

Train for Healthy Ageing: Muscles That Matter

Posture, balance, injury prevention and muscle preservation as you get older

You don't lose strength and balance because of age alone. Much of it comes from **using muscles less**. Training the right muscles keeps you upright, steady and independent. This guide covers the key muscle groups, **why each matters**, **exercises to build them** (easy to harder) and **how often to train**, followed by balance and mobility drills, a weekly plan and safety guidance.

1. What Changes With Age

And what to train against

Why this matters: Ageing changes the body in predictable ways, but most of these changes slow down or partly reverse with the right training. These are the main ones to train against.

WHAT CHANGES	WHAT HAPPENS	RESULT	WHAT HELPS
Muscle mass and strength	From about 30, muscle slowly declines, and the loss speeds up in later decades if you don't train (sarcopenia).	Everyday tasks like climbing stairs, standing up and carrying bags get harder.	Strength train 2 to 3 days a week and eat enough protein.
Balance and reaction time	Leg strength, ankle control and the nervous system all weaken, so catching yourself during a trip is harder.	Higher risk of falls, the leading cause of injury in older adults.	Train legs, hips and ankles, and practise balance drills.
Bone density	Bone mass peaks around 30 and declines after, faster in women after menopause.	Fractures become more likely, and falls become more serious.	Weight-bearing and resistance exercise, plus calcium and vitamin D.
Posture and spine	Desk work and weaker back muscles lead to a rounded upper back and forward head.	Neck, shoulder and back pain, and less balance and breathing space.	Strengthen the upper back, core and glutes.
Power (speed of strength)	Fast muscle fibres decline first, so you lose the ability to move quickly.	Slower reactions when you stumble or need to step quickly.	Add quick, controlled movements such as fast sit-to-stands.

2. Lower Body: Your Fall-Proofing Muscles

Legs, hips and ankles

Why this matters: Strong legs and hips are the foundation of independence. They are the first line of defence against falls.

MUSCLE	WHY IT MATTERS	EXERCISES (EASY TO HARDER)	HOW OFTEN
Glutes (buttocks)	The body's largest muscles. They power standing, walking and stairs, stabilise the pelvis and protect the lower back and knees.	Glute bridge, then single-leg bridge, hip thrust and step-ups	2 to 3 times a week
Quadriceps (front of thigh)	Needed for standing from a chair, stairs and slowing down when you walk downhill. Weak quads are strongly linked with falls.	Chair sit-to-stand, then squats, goblet squats and split squats	2 to 3 times a week
Hamstrings (back of thigh)	Support the knee and hip, help you walk and balance the quads. Tight and weak ones add to back strain.	Hip hinge with a light weight, Romanian deadlift, hamstring curl with a band	2 times a week

MUSCLE	WHY IT MATTERS	EXERCISES (EASY TO HARDER)	HOW OFTEN
Calves and ankles	Provide the push in every step and make fast corrections when you lose balance.	Calf raises on both legs, then single leg, then on a step; toe raises	2 to 3 times a week, daily balance work
Hip abductors and adductors (outer and inner thigh)	Keep the pelvis level when walking and stop sideways falls.	Side-lying leg raise, banded side steps, standing hip abduction, clamshell	2 times a week

3. Core and Back

Your internal brace

Why this matters: A strong core and back hold you upright and transfer force between your upper and lower body.

MUSCLE	WHY IT MATTERS	EXERCISES (EASY TO HARDER)	HOW OFTEN
Deep core (transverse abdominis) and pelvic floor	Acts like a natural brace for the spine and supports posture and bladder control.	Diaphragmatic breathing, dead bug, bird dog, forearm plank on knees	3 times a week, short sessions
Obliques	Resist twisting and tipping, helping you stay upright when you turn or carry something.	Side plank (knees, then feet), Pallof press, suitcase carry	2 to 3 times a week
Spinal erectors and multifidus (back)	Hold the spine upright and protect against back pain and a stooped posture.	Bird dog, prone back extension, supported hip hinge	2 to 3 times a week

4. Upper Back, Shoulders and Posture

Stand tall, move freely

Why this matters: These muscles pull your shoulders back, keep your head over your spine and protect your shoulders and neck.

MUSCLE	WHY IT MATTERS	EXERCISES (EASY TO HARDER)	HOW OFTEN
Mid and lower trapezius, rhomboids	Pull the shoulder blades back and down. Weak ones allow rounded shoulders.	Band pull-apart, seated or bent-over row, wall slide	2 to 3 times a week
Rear shoulders and rotator cuff	Keep the shoulder joint stable and prevent pain and injury when reaching or lifting.	Band external rotation, face pull, reverse fly	2 times a week
Chest and front shoulders	Help with pushing, getting up from the floor and carrying. Tightness pulls the shoulders forward.	Wall or incline push-up, then floor push-up, dumbbell press; plus pec stretch	2 times a week, stretch daily
Deep neck flexors	Keep the head stacked over the spine to reduce neck strain from forward head posture.	Chin tuck, then chin tuck against a wall	Daily, 10 slow reps
Grip, forearms and arms	Grip strength is linked with overall strength and independence. Needed for carrying, opening jars and breaking a fall.	Farmer carry, towel hold, dumbbell curls and triceps extensions	2 times a week

5. Balance and Mobility Drills

A few minutes daily

Why this matters: Balance is a skill that improves with practice. Mobility keeps joints moving well. Aim for a few minutes every day.

DRILL	HOW TO DO IT	WHY IT HELPS
Single-leg stand	Stand on one leg near a counter for 20 to 30 seconds, then without support, then with eyes closed.	Trains ankle, hip and inner-ear balance.
Heel-to-toe walk	Walk in a straight line placing the heel against the toe. Add looking side to side.	Trains stability and coordination.
Sit-to-stand without hands	Stand up from a chair 10 times without using your hands, a little faster each week.	Builds leg power, a key fall-prevention skill.
Tai chi or yoga	Gentle flowing moves with weight shifts. One to two classes a week.	Evidence supports tai chi for reducing falls.
Hip flexor and chest stretch	Hold each 30 seconds on each side. Opens the front of the body.	Counters sitting posture.
Thoracic rotation and cat-cow	10 slow reps on each side. Frees up the upper back.	Improves posture and shoulder movement.
Ankle circles and calf stretch	20 circles each way, then a 30-second calf stretch.	Keeps ankles mobile for steady steps.

6. A Sample Weekly Plan

Strength, cardio, balance and rest

Weekly structure: A balanced week combines strength, cardio, balance and mobility. WHO suggests 150 to 300 minutes of moderate activity a week plus strength work on 2 or more days.

DAY	WHAT TO DO	TIME
Monday	Strength A: lower body and core (squats or sit-to-stands, bridges, hinge, calf raises, dead bug)	30 to 40 min
Tuesday	Brisk walk or cycling, plus balance drills	30 min + 10 min
Wednesday	Mobility and stretching, or a gentle yoga or tai chi class	20 to 30 min
Thursday	Strength B: upper back, shoulders and posture (rows, pull-aparts, push-ups, carries, chin tucks)	30 to 40 min
Friday	Brisk walk plus balance drills	30 min + 10 min
Saturday	Enjoyable activity: swimming, hiking, badminton, dancing or a full-body strength session	30 to 60 min
Sunday	Rest, a short walk and light stretching	15 to 20 min

7. Training Safely

Habits for the long run

Why this matters: Safe habits keep you training for decades.

PRINCIPLE	WHAT TO DO	KEY POINT
Warm up first	5 to 10 minutes of easy walking and joint circles prepares muscles and joints.	Never start strength work cold.
Start light, control the movement	Learn the pattern with bodyweight or light weights, and take 2 to 3 seconds to lower.	Quality before load.
Progress gradually	When you can do all reps easily, add a little weight, reps or a harder variation about every 2 weeks.	Aim for 2 to 3 sets of 8 to 12 reps.
Rest between sets and days	Rest 60 to 90 seconds between sets and train each muscle no more than every other day.	Muscles grow during recovery.
Breathe	Breathe out during the effort and don't hold your breath.	Holding your breath spikes blood pressure.
Soreness vs pain	Mild muscle soreness is normal. Sharp, joint or sudden pain is a signal to stop.	Skip the movement and get advice if pain persists.
Fuel and sleep	Enough protein (often about 1.2 to 1.6 g per kg for older adults, if kidneys are healthy), calcium, vitamin D and 7 to 8 hours of sleep support muscle and bone.	Ask your doctor about personal needs.

8. Check With a Doctor First If

Situations that need advice

Remember: Most people can exercise safely, but some situations need advice first.

SITUATION	WHAT TO DO
Chest pain, breathlessness or dizziness	Stop and get medical advice before continuing.
Heart disease, uncontrolled blood pressure or diabetes	Get clearance and guidance on intensity.
Osteoporosis or past fractures	Avoid loaded spinal flexion and twisting. Work with a physiotherapist.
Joint replacement, recent surgery or injury	Follow your surgeon or physio's plan first.
Frequent falls or severe balance problems	See a doctor or physiotherapist to be assessed first.

Note: This is general fitness information, not medical advice. Start at a level that suits your current ability, and adjust or skip exercises that cause pain. If you have a medical condition, are recovering from injury or haven't exercised in a long time, get medical clearance or work with a qualified trainer or physiotherapist.