



NOVEMBER 2016

Proprioception and Balance

ESSENTIAL PHYSIOTHERAPY

Started a new exercise regime lately and noticed your balance isn't quite up to scratch? Chances are, you need to dial things back a little and return to the basics. Balance is an important part of fitness and improving your balance can dramatically improve your performance.

What is balance?

Balance is a state in which weight is evenly distributed in order to prevent falling. Balance has major parts:

- Sight
- Vestibular system (the inner ear)
- Proprioception

Change any one of these three variables and you'll challenge your balance in different ways.

What is proprioception?

Proprioception refers to the awareness of a person about their body's position in space. The origin of the word is derived from Latin, and it translates as "one's own perception". The central nervous system gains sensory input from receptors in the skin known as mechanoreceptors. This information is processed by the

brain, and helps to translate data sent from the body in the form of vibrations, pressure, motion and joint position. Proprioception helps to maintain stability.

How can I test and improve my proprioception?

1. Stand with two feet together.
2. Close your eyes.
3. Count how long you can maintain your balance for.
4. Try again, this time standing on one foot. Close your eyes only once you have found a steady posture with your eyes open.
5. To increase difficulty, stand on an uneven surface, like a pillow on the floor. Start by standing with two feet together; stand on one foot if this becomes too easy.

While this isn't a definitive test, if there is a significant difference in your balance when your eyes are open to when your eyes are close, or from the right side to the left side, your proprioception might be a little diminished.

Speak to your physiotherapist for more practical tips on how to reduce injury incidence by improving your balance and proprioception.



Brain Teasers

1. Mr. and Mrs. Smith have seven daughters.

If each daughter has a brother how many children do Mr. and Mrs. Smith have?

2. I have four wings, but cannot fly, I never laugh and never cry; on the same spot I'm always found, toiling away with little sound.

What am I?

3. A man rode out of town on Sunday, he stayed a whole night at a hotel and rode back to town the next day on Sunday.

How is this possible?

PhysioTip

Not all injuries can be fixed in one or two sessions. Let your physiotherapist help you set realistic goals for your recovery.

Meniscal injuries

The knees take a lot of impact when doing medium- or high-impact activities such as running, jumping, hill-walking and playing field sports. The meniscus is commonly damaged during these activities, and can be a cause of significant pain and movement dysfunction if damaged. What exactly is this mysterious meniscus, and why is it so important?

What is the role of the meniscus?

The meniscus is a thin, fibrous cartilage lining the bones of the knee. Its main function is to absorb shock when performing weight-bearing activities such as walking, running or hopping.

The meniscus in the knee is c-shaped, and there is one on the outside (lateral) and one on the inside (medial) knee joint.

The medial meniscus is more commonly damaged than the lateral meniscus, because of the fact that more weight is transferred through the medial knee joint in normal movement.

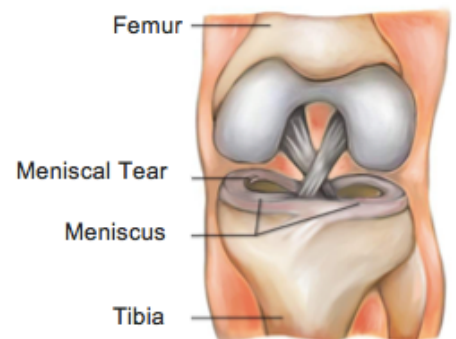
What causes meniscal damage?

Twisting forces most frequently damage the meniscus. For example, if a soccer player's foot is planted on the ground and their body rotates around the knee, the meniscus will often be unable to withstand the pressure and will sustain a strain or a tear. This can be of varying degrees, to a few stretched fibres right up to a large tear involving multiple areas of the cartilage. A locking, clicking or clunking may be felt in the knee upon movement. Your physiotherapist will be able to perform clinical tests to check whether the meniscus is likely to have been damaged or not.

Can I recover from a meniscal injury?

Depending on the extent and location of the injury, many patients have excellent functional outcomes with physiotherapy management. This typically involves strengthening the muscles around the knee as well as increasing the range and training task-specific activities. Sometimes, a referral to an orthopaedic doctor can help to determine whether or not surgery may be appropriate. If you have any doubts, talk to your physiotherapist about your options.

None of the information in this newsletter is a replacement for proper medical advice. Always see a medical professional for advice on your individual injury.



Brain Teaser Answers:

1. They have eight children. 2. A windmill. 3. The man's horse is called Sunday.

Lizzie's Toasted Muesli

Ingredients:

- 2-3 cups Quick Cook Oats
- 2 cups Bran
- 1-2 cups All Bran
- 2 cups Sunflower Seeds
- 2 cups Pumpkin Seeds
- 1 cups Linseed
- 1 cups Coconut Chips
- 1 cups Shredded Coconut
- 1 cups Almonds or Brazil nuts
- 1 cup Cold pressed oil
- 1 cup Honey
- 2 Tbsp Quinoa
(cooked for 5 mins)
- 1 Tbsp Chia Seeds
(soak for 10 mins)
- 1-2 cups Dried Fruit;
Raisins Apricots, Goji Berries and Dates



1. Mix all ingredients in a roasting pan. Roast at 150° Celsius for 15 minutes.
2. Turn ingredients gently then place back in the oven for 15 minutes. Roast until golden brown and cool. Once cooled, add dried fruit.
3. Keep in a sealed container. This muesli will keep for a month.

Note from the chef:

"This is a super-food breakfast. The combined ingredients provide great nutrition for the start of your day by including vitamin A, Vitamin E, selenium, fiber, protein and omega 3."

Recipe by Lizzie Carson from Vknow Winebar and Restaurant Fernhill, Queenstown, NZ.



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