to minimize long-term damage. What about alcohol? Alcohol is also a recognized carcinogen, is associated with dementia, remains a major cause of liver disease, and is relatively calorically dense (7 calories per gram).^{2,3} For those who drink alcohol, try to limit consumption to 1-2 drinks and only at social or special occasions. Lastly, minimize unprotected sun exposure to prevent against future skin cancer.
- 4. Prioritize Your Sleep:** Getting high-quality, regular sleep is foundational to success in other lifestyle domains. When we are sleep deprived, we eat on average 385 calories more per day, we have less motivation to exercise and eat healthy, our cortisol levels become elevated, our emotional health suffers, amongst other negative health effects.^{4,5} Start adopting optimal sleep hygiene habits, including maintaining a regular bedtime and wake time, avoiding late-night screen time, and getting plenty of exercise and early-morning daylight.
- 5. Screen for Early-Onset Health Concerns:** In many individuals, risk factors for future disease can be identified from a relatively young age. To prevent future cardiovascular disease, ensure that you get your blood pressure, cholesterol levels, and glycemic (blood sugar) markers checked and that they are under control. For even mildly abnormal levels, work with your physician to implement aggressive lifestyle changes, and medication, when necessary, to minimize risk of future disease. In young women, be aware that screening for cervical cancer in Canada typically starts at age 25 with regular pap smears and that breast cancer screening starts between ages 40-50 for average-risk individuals.

Age 35–49 Carving Out Time for Your Health

Chances are, if you're between the ages of 35 and 49, you lead a busy life with multiple competing demands for your time: career, family, friends, and generally just staying afloat. It can feel easy to slowly gain weight, with seemingly minimal time available for exercise and healthy eating. At such a time, it is essential to carve out time to make healthy practices a baseline part of your routine. Doing so may require removing non-essential activities such as watching television or spending time on social media. Your future self will thank you. Here are 5 top longevity actions for someone aged 35 – 49:

1. Make Regular Exercise Non-Negotiable: Considering the major benefits of regular exercise on longevity (Figure 1), make working out a mandatory activity on par with brushing your teeth. Unless it's planned, exercise rarely takes place spontaneously, and other activities can take precedent. Consider making a weekly exercise plan, incorporating a mix of cardiovascular and resistance training, to improve your VO2 max and lean muscle mass.

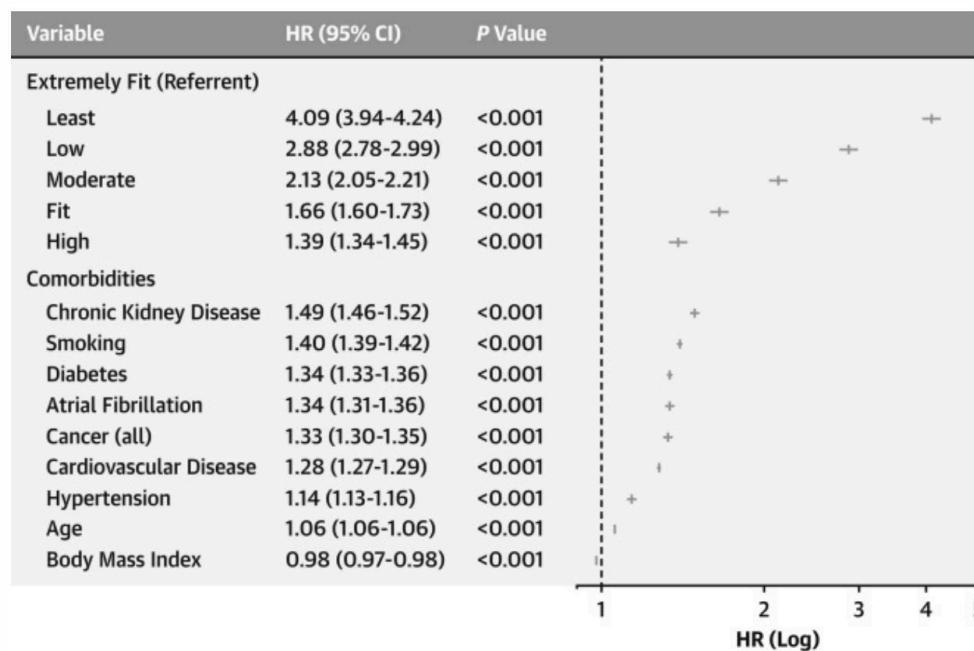


Figure 1. Mortality risk depending on physical fitness as assessed by VO2 Max, compared with chronic comorbidities. Note that compared to those who are extremely fit, those who are in the 'Least Fit' category have more than 4x elevated risk of mortality. Adapted from Kokkinos et al.⁶ 5

2. **Be Proactive with Nutrition:** Building upon the foundations laid in the 20 – 34 age group, ensure that you and your family have a weekly meal plan that incorporates plenty of fruits and vegetables, lean protein, and whole foods. Minimize exposure to ultra processed foods, foods that are high in saturated fat, sugar, and sodium, and restrict consumption of carbohydrates, especially when they are not being used as immediate fuel for exercise.
3. **Eliminate Remaining Indiscretions:** As discussed above, smoking and regular alcohol consumption are major toxins with causal links to cancer, organ dysfunction, and chronic disease.¹ Minimize alcohol consumption to 1-2 beverages on social / special occasions only and stop smoking altogether.
4. **Track Cardiovascular & Metabolic Risk Factors:** To a large degree, cardiovascular risk and metabolic dysfunction are addressable through lifestyle interventions. If you have not already, start tracking and managing your blood pressure, cholesterol levels, glycemic numbers, along with your weight and body fat percentage. Failure to do so can result in progressive atherosclerosis (clogging of the arteries), insulin resistance (the hallmark of Type 2 Diabetes), and progressive organ damage.
5. **Prioritize Your Sleep:** See action #4 in above section.

Age 50–64 Aggressive Risk Reduction

For those who are at elevated risk, chronic and serious illnesses such as cardiovascular disease, cancer, and organ dysfunction often start to manifest in one's 50's. Individuals during this phase of life should build upon prior-established health habits and aggressively address any remaining risk factors for chronic diseases. Here are 5 top longevity tips for an individual aged 50 – 64:

1. Build & Maintain Cardiovascular Fitness & Muscle Mass: Understanding that cardiovascular fitness as measured by VO2 max invariably declines with age (Figure 2), we want as high a starting point as possible. Want to be able to walk an 18-hole golf course or a hilly European town when you're in your 80's? Think again if you're currently in your 50's and unable to run without stopping for a reasonable period. In other words, we want to build as a big a base of exercise capacity as we can as early as we can to best assure future performance of tasks that may seem trivial earlier in life. Similarly, if you haven't already, now is the time to prioritize building and maintaining lean muscle mass. Lean muscle mass is protective from falls and frailty, and it becomes increasingly challenging to build muscle past 60 years of age.

2. Prioritize Sleep: In addition to the multitude of negative consequences of sleep deprivation outlined previously, chronically impaired deep sleep in one's 50s – 60s is also associated with development of Alzheimer's dementia.⁷ During deep sleep, which largely occurs during the first half of the night (Figure 3), cellular waste products in the brain are "swept away", and consequently buildup of these inflammatory particles is more likely to occur during times of sleep deprivation.

3. Continue to Optimize Nutrition: Hopefully by this point you have established strong dietary practices, consuming mostly of whole foods such as fruits and vegetables, lean protein such as chicken and fish, nuts and seeds, while minimizing sugar and simple carbohydrates, saturated fat, sodium, and ultra-processed ingredients. Continue to reinforce these nutritional habits as well as maintain a lean body fat composition to reduce likelihood of metabolic diseases such as diabetes and obesity.

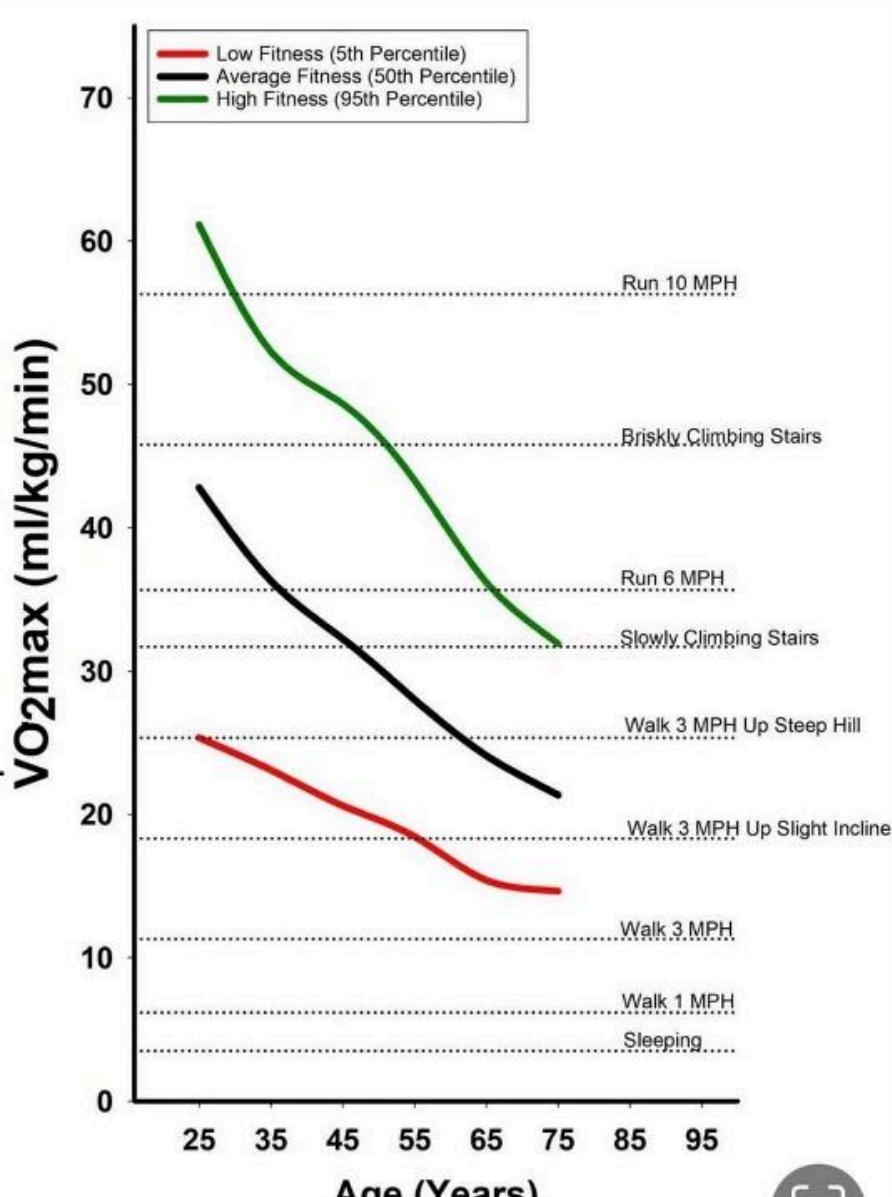


Figure 2. High, average, and low VO₂ Max scores based on age group. Note the gradual decline in VO₂ Max with age with significantly limited functional capacity in later life for those who have low fitness levels earlier in life.



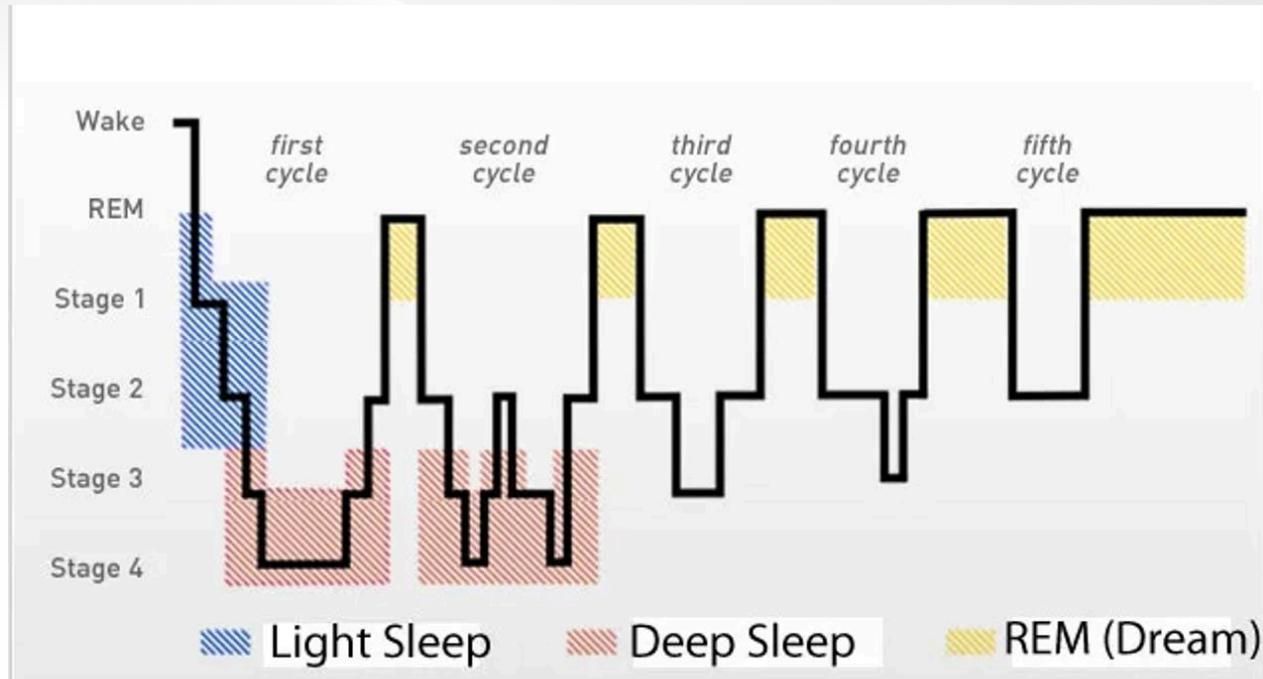


Figure 3. Typical stages of sleep with early night characterized by periods of deep sleep and later night characterized by more Rapid Eye Movement (REM) sleep.

4. Aggressively Treat Cardiovascular Risk Factors: Cardiovascular disease, comprised of serious issues such as heart attacks, strokes, arterial disease, and more, collectively represents a major cause of death at a population level and typically manifests in those over 50 years of age. The precursors to cardiovascular disease, however, can often be identified well in advance of major events. To a large degree, cardiovascular disease is preventable through aggressive treatment of these common risk factors, including high blood pressure, cholesterol, diabetes, obesity, sedentary lifestyle, and regular smoking. To best protect your longevity from cardiovascular disease, regularly monitor for the development of any cardiovascular risk factors and have a low threshold to take targeted medication to treat risk factors if lifestyle measures prove insufficient.

5. Be a Cancer Watchdog: Similar to cardiovascular disease, the incidence of cancer steadily increases for individuals in their 50's and 60's. Be sure to undergo traditional cancer screening protocols. As discussed above, women start traditional cancer screening earlier in life than men, with pap smears typically starting at age 25 and mammograms starting at 40-50, depending on risk and your healthcare system. For those without a strong family history of colorectal cancer, screening starts to take place at age 50 with a colonoscopy every 5 years if no high-risk findings are seen.⁸ Concerned individuals with means may choose to undergo additional screening measures such as whole-body MRI scans and/or cell-free DNA testing, though whole-body MRI is not recommended largely on the basis of high false-positive rates and cell-free DNA testing is not yet validated for use at a large-scale level.⁹ Regardless of your risk and test results, be on high alert for any 'red flag' symptoms such as unintentional weight loss and loss of appetite which may signify underlying malignancy.

Age 65-79 Your New 9-5

Upon reaching retirement age, you may be faced with the common question of what to do with your extra time. My suggestion? Remain as cognitively and physically engaged as possible for as long as possible in order to maintain executive and physical function.

- 1. Challenge Your Mind & Body:** To protect against cognitive impairment, challenge yourself with learning new skills such as learning to speak a new language or learning to play a musical instrument. Tackle challenging physical tasks that maintain your cardiovascular fitness, lean muscle mass, and stability. Failure to do so can easily lead to a progressive decline in function that may never be regained.
- 2. Maintain Nutrition Habits & Optimize Bone Health:** In addition to the lifelong nutritional habits discussed in the above section (action item #3), ensure adequate consumption of calcium and Vitamin D to reduce likelihood of disorders of bone thinning: osteopenia and osteoporosis. In many instances, particularly in the case of thin, elderly women, medication to maintain bone density may be necessary. Failure to maintain bone health can result in osteoporotic fractures, which are often severely disabling to physical function and can result in chronic pain and postural change.
- 3. Continue to Prioritize Sleep:** Regardless of one's age, high quality sleep is essential to cognitive performance, emotional stability, recovery and metabolic control. As discussed above, achieving adequate deep sleep is especially important in one's 50s and 60s to protect against dementia development.

4. Continue to Be a Cancer Watchdog & Aggressively Treat Cardiovascular

Risk Factors: See actions #4 & #5 in above section.

5. Take a Proactive Approach to Aging Body Parts: Similar to an old vehicle,

with time parts may warrant replacing or require some additional assistance.

For those with severe arthritis, consider joint replacement sooner rather

than later if indicated: recovery from surgery is unlikely to be any easier if

you wait till an older age. Get your vision and hearing checked if you have

not already done so to screen for macular degeneration, glaucoma, and

hearing impairment. Chronic hearing and visual impairment can limit

engagement in social interaction, functionality, and can serve as

independent risk factors for progressive cognitive impairment.¹⁰

Age 80+ Maintaining Independence

For most individuals in their 80's and 90's, quality of life is directly proportional to independence in performing daily activities. Maintaining independence should therefore be a top priority in our elderly years. Here are 5 top strategies to retain independence and protect against physical and cognitive frailty:

- 1. Do It Yourself:** Whenever safe to do so, continue to manage your own transportation, finances, errands, groceries, and household tasks. Challenge yourself to use technology daily, solve problems for yourself, and remain cognitively stimulated. The risk in delegating such tasks and activities to others is that a slice of independence and sense of self-competence is lost and rarely recovered.
- 2. Maintain Relationships & Stay Engaged:** The dangers of social isolation are real: a recent large meta-analysis demonstrated that social isolation in adults is associated with a 32% relative increase in all-cause mortality.¹¹ Elderly individuals are particularly at risk and should prioritize maintaining close ties with friends and families through technology and travel as necessary. To further maintain social engagement, consider enrolling in group activities, senior fitness programs, and / or volunteering.
- 3. Get Serious about Falls Prevention:** Amongst elderly individuals, falls represent a major cause of loss of function, injury, hospitalization, and even death. The 12-month mortality (risk of death) in someone who has surgery for a hip fracture between the ages of 81-90 is 28%.¹² To avoid falls and fractures, consider engaging in activities which promote stability such as Tai-Chi, racquet sports, falls prevention programs, and resistance training under supervision. Professionals such as occupational therapists and physical therapists can further reduce risk of falls with personalized

guidance and physical aids both for your movement and your home environment.

4. Prevent Infections: In an elderly individual, infections such as pneumonia, influenza, and RSV can severely reduce functionality, lead to hospitalization, cause delirium, and even death. Essential vaccinations for elderly individuals include seasonal influenza, COVID-19, RSV, pneumococcal, and shingles vaccines. Shingles vaccination was recently shown to offer additional benefit of reduced likelihood of dementia.¹³

5. Meet Dietary Needs: To stave off sarcopenia (age-related low muscle mass), ensure adequate consumption of lean protein and adequate caloric requirements. Address common limitations to adequate nutrition, such as poor dentition or loose-fitting dentures, food preparation difficulties, and swallowing difficulties. Have a low threshold for involvement of a professionals including a dietitian or a speech and language pathologist (SLP) when indicated.

Summary:

Just like saving for retirement, longevity is not something that can be ignored until the age of 65, but rather requires careful planning and represents a series of actions with compounding consequences over time. The 3 core pillars for ensuring longevity at any age involve regular physical exercise, optimal nutrition, and quality sleep. In addition, younger individuals should focus on avoiding toxins and excesses such as smoking and alcohol, while elderly individuals should focus on maintaining independence, preventing falls, and staying socially and cognitively engaged. Longevity requires self-discipline and a proactive approach to one's health and is not something that can be obtained through quick "health hacks". Consider working with a dedicated physician who is invested in your best interests to best adapt these recommendations to your situation and provide long-term health accountability.

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About Dr. Finlay:



Dr. Finlay is a Fellow of the Royal College of Physicians and Surgeons of Canada (FRCP) in Internal Medicine, and a certified Clinical Hypertension Specialist (CHS). Born and raised in Vancouver, BC, Dr. Finlay pursued a direct path to medicine, beginning with pre-clinical training at the University of St. Andrews and clinical training at the University of Manchester.

After medical school, he interned in London, England, before returning to Canada for his Internal Medicine residency at McMaster University. Since completing his training, Dr. Finlay has worked as an internal medicine specialist at Mackenzie Health, where he diagnoses and manages a diverse range of adult conditions, such as cardiovascular disease, organ failure, autoimmune disease, infections, cancer, and dementia. His hospital experience has deepened his understanding of the irreversible consequences of neglecting preventable risk factors, particularly untreated hypertension. This insight inspired him in 2023 to establish the Toronto Hypertension Clinic, a publicly funded clinic dedicated to treating all forms of hypertension and other significant cardiovascular risk factors such as high cholesterol, diabetes mellitus, and kidney disease. Dr. Finlay is passionate about taking a proactive, non-pharmacological approach to enhance longevity and healthspan, emphasizing optimal nutrition, exercise, and lifestyle modifications that are often overlooked with traditional medicine. He is also interested in leveraging technology to inform these lifestyle changes and provide metrics regarded projected longevity, healthspan, and disease development. These interests culminated in the founding of Almira Medical, a private clinic focused on delivering exceptional preventive care. Outside of his clinical work, Dr. Finlay is an avid sports enthusiast with a strong background in competitive swimming, water polo, and marathon running. He completed the Boston Marathon in Spring 2025 and can often be found cheering on the Toronto Raptors.