

Move with Confidence: Home-based Exercises for Ataxia

What is Ataxia?

Ataxia is lack of coordination or impaired control of body movements. This condition affects your balance and coordination, making everyday movements like walking, reaching, or standing more challenging. It occurs when parts of the brain or nervous system that coordinate the movement (especially the cerebellum) are affected.



Why Exercise is Important

- Improves balance and coordination
 - Helps reduce fall risk
 - Strengthens the muscles
- Boosts confidence in daily activities



Do's

- *Always do it under supervision/ with support*
- Start slowly and increase gradually.
- Be consistent (10–20 min daily if possible).
- Keep breathing normally during exercises.



Don'ts

- Don't exercise alone
- Don't rush or overexert.
- Don't hold your breath.
- Don't do exercises in unsafe spaces (slippery floors, near sharp edges)

SAFETY FIRST

- Always exercise under supervision/a stable surface or support (chair, wall, rail).
- Do exercises in a clutter-free space.
- Wear comfortable clothes and supportive shoes.
- Stop if you feel dizzy, experience pain, or are very fatigued.

BALANCE & COORDINATION EXERCISES

Lying Bent Knee Rotations



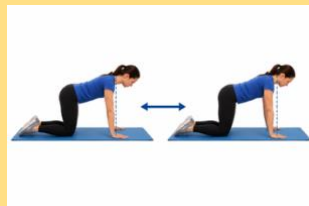
Lie down with both knees bent, hip width apart and feet flat; arms positioned out wide away from the body. Slowly let both knees rotate from one side to the other. Try to keep your upper body and back flat as you are doing the rotations.

Kneeling Press Up



Start in an upright kneeling position with knees under hips and with arms at the side. Slowly move from a high kneeling position, hips straight body upright, to a low kneeling position hips moving down to rest on heels.

Quadruped Weight Shifting



Start with hands under shoulders and knees under hips, spine is neutral. Slowly shift your body weight towards the arms and after 5 counts shift it backwards towards the hips. and hold again for 5 counts.

Perform 2-3 sets (1 set=10 repetition) of each exercise as indicated. Begin with 10 seconds holds/ 10 reps and gradually increase the time and repetitions as you master each exercise.

Birddog



Start with hands under shoulders and knees under hips, spine is neutral. Slowly reach an arm forward to shoulder height, then begin to extend the opposite-side leg backwards to hip height. Hold for few seconds. Repeat on the other side.

Sit to Stand



Sit on a chair, feet flat backward. Lean your body forward, push through your legs, and stand up by bending your knees slowly. Sit back down with control. Repeat.

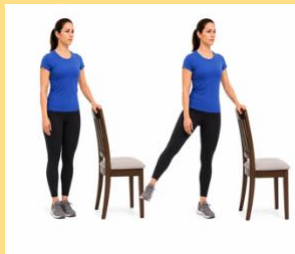
BALANCE & COORDINATION EXERCISES

Stationary Marching



Stand upright, lift one foot off the floor and knee up towards your chest. Return the foot to the ground and repeat on the other side.

Hip Abductions



Standing upright holding on to a chair or other support, gently shift your weight to one side as you lift the opposite leg out to the side repeat with the other leg.

Hip Extension



Stand upright holding on to support, if needed. Kick one leg back behind you, return to the starting position and repeat on the other side.

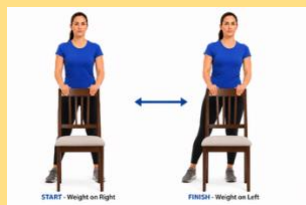
Perform 2-3 sets (1 set=10 repetition) of each exercise as indicated. Begin with 10 seconds holds/ 10 reps and gradually increase the time and repetitions as you master each exercise.

Front/Back Weight Shifting



Begin with feet hip width apart. Weight evenly distributed between along both feet. Using ankles, shift your weight forward towards the toes and then back towards the heels.

Lateral Weight Shifting



With feet slightly wide apart and weight evenly distributed, shift your weight from right to left. Ensure the movement begin at the ankle so body moves right to left as one unit.

BALANCE & COORDINATION EXERCISES

Narrow foot stance



Stand with feet about one foot apart. Hold steady. As balance improves, bring feet closer together. Use support if needed.

Frenkel's mat



Stand with support on the mat. Move legs slowly in number order (1 = forward, 2 = diagonal, 3 = sideways). As balance improves, take bigger steps

Walking mat



Walk along the marked footprints on the mat. Start with smaller steps, then gradually increase the distance between steps as step precision improves.

Perform 2-3 sets (1 set=10 repetition) of each exercise as indicated. Begin with 10 seconds holds/ 10 reps and gradually increase the time and repetitions as you master each exercise.

Tandem Walking



Walk in a straight line. Start with a wider base, then progress to heel-to-toe. Walk slowly and use support (wall or rail) if needed.

Side walking



Move sideways with feet apart. This strengthens hip muscles, improves side stability, and trains coordination.

Single leg standing



Stand on one leg for 10-15 seconds, using support if needed. Switch legs and gradually increase the time to build balance and strength.

Progression

- ◆ **Speed:** Start with performing exercises slowly to have control over your movement then increase your speed gradually.
- ◆ **Precision:** Aim with performing smaller movement to do the exercise precisely.
- ◆ **Repetitions:** Begin with a few and add more over time.



Fall Prevention & Safety Tips

- ◆ **Clear pathways:** Remove loose rugs, cords, and clutter from walking areas.
- ◆ **Wear safe shoes:** Choose non-slip, supportive footwear.
- ◆ **Move slowly:** Avoid sudden turns or quick movements.
- ◆ **Use assistive devices:** Canes or walkers can help maintain balance.
- ◆ **Good lighting:** Keep rooms and hallways well-lit, especially at night.
- ◆ **Avoid slippery surfaces:** Use non-slip mats in bathrooms and kitchens.
- ◆ **Plan falls safely:** If you feel yourself losing balance, try to sit or hold onto something instead of twisting.
- ◆ **Ask for help:** Don't hesitate to get assistance when doing risky tasks.

Other recommendations

- ◆ **Walking practice:** Walk indoors or outdoors safely, use support if needed.
- ◆ **Energy tips:** Take breaks often, don't rush movements.

References:

1. National Ataxia Foundation. Ataxia information [Internet]. [cited 2025 Oct 14]. Available from: <https://www.ataxia.org>
2. Keller JL, Bastian AJ. A home balance exercise program improves walking in people with cerebellar ataxia. *Neurorehabil Neural Repair*. 2014 Oct;28(8):770-8. doi: 10.1177/1545968314522350.