MODULE 4 TOOLKIT · MOVEMENT STARTER

Twelve weeks of strength, written out in full.

Two sessions a week, every exercise in a home and a gym version, and exactly how many sets, repetitions and how hard, week by week. Built on the structure of the Swedish trial from Lesson 4.1 and on UK guidance for bone and muscle.

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How this plan works

- **Two sessions a week**, Session A and Session B, about 40 minutes each. Leave at least one day between them.
- **Three phases over twelve weeks.** Learn the movements, then build, then get properly strong.
- **Home or gym.** Every exercise has both versions. Mix them freely.
- **Effort is the target, not a weight.** You choose the weight that makes the last repetitions hard. Page 2 shows you how to judge that.

WHERE THE STRUCTURE COMES FROM

In the Swedish trial in Lesson 4.1, previously inactive women trained three times a week for fifteen weeks: two sets of 15 to 20 repetitions for the first three weeks, then two sets of 8 to 12, with loads set so the last repetitions were genuinely hard. Muscle volume rose by around four percent and hot flushes fell by nearly half.[1,2] This plan uses two sessions a week, which is the UK minimum for muscle strengthening[3] and a realistic start, and adds a third set and heavier work from week 6.

What you need

At home	Why
Two pairs of dumbbells	One lighter pair and one heavier pair, or one adjustable set. Many women start with something like 4 kg and 8 kg. Adjustable dumbbells save money and space once you progress.

A long resistance band	For pulling movements, anchored in a door. A medium and a heavy band give you room to progress.
A sturdy chair, a step	The bottom stair works as a step. A kitchen worktop works for incline press ups.
In a gym	Everything in the gym column is standard kit. Ask a member of staff to set up any machine the first time.

BEFORE YOU START, PLEASE READ

Speak to your GP or a physiotherapist before starting if any of these apply: chest pain, faintness or unusual breathlessness on exertion; a heart condition or blood pressure that is not controlled; osteoporosis or a previous fracture from a minor fall; recent surgery or an injury that has not settled; you are or might be pregnant. Strength training is still recommended for people with osteoporosis, but you should get guidance on which movements suit you.[4]

Stop and seek help if you get chest pain, feel dizzy or faint, or feel a sudden sharp pain. Muscle soreness for one to three days after a new session is normal. Sharp joint pain during a movement is not: swap to the easier version, and if it persists, see a physiotherapist.

Leaking urine when lifting or jumping is common and treatable. It is a reason to see a pelvic floor physiotherapist, available on the NHS in many areas, not a reason to stop exercising.

HOW HARD

Reps in reserve, the only rule you need

At the end of each set, ask yourself: **how many more could I have done with good form?** That number is your reps in reserve. It is how you choose the right weight without a coach, and it is what makes the difference between exercise that changes muscle and exercise that maintains it.

Reps in reserve	What it feels like	When you use it
4 or more	Comfortable. You could chat.	Warm up sets only.
3 to 4	Working, but form is easy to keep.	Phase 1, while you learn the movements.
2	The last two repetitions slow down.	Phase 2. This is where most change happens.
1	You could just about squeeze out one more.	Phase 3, on the main lifts.
0	You could not do another.	Not needed in this plan. Do not train to failure on heavy lifts.

The twelve weeks at a glance

Phase	Weeks	Sets	Repetitions	Reps in reserve	Rest between sets
1 · Learn	1 to 3	2	15 to 20	3 to 4	60 to 90 seconds
2 · Build	4 to 8	2, then 3 from week 6	8 to 12	2	90 seconds
3 · Strengthen	9 to 12	3	6 to 10 on exercises 1 to 4, 8 to 12 on the rest	1 to 2	2 minutes on exercises 1 to 4

How to progress

Top of the range, then go up. When you reach the top of the repetition range on every set, with the reps in reserve still where they should be, increase the weight at your next session. Then work back up the range.

Example in Phase 2 (8 to 12 repetitions): week 4 you do 2 sets of 9 with 6 kg. Week 5, 2 sets of 11. Week 6, 3 sets of 12 with 2 left in the tank. Week 7, move to 8 kg and you are back to around 8 repetitions. That is progressive overload.

Smallest sensible jumps: 1 to 2 kg on dumbbells, one plate on a machine, the next band up, or the harder version of the exercise.

Every session follows the same shape

Part	Time	What you do
Warm up	6 min	2 minutes of marching on the spot or brisk walking. Then 10 sit to stands from a chair, 10 press ups against a wall, 10 hip hinges with hands on hips, 10 arm circles each way. Then one light set of your first exercise.
Main work	28 to 32 min	Exercises 1 to 6 in order. Do all sets of one exercise before moving on.
Balance	3 min	The balance ladder on page 5.
Note it down	1 min	Weight and repetitions in the 12 week log in your weekly movement plan. You cannot progress what you do not record.

THE SESSIONS

Session A

Exercises 1 to 4 are the main lifts. Numbers show sets × repetitions for each phase.

#	Movement	Home version	Gym version	Phase 1	Phase 2	Phase 3
A1	Squat	Goblet squat to a chair	Leg press, or goblet squat	2 × 15-20	2-3 × 8-12	3 × 6-10
A2	Push	Incline press up on a worktop	Chest press machine, or dumbbell bench press	2 × 15-20	2-3 × 8-12	3 × 6-10
A3	Hinge	Dumbbell Romanian deadlift	Dumbbell or barbell Romanian deadlift	2 × 15-20	2-3 × 8-12	3 × 6-10
A4	Pull	One arm dumbbell row, hand on a chair	Seated cable row	2 × 15-20	2-3 × 8-12	3 × 6-10
A5	Carry	Suitcase carry, one dumbbell	Suitcase carry, one kettlebell	2 × 20 steps each side	3 × 20 steps each side	3 × 30 steps each side
A6	Core	Dead bug	Dead bug	2 × 6 each side	2-3 × 8 each side	3 × 10 each side

Where a cell shows a range such as 2-3 sets, that is the sets column: 2 sets in weeks 4 and 5, 3 sets from week 6.

Session B

#	Movement	Home version	Gym version	Phase 1	Phase 2	Phase 3
B1	Single leg	Split squat, holding a chair	Split squat with dumbbells	2 × 12 each leg	2-3 × 8-12 each	3 × 6-10 each
B2	Glutes	Glute bridge, then single leg bridge	Hip thrust, back on a bench	2 × 15-20	2-3 × 8-12	3 × 6-10
B3	Overhead push	Seated dumbbell shoulder press	Shoulder press machine	2 × 15-20	2-3 × 8-12	3 × 6-10
B4	Pull down	Band pulldown, band anchored high in a door	Lat pulldown	2 × 15-20	2-3 × 8-12	3 × 6-10

B5	Step	Step up onto the bottom stair	Step up onto a box or bench	2 × 10 each leg	2-3 × 10 each	3 × 10 each, holding dumbbells
B6	Back	Bird dog	Back extension bench	2 × 8 each side	2-3 × 10-12	3 × 10-12

AN EXAMPLE WEEK 7, WRITTEN OUT

Tuesday 7.00, Session A at home. Warm up. Goblet squat 3 × 10 with 8 kg. Incline press up on the worktop 3 × 11. Romanian deadlift 3 × 10 with two 8 kg dumbbells. Row 3 × 12 with 8 kg each arm. Suitcase carry 3 × 20 steps each side with 10 kg. Dead bug 3 × 8 each side. Balance ladder, step 3. Log it.

Saturday 9.00, Session B at the gym. Warm up. Split squat 3 × 10 each leg with two 6 kg dumbbells. Hip thrust 3 × 12 with 20 kg. Shoulder press machine 3 × 10. Lat pulldown 3 × 10. Step up 3 × 10 each leg. Back extension 3 × 12. Balance ladder. Log it.

The weights are an illustration only. Yours will be different, and the right weight is whichever one hits the reps in reserve target.

EXERCISE LIBRARY

How to do each one

The starting weights are coaching rules of thumb for women new to lifting, not trial data. If a weight feels too easy or too hard for the reps in reserve target, change it.

Goblet squat

A1 · SQUAT

SET UP
Feet a little wider than hips, toes slightly out. Hold one dumbbell vertically against your chest.

CUES
Sit back and down between your heels. Knees travel in line with your toes. Chest tall. Push the floor away to stand.

EASIER
Sit to stand from a chair, no weight, then holding a dumbbell.

HARDER
Squat below chair height, or heavier dumbbell. Gym: leg press. Typical start: 4 to 8 kg.

Incline press up

A2 · PUSH

SET UP
Hands on a kitchen worktop, slightly wider than shoulders. Walk your feet back until your body is one straight line.

CUES
Lower your chest to the edge with elbows angled back, not flared out. Ribs down, bottom in line. Push away.

EASIER
Hands on a wall.

HARDER
Lower surface: table, sofa arm, stairs, then the floor on your knees, then full. Gym: chest press or dumbbell bench press, typical start 4 to 6 kg each hand.

Romanian deadlift

A3 · HINGE

SET UP
Stand tall, a dumbbell in each hand in front of your thighs, soft knees.

CUES
Push your hips back as if closing a car door with your bottom. Dumbbells slide down your thighs. Back stays long, not rounded. Stop when you feel a stretch in the back of your legs, then drive your hips forward to stand.

EASIER
Hip hinge with a broom handle along your spine: head, upper back and tailbone stay in contact.

HARDER
Heavier dumbbells, then a barbell in the gym. Typical start: 4 to 8 kg each hand. Worth having technique checked early.

One arm dumbbell row

A4 · PULL

SET UP
One hand on the seat of a chair, same side foot back, back flat. Dumbbell hanging in the other hand.

CUES
Pull the dumbbell towards your back pocket, elbow close to your side. Pause, lower slowly. Do not twist.

EASIER
Lighter weight, or a band row anchored at waist height.

HARDER
Heavier dumbbell, three second lowering. Gym: seated cable row. Typical start: 4 to 8 kg.

Suitcase carry

A5 · CARRY

SET UP
One heavy dumbbell or kettlebell in one hand, like a suitcase.

CUES
Walk tall and slowly. Do not lean towards or away from the weight. This is core training that looks like shopping.

EASIER
Lighter weight, fewer steps.

HARDER
Heavier weight, more steps. Typical start: 6 to 10 kg.

Dead bug

A6 · CORE

SET UP
Lie on your back, arms pointing to the ceiling, knees bent at 90 degrees above your hips.

CUES
Press your lower back gently into the floor. Slowly lower one arm and the opposite leg, breathe out, return. Swap sides.

EASIER
Move only the legs, one heel tap at a time.

HARDER
Straighter leg, slower, or hold a light weight in the hands.

Split squat

B1 · SINGLE LEG

SET UP
One foot forward, one back, as if mid stride, both feet hip width apart like train tracks. Hold a chair for balance.

CUES
Lower straight down until the back knee is just above the floor. Front knee over the middle of the foot. Push through the front heel.

EASIER
Smaller range, hold the chair with both hands.

HARDER
Dumbbells in each hand, then back foot raised on the bottom stair. Typical start: bodyweight, then 2 to 6 kg each hand.

Glute bridge

B2 · GLUTES

SET UP
Lie on your back, knees bent, feet flat and hip width apart.

CUES
Squeeze your bottom and lift your hips until knees, hips and shoulders are in line. Pause for two seconds. Lower slowly. Ribs stay down.

EASIER
Smaller lift, no pause.

HARDER
Dumbbell across the hips, then single leg. Gym: hip thrust with your upper back on a bench.

Seated shoulder press

B3 · OVERHEAD PUSH

SET UP
Sit tall on a chair, a dumbbell in each hand at shoulder height, palms facing forward or facing each other.

EASIER
One arm at a time, or lighter weights.

CUES
Press up and slightly back so the weights finish over your ears. Do not arch your lower back. Lower with control.

HARDER
Standing, heavier. Gym: shoulder press machine. Typical start: 2 to 5 kg each hand.

Band pulldown

B4 · PULL DOWN

SET UP
Band anchored at the top of a closed door. Kneel or sit facing it, arms up holding the band.

EASIER
Lighter band, or step closer to the door.

CUES
Pull your elbows down towards your back pockets, shoulders away from your ears. Squeeze, then return slowly.

HARDER
Heavier band, slower return. Gym: lat pulldown.

Step up

B5 · STEP

SET UP
Face the bottom stair, hand on the banister if you need it.

EASIER
Lower step, hold the banister.

CUES
Put your whole foot on the step and push through that heel to stand up. Try not to push off the back foot. Step down slowly.

HARDER
Higher step, then dumbbells in each hand.

Bird dog

B6 · BACK

SET UP
On hands and knees, hands under shoulders, knees under hips.

EASIER
Lift the leg only, or the arm only.

CUES
Reach one arm forward and the opposite leg back until both are level with your body. Hips stay square, as if balancing a cup on your lower back. Pause, return.

HARDER
Three second hold. Gym: back extension bench, which the Swedish trial used.[1]

EVERY SESSION

Balance and impact

Balance matters as much as strength, because falling is how most fractures happen. In osteoporotic women, balance predicted fractures better than bone density did, and balance and resistance training both improved balance in a network meta analysis of 26 trials.[5]

The balance ladder

Stand next to a worktop. Hold each step for 30 seconds on each leg. When you can do it steadily on both legs in two sessions running, move up a step.

Step	What you do
1	Stand on one leg, fingertips on the worktop.
2	Stand on one leg, hands hovering just above the worktop.
3	Stand on one leg and slowly turn your head left and right.
4	Stand on one leg and reach the other foot forward, to the side and back, tapping the floor lightly.
5	Stand on one leg on a folded towel or cushion.
6	Step 1 with your eyes closed, always right next to the worktop.

And on the other days: stand on one leg while the kettle boils, or while you brush your teeth. It genuinely counts.

Impact for bone, most days

Bone responds to load and to impact. The UK consensus on exercise for osteoporosis recommends muscle strengthening two to three days a week and some impact most days, building up gradually.[4] Impact does not need to be dramatic.

Weeks	What you do
1 to 2	Heel drops: rise onto your toes and drop down onto your heels. 10, holding a worktop.
3 to 6	Add 5 heel drops a week until you reach 50, in sets of 10 with a short rest.
7 onwards	If heel drops feel fine, swap some for small jumps on the spot or skipping, landing softly. Brisk walking, stair climbing and running also count.

> CHECK FIRST
>
> If you have osteoporosis, a previous fracture of the spine, or pelvic floor symptoms such as leaking, get individual advice before adding jumping. Heel drops and brisk walking are a reasonable alternative for most people.[4]

AFTER WEEK 12

What comes next

- **Repeat Phase 3** with your new weights. Most women can keep progressing for many months.
- **Swap the versions.** Move a home exercise to its gym version, or the split squat to a rear foot elevated split squat.
- **Consider supervised heavier lifting.** In the LIFTMOR trial, postmenopausal women with low bone mass did supervised heavy deadlifts, squats and overhead presses, five sets of five, twice a week for eight months, and bone density improved at the spine and hip with no fractures or serious injuries.[6] It was supervised throughout, so learn this with a qualified coach or physiotherapist rather than on your own.
- **Keep your two sessions.** Physical activity was still increased two years later in the women from the Swedish trial.[7] The point is not a twelve week project. It is a habit.

References

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