

How good is your balance?

by Tessa Jupp RN OAM

Good balance is often taken for granted. Most people don't find it difficult to walk across a gravel driveway, transition from walking on a footpath to grass, up a gentle slope or to get out of bed in the middle of the night to go to the loo, without stumbling and falling.

However, for polios and other people aging with impaired balance, such activities can be extremely fatiguing and sometimes dangerous. Symptoms that accompany the unsteadiness can include dizziness, vertigo, hearing and vision problems, and difficulty with concentration and memory. As polios age, weakening polio muscles can mean that even a light seabreeze can be enough to put them off balance and in danger of falling. **What can we do?**

Good balance requires sensory input from **vision**, the **inner ear** and **sensors in the legs and feet**.

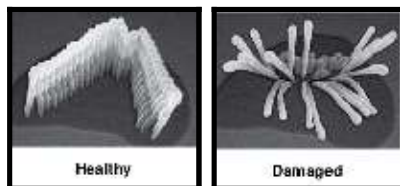
Good balance means being in control of your body position whether standing, lying, walking or sitting. As we age, changes in eyesight, hearing, feeling sensation in our feet and legs, lessening of muscle strength and energy, can put us at risk.

CAN WE DO ANYTHING ABOUT THIS?

A long time ago I came across photos of damage inside the ear that really interested me, particularly as I found it was often caused by low magnesium!

Very loud sounds can damage the sensitive hair cells in the inner ear which are necessary to hear. As the number of damaged hair cells increase, the brain receives fewer impulses to interpret sound. And so hearing diminishes. The ability to hear well with both ears is part of our perception of direction, distance and our positioning in the space around us.

These are the photos of healthy ear cells and damaged ones. They move in response to sound and are attached to nerves that relay the movement message to the brain.



The nutrients we should get from our foods that I keep writing about as important for polio muscles, nerves and tendons, are also needed for our hearing and sight. So it is important to know if we need to take a supplement for more reasons than just muscles.

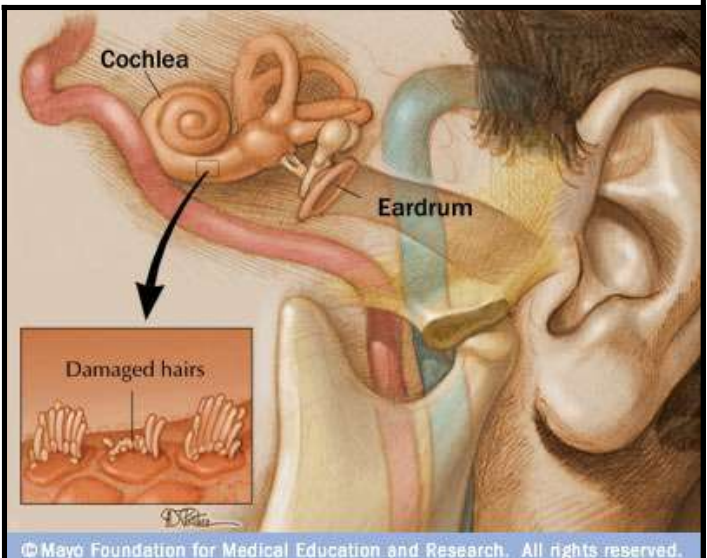
In general, contrary to what is generally thought, we need relatively **high fat** in our diet (the essential vitamins etc for vision, bone building and repair, muscle building etc, are primarily found in animal foods, especially the fat), **moderate protein** and **low carbohydrate**. So we need more **red meat** not only for carnitine but for fat-soluble vitamins like

Vitamin A, E, D and K2



In 2014, a study printed in *Nutrients* provided evidence that **Vitamin A can stimulate the regeneration of mammalian auditory hair cells and supports self-renewal of stem cells**. Vitamin A's ability to not only protect but regenerate or **replace damaged hair cells** in the ear comes from **modern work with stem cells**, which are unspecialized cells that can be converted to **many other specialized cells** too, including muscle and nerve cells.

* So we already know that **Vitamin A is essential for eyesight**, but we do also need it for balance.



Here are comments I found on other nutrients needed

* **Tinnitus, imbalance, and blindness** in the elderly can be **prevented**, even improved by taking sufficient **zinc supplementation**.

* **Potassium** is most needed in your ears especially in the part where **noise signals** are **converted to electrical impulses**.

* **Manganese** is required for inner ear function that controls **tinnitus** and the **sense of balance**.

* Manganese allows us to judge where we are **positioned in the space** around us.

* **Magnesium is like a shield** protecting our ears from **unwanted noise attack**.

* **Magnesium** protects from noise-induced hearing loss. When noise irritates, **magnesium comes to the rescue** by combating the free radicals emitted during the attack much like a **protective barrier in the inner ear where the hair cells are present**.

* People are afraid to exercise for fear of falling, but it is **exercise** that strengthens the muscles to keep us upright.

Balance-strengthening Exercises

Some simple exercises that you might be able to do at home to help with strength and balance. Start slowly and gradually increase number of repetitions. Remember to rest between exercises. Don't over-do it. Use something stable to lean on and steady you.

You don't need to go to the gym!

You have plenty of equipment at home. These simple items in your home will help to improve your balance.

- ✓ Your bed
- ✓ A good upright kitchen chair
- ✓ Kitchen bench
- ✓ Table

on bed

BOTTOM LIFTS



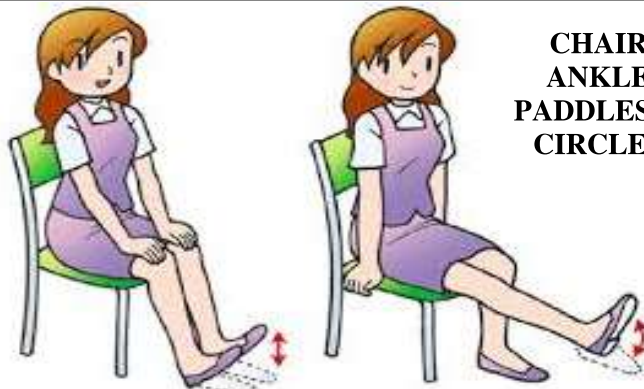
BOTTOM LIFTS

These will help to strengthen your body core. Lying on your back on your bed, slide both feet up towards the knees.

Then slowly lift bottom in the air by tightening your stomach muscles while keeping your back straight.

Hold for a few seconds, slowly lower bottom. Gradually increase the number of repeats as you become comfortable with your ability.

**CHAIR
ANKLE
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STAND TALL

To avoid being knocked over sideways, when in a crowd or waiting in a queue -

Stand pigeon-toed.

If you have to stand you are safer and more stable standing with toes inward.

TRY IT!!

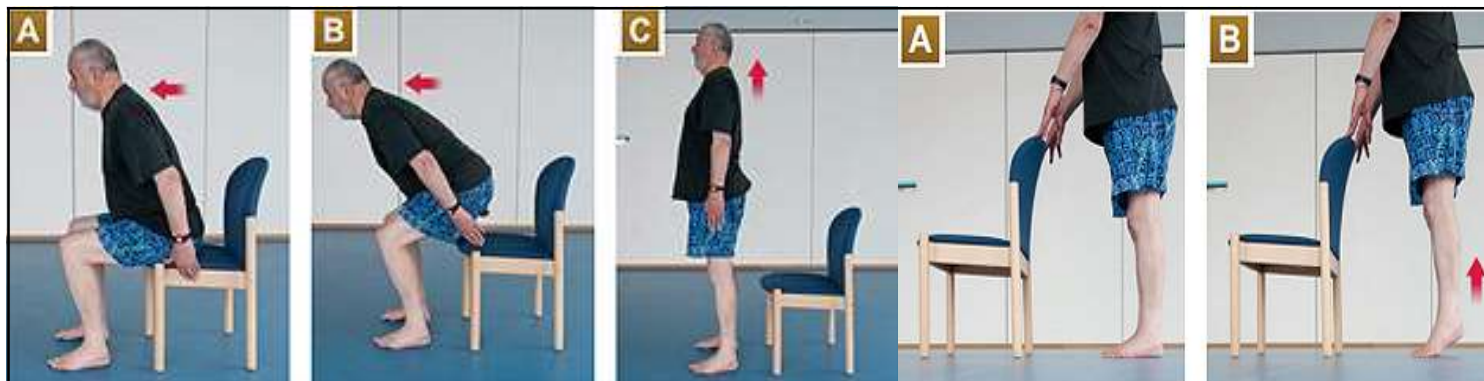


**ARM & LEG
STRETCHES**

Theraband or stretchy rubber bands are a fun way of exercising arms and can help you lift a weak leg for exercise.

They come in different colours for different strengths.

Available in sports stores



Stand and sit down again slowly a number of times - if you can . . .

Heel raises - up an down and hold . . .

