

Information sources and further reading

World Physiotherapy would like to express its sincere thanks to the following for their input and assistance in the production of the materials for World PT Day 2025: International Association of Physiotherapists working with Older People (IPTOP) (www.world.physio/subgroups/older-people); Melanie Farlie (www.linkedin.com/in/dr-melanie-farlie-74682762); Cathie Sherrington (www.linkedin.com/in/cathie-sherrington-752b7a83); and Dawn Skelton ([@LaterLifeTrain](https://www.linkedin.com/in/dawn-a-skelton) and www.linkedin.com/in/dawn-a-skelton).

Information sheet 1: Healthy ageing

In 2019 1 billion were aged 60+ years

By 2030 1.4 billion will be aged 60+ years

By 2050 2.1 billion will be aged 60+ years

The pace of population ageing is much faster than at any time in history. The number of persons aged 80 years or older is expected to triple between 2020 and 2050 to reach 426 million

World Health Organization: [Ageing and health](#). October 2024

What is healthy ageing?

Healthy ageing means staying active, maintaining relationships, and continuing to do the things you value as you grow older.

Supportive environments that promote physical and mental wellbeing are essential for healthy ageing.

World Health Organization. [Healthy ageing and functional ability](#). October 2020

What promotes healthy ageing?

Having a healthy lifestyle throughout your life will help you reduce the risk of many chronic diseases and improve your physical and mental wellbeing, such as:

- **staying as active as your circumstances allow**
- **challenging your balance regularly**
- **staying socially connected**
- **keeping your joints and muscles moving**
- **eating as well as you can**

World Health Organization: [Ageing and health](#). October 2024

The life course approach

Ageing is often linked to health conditions like dementia and frailty, and the risk of developing them is shaped by experiences throughout life. Preventing age-related health conditions involves addressing risk factors at different life stages, such as:

Early life

Regular physical activity during childhood and adolescence is crucial for long-term health. It helps build strong bones and muscles, and improves cardiovascular health, reducing the risk of chronic diseases such as obesity, diabetes, and osteoporosis later in life.

Young adulthood

Engaging in sports and regular exercise during young adulthood has been linked to better physical health later in life. This includes lower risks of obesity, diabetes, and cardiovascular diseases. It can also protect cognitive health later.

Midlife

Staying physically active during midlife is essential for both immediate and long-term health benefits. It helps prevent chronic diseases, supports mental health, maintains bone density, improves overall quality of life, and can reduce dementia risk.

[The life course approach: setting the stage for healthy ageing](#). The Lancet Healthy Longevity, The Lancet Healthy Longevity, Volume 6, Issue 1, 100686

Michel J, Bernier A, Thompson LA. [Physical Activity in Children](#). JAMA Pediatr. 2022;176(6):622. doi:10.1001/jamapediatrics.2022.0477

Pate RR, Davis MG, Robinson TN, Stone EJ, McKenzie TL, Young JC; American Heart Association Council on Nutrition, Physical Activity, and Metabolism (Physical Activity Committee); Council on Cardiovascular Disease in the Young; Council on Cardiovascular Nursing. [Promoting physical activity in children and youth: a leadership role for schools: a scientific statement from the American Heart Association Council on Nutrition, Physical Activity, and Metabolism \(Physical Activity Committee\) in collaboration with the Councils on Cardiovascular Disease in the Young and Cardiovascular Nursing](#). Circulation. 2006 Sep 12;114(11):1214-24. doi: 10.1161/CIRCULATIONAHA.106.177052. Epub 2006 Aug 14. PMID: 16908770.

Janssen, I., LeBlanc, A.G. [Systematic review of the health benefits of physical activity and fitness in school-aged children and youth](#). Int J Behav Nutr Phys Act 7, 40 (2010). <https://doi.org/10.1186/1479-5868-7-40>

Aira, T., Vasankari, T., Heinonen, O.J. et al. [Physical activity from adolescence to young adulthood: patterns of change, and their associations with activity domains and sedentary time](#). Int J Behav Nutr Phys Act 18, 85 (2021). <https://doi.org/10.1186/s12966-021-01130-x>

Corder K, Winpenny E, Love R, Brown HE, White M, Sluijs EV. [Change in physical activity from adolescence to early adulthood: a systematic review and meta-analysis of longitudinal cohort studies](#). Br J Sports Med. 2019 Apr;53(8):496-503. doi: 10.1136/bjsports-2016-097330. Epub 2017 Jul 24. PMID: 28739834; PMCID: PMC6250429

Kongsvold, A., Skarpsno, E.S., Flaaten, M. et al. [Associations of sport and exercise participation in adolescence with body composition and device-measured physical activity in adulthood: longitudinal data from the Norwegian HUNT study](#). Int J Behav Nutr Phys Act 22, 29 (2025). <https://doi.org/10.1186/s12966-025-01726-7>

Zhang, X., Niu, X., Wang, M. et al. [Association between physical activity trajectories and successful aging in middle-aged and elderly Chinese individuals: a longitudinal study](#). BMC Public Health 25, 1812 (2025). <https://doi.org/10.1186/s12889-025-23021-7>

David X Marquez, Susan Aguiñaga, Priscilla M Vásquez, David E Conroy, Kirk I Erickson, Charles Hillman, Chelsea M Stillman, Rachel M Ballard, Bonny Bloodgood Sheppard, Steven J Petruzzello, Abby C King, Kenneth E Powell, [A systematic review of physical activity and quality of life and well-being](#), Translational Behavioral Medicine, Volume 10, Issue 5, October 2020, Pages 1098–1109, <https://doi.org/10.1093/tbm/ibz198>

Lee M, Lee H, Song K, Lee YM. [Benefits of sustained physical activity from middle age to early old age on quality of life in early old age](#). Sci Rep. 2022 Sep 30;12(1):16455. doi: 10.1038/s41598-022-20431-0. PMID: 36180509; PMCID: PMC9524733

How can physiotherapy help?

Physiotherapists can advise on how to adopt a healthy lifestyle throughout your life, and offer treatments and exercise plans to meet your changing needs. They can:

- give you tailored exercises to maximise your physical function, including improving your balance and muscle strength, and help build stronger bones
- help you maintain the ability to get up off the ground
- help with your recovery, and show you how to get moving again after surgery, injury or illness
- manage pain to optimise your mobility
- help you recover from stroke or heart attack
- manage long-term conditions such as arthritis, diabetes, and Parkinson's
- reduce breathlessness and teach the best way for you to move

Chartered Society of Physiotherapy: [Keeping active - Advice on how to stay healthy and active from 50 to 60+](#)

Information sheet 2: Activity for healthy ageing

Doing some physical activity is better than none. Start by doing small amounts, and gradually increase over time.

Older adults should be as physically active as they can. Adjust the effort according to your fitness and range of motion.

Sit less! Sitting for long periods of time is bad for your health, break up and reduce your sitting time by moving around regularly.

Physical activity reduces the risk of:

- cardiovascular disease
- high blood pressure
- some cancers
- type 2 diabetes
- falls and related injuries
- poor bone health (osteoporosis)
- cognitive decline (eg memory loss, dementia)

It will also improve your overall health, including your mental health, as well as help you move and sleep better.

How much physical activity and exercise should you do?

150-300 minutes of moderate-intensity aerobic physical activity throughout the week

OR

75-150 minutes of vigorous-intensity aerobic physical activity throughout the week

PLUS

2 days per week do muscle-strengthening activities involving all muscle groups

On at least 3 days per week do varied physical activity that focuses on balance and strength – this will help you achieve your overall physical activity goals.

Your physiotherapist will be able to advise an exercise programme that works best for you. Join group classes that focus on balance and stretching, eg yoga, tai chi, and Pilates.

Limit your sitting time and replace with any type of physical activity:

-
- **stand up and move during TV advert breaks**
 - **stand or walk while on the phone**
 - **use the stairs as much as possible**
 - **take up active hobbies such as gardening**
 - **join in community-based activities, such as dance classes and walking groups**
 - **take up active play with grandchildren, if you have them**
 - **do most types of housework.**

World Health Organization. [WHO guidelines on physical activity and sedentary behaviour](#). November 2020

World Health Organization: [Promoting physical activity for older people: a toolkit for action](#). Published October 2023

National Institute for Health and Care Excellence (NICE): [Physical activity guidelines: adults and older adults](#).
Published: 7 September 2019

Physiopedia. [Physical Activity in Older Adults](#).

NHS. [Why we should sit less](#). Page last reviewed: 29 December 2022

Information sheet 3: Falls prevention

Falls are the second leading cause of unintentional injury deaths worldwide

37.3 million falls each year are severe enough to require medical attention

Adults over 60 years old are at the greatest risk of fatal falls

World Health Organization: [Falls](#). April 2021

How physiotherapy can help prevent falls

Exercise is key to fall prevention - physiotherapists are experts in prescribing individualised exercise programmes to help improve your strength, balance, coordination, and flexibility. Exercises should be challenging, but safe and progressed as they become easier. They may include:

- **sit-to-stand exercises**
- **squats**
- **reaching when standing**
- **stepping in different directions**
- **walking at different speeds and in different environments**
- **getting up from the floor**

Activities such as walking, tai chi, or balance exercises will also help.

Physiotherapists can also:

- **teach you how to safely do daily activities, such as standing up from a chair, or climbing stairs**
- **assess if you need a walking frame or cane**
- **provide recommendations to make your home safer, such as installing grab bars in bathrooms, securing rugs, and improving lighting**
- **advise on footwear**
- **help identify when you may need help from other members of the healthcare team**

How at risk are you?

Lower risk: you are an older adult with no history of falling, or had one non-severe fall, and no problems with balance or walking.

Medium risk: have had a single fall, and have some problems with balance or walking.

Higher risk: have had a single fall with injury, multiple falls (>2) in the past year, have frailty, were unable to get up after the fall without help for at least an hour, may have lost consciousness and continence.

A physiotherapist will be able to assess how at risk you are and what strategies to put in place to prevent further falls. They may assess:

- **your muscle strength, mobility and flexibility**
- **how stable you are, eg while walking or doing daily tasks**
- **your thinking skills and memory**

A physiotherapist will often work closely with other health professionals such as doctors and occupational therapists. This is called a multidisciplinary approach.

Manuel Montero-Odasso, Nathalie van der Velde, Finbarr C Martin, Mirko Petrovic, Maw Pin Tan, Jesper Ryg, Sara Aguilar-Navarro, Neil B Alexander, Clemens Becker, Hubert Blain, Robbie Bourke, Ian D Cameron, Richard Camicioli, Lindy Clemson, Jacqueline Close, Kim Delbaere, Leilei Duan, Gustavo Duque, Suzanne M Dyer, Ellen Freiburger, David A Ganz, Fernando Gómez, Jeffrey M Hausdorff, David B Hogan, Susan M W Hunter, Jose R Jauregui, Nellie Kamkar, Rose-Anne Kenny, Sarah E Lamb, Nancy K Latham, Lewis A Lipsitz, Teresa Liu-Ambrose, Pip Logan, Stephen R Lord, Louise Mallet, David Marsh, Koen Milisen, Rogelio Moctezuma-Gallegos, Meg E Morris, Alice Nieuwboer, Monica R Perracini, Frederico Pieruccini-Faria, Alison Pighills, Catherine Said, Ervin Sejdic, Catherine Sherrington, Dawn A Skelton, Sabestina Dsouza, Mark Speechley, Susan Stark, Chris Todd, Bruce R Troen, Tischa van der Cammen, Joe Verghese, Ellen Vlaeyen, Jennifer A Watt, Tahir Masud, the Task Force on Global Guidelines for Falls in Older Adults , [World guidelines for falls prevention and management for older adults: a global initiative](#), Age and Ageing, Volume 51, Issue 9, September 2022, afac205, <https://doi.org/10.1093/ageing/afac205>

Why falls prevention matters

Falls are a leading cause of injury among older adults, often resulting in serious consequences such as fractures, loss of independence, and even death.

World Health Organization: [Falls](#). April 2021

Information sheet 4: Healthy ageing and frailty

What is frailty?

Anyone can experience frailty due to inactivity, disease, trauma, or persistent pain, however it is more common in older age.

Around 12% of people globally aged 50 years and over are diagnosed as having frailty and around 46% as being pre-frail, however the prevalence of frailty varies throughout the world.

Rónán O’Caoimh, Duygu Sezgin, Mark R O’Donovan, D William Molloy, Andrew Clegg, Kenneth Rockwood, Aaron Liew, [Prevalence of frailty in 62 countries across the world: a systematic review and meta-analysis of population-level studies](#), Age and Ageing, Volume 50, Issue 1, January 2021, Pages 96–104, doi.org/10.1093/ageing/afaa219

Symptoms of frailty

- **feeling exhausted**
- **feeling weak**
- **moving around slowly**
- **having trouble with balance**

-
- **losing weight without trying.**

Frailty is not an inevitable part of ageing - it is a long-term condition that can be made better or worse.

Fried LP, Tangen CM, Walston J, Newman AB, Hirsch C, Gottdiener J, Seeman T, Tracy R, Kop WJ, Burke G, McBurnie MA; Cardiovascular Health Study Collaborative Research Group. [Frailty in older adults: evidence for a phenotype](#). J Gerontol A Biol Sci Med Sci. 2001 Mar;56(3):M146-56. doi: 10.1093/gerona/56.3.m146. PMID: 11253156.

Myth vs fact

MYTH: I'm too old to start lifting weights

FACT: Older adults respond similarly to younger individuals with exercise and strength training

MYTH: I shouldn't exercise; I might fall

FACT: Strengthening your muscles improves balance and helps to reduce the risk of falls

MYTH: Weights will damage my joints

FACT: Weights can strengthen the muscles around the joints. This can help prevent joint injuries and improve overall joint health

MYTH: It's too late to make a difference

FACT: It's never too late! The benefits of strength training can occur at any age!

American Physical Therapy Association (APTA). APTA Geriatrics, Patient education brochure. [Strengthening for seniors](#)

World Health Organization. [WHO guidelines on physical activity and sedentary behaviour](#). November 2020

How can physiotherapy help?

Physiotherapy can help you be as active as possible – people who are more active are up to 41% less likely to have frailty.

Wenjing Zhao, Peng Hu, Weidi Sun, Weidong Wu, Jinhua Zhang, Hai Deng, Jun Huang, Shigekazu Ukawa, Jiahai Lu, Akiko Tamakoshi, Xudong Liu. [Effect of physical activity on the risk of frailty: A systematic review and meta-analysis](#). Published: December 1, 2022, doi.org/10.1371/journal.pone.0278226

A physiotherapist can develop an exercise programme for you and show you how to gradually increase the resistance and intensity to prevent and treat frailty. This will help to prevent loss of strength and muscle (sarcopenia) and make you fitter by increasing your aerobic and lung capacity. A physiotherapist can help you:

- **move better and improve your mobility**
- **improve your balance and strength**
- **find an aerobic exercise you enjoy and recommend the length of time you should be doing it**
- **return to the activities you enjoy doing**
- **manage any acute and chronic pain**
- **address any fears you may have about exercising**

A physiotherapist will also work with other members of your health team, such as medical doctors, occupational therapists, nutritionists and counsellors, to find the right services and treatment for you.

Wenjing Zhao, Peng Hu, Weidi Sun, Weidong Wu, Jinhua Zhang, Hai Deng, Jun Huang, Shigekazu Ukawa, Jiahai Lu, Akiko Tamakoshi, Xudong Liu. [Effect of physical activity on the risk of frailty: A systematic review and meta-analysis](#). Published: December 1, 2022, doi.org/10.1371/journal.pone.0278226

American Physical Therapy Association (APTA). Choose PT. [Physical Therapy Guide to Frailty](#)

Poster 1: Healthy ageing

Getting older does not mean you must stop or do less of what you enjoy

Healthy ageing means staying active, maintaining relationships and doing what you value as you get older

World Health Organization. [Healthy ageing and functional ability](#). October 2020

Poster 2: Falls prevention

Injury from a fall is avoidable. Improving your balance can prevent falls. Being strong and flexible can prevent serious injury should you fall.

Manuel Montero-Odasso, Nathalie van der Velde, Finbarr C Martin, Mirko Petrovic, Maw Pin Tan, Jesper Ryg, Sara Aguilar-Navarro, Neil B Alexander, Clemens Becker, Hubert Blain, Robbie Bourke, Ian D Cameron, Richard Camicioli, Lindy Clemson, Jacqueline Close, Kim Delbaere, Leilei Duan, Gustavo Duque, Suzanne M Dyer, Ellen Freiburger, David A Ganz, Fernando Gómez, Jeffrey M Hausdorff, David B Hogan, Susan M W Hunter, Jose R Jauregui, Nellie Kamkar, Rose-Anne Kenny, Sarah E Lamb, Nancy K Latham, Lewis A Lipsitz, Teresa Liu-Ambrose, Pip Logan, Stephen R Lord, Louise Mallet, David Marsh, Koen Milisen, Rogelio Moctezuma-Gallegos, Meg E Morris, Alice Nieuwboer, Monica R Perracini, Frederico Pieruccini-Faria, Alison Pighills, Catherine Said, Ervin Sejdic, Catherine Sherrington, Dawn A Skelton, Sabestina Dsouza, Mark Speechley, Susan Stark, Chris Todd, Bruce R Troen, Tischa van der Cammen, Joe Verghese, Ellen Vlaeyen, Jennifer A Watt, Tahir Masud, the Task Force on Global Guidelines for Falls in Older Adults, [World guidelines for falls prevention and management for older adults: a global initiative](#), Age and Ageing, Volume 51, Issue 9, September 2022, afac205, <https://doi.org/10.1093/ageing/afac205>

Poster 3: Preventing frailty

It's never too late to start an exercise programme! People receive benefit from strength training at all ages.

American Physical Therapy Association (APTA). APTA Geriatrics, Patient education brochure. [Strengthening for seniors](#)

World Health Organization. [WHO guidelines on physical activity and sedentary behaviour](#). November 2020

Banner 1: Healthy ageing

Older adults should be as physically active as they can
Adjust the effort according to your fitness and range of motion

Doing some physical activity is better than none
Start by doing small amounts, and gradually increase over time

Sit less!

Sitting for long periods of time is bad for your health, break up and reduce your sitting time by moving around regularly

World Health Organization. [WHO guidelines on physical activity and sedentary behaviour](#). November 2020

World Health Organization: [Promoting physical activity for older people: a toolkit for action](#). Published October 2023

National Institute for Health and Care Excellence (NICE): [Physical activity guidelines: adults and older adults](#).
Published: 7 September 2019

NHS. [Why we should sit less](#). Page last reviewed: 29 December 2022

Banner 2: Falls prevention

Falls are the second leading cause of unintentional injury deaths worldwide

World Health Organization: [Falls](#). April 2021

How physiotherapy can help prevent falls

Exercise is key to fall prevention - physiotherapists are experts in prescribing individualised exercise programmes to help improve your:

- **strength and balance**
- **coordination**
- **flexibility**

Manuel Montero-Odasso, Nathalie van der Velde, Finbarr C Martin, Mirko Petrovic, Maw Pin Tan, Jesper Ryg, Sara Aguilar-Navarro, Neil B Alexander, Clemens Becker, Hubert Blain, Robbie Bourke, Ian D Cameron, Richard Camicioli, Lindy Clemson, Jacqueline Close, Kim Delbaere, Leilei Duan, Gustavo Duque, Suzanne M Dyer, Ellen Freiburger, David A Ganz, Fernando Gómez, Jeffrey M Hausdorff, David B Hogan, Susan M W Hunter, Jose R Jauregui, Nellie Kamkar, Rose-Anne Kenny, Sarah E Lamb, Nancy K Latham, Lewis A Lipsitz, Teresa Liu-Ambrose, Pip Logan, Stephen R Lord, Louise Mallet, David Marsh, Koen Milisen, Rogelio Moctezuma-Gallegos, Meg E Morris, Alice Nieuwboer, Monica R Perracini, Frederico Pieruccini-Faria, Alison Pighills, Catherine Said, Ervin Sejdic, Catherine Sherrington, Dawn A Skelton, Sabestina Dsouza, Mark Speechley, Susan Stark, Chris Todd, Bruce R Troen, Tischa van der Cammen, Joe Verghese, Ellen Vlaeyen, Jennifer A Watt, Tahir Masud, the Task Force on Global Guidelines for Falls in Older Adults , [World guidelines for falls prevention and management for older adults: a global initiative](#), Age and Ageing, Volume 51, Issue 9, September 2022, afac205, <https://doi.org/10.1093/ageing/afac205>

Additional reading and key resources

World Health Organization: [Ageing and health](#)

World Health Organization: [Falls](#). Published April 2021

World Health Organization: [Promoting physical activity for older people: a toolkit for action](#). Published October 2023

World Health Organization. [Healthy ageing and functional ability](#). October 2020

World Health Organization: [WHO calls for urgent transformation of care and support systems for older people](#).
Published October 2024

World Health Organization: [WHO Global report on falls prevention in older age](#). Published 2007

World Health Organization: [WHO Global Coordination Mechanisms on the Prevention and Control of NCDs
Decade of Healthy Ageing](#) platform

Manuel Montero-Odasso, Nathalie van der Velde, Finbarr C Martin, Mirko Petrovic, Maw Pin Tan, Jesper Ryg, Sara Aguilar-Navarro, Neil B Alexander, Clemens Becker, Hubert Blain, Robbie Bourke, Ian D Cameron, Richard Camicioli, Lindy Clemson, Jacqueline Close, Kim Delbaere, Leilei Duan, Gustavo Duque, Suzanne M Dyer, Ellen Freiburger, David A Ganz, Fernando Gómez, Jeffrey M Hausdorff, David B Hogan, Susan M W Hunter, Jose R Jauregui, Nellie Kamkar, Rose-Anne Kenny, Sarah E Lamb, Nancy K Latham, Lewis A Lipsitz, Teresa Liu-Ambrose, Pip Logan, Stephen R Lord, Louise Mallet, David Marsh, Koen Milisen, Rogelio Moctezuma-Gallegos, Meg E Morris, Alice Nieuwboer, Monica R Perracini, Frederico Pieruccini-Faria, Alison Pighills, Catherine Said, Ervin Sejdic, Catherine Sherrington, Dawn A Skelton, Sabestina Dsouza, Mark Speechley, Susan Stark, Chris Todd, Bruce R Troen, Tischa van der Cammen, Joe Verghese, Ellen Vlaeyen, Jennifer A Watt, Tahir Masud, the Task Force on Global Guidelines for Falls in Older Adults, [World guidelines for falls prevention and management for older adults: a global initiative](#), Age and Ageing, Volume 51, Issue 9, September 2022, afac205, <https://doi.org/10.1093/ageing/afac205>