

# September 2017 Newsletter

Turramurra Trotters  
Running since 1974

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# The Newsletter

## Re-cap of the month, plus announcements:

Dear all

Thank you to Alex and Pam Rosser for drink duties during September. Julie Madden and Val Lombard will be handling October.

Each year around this time the walking group starts earlier (6:15 am). This year the **start time for walkers will commence on 14 October**.

There was a very successful Blackmores Running Festival and Melanie Duncan wrote of her experience as a “pacer”. The report is below.

Each year we have our Christmas Function at the Blue Gum Hotel, Waitara on the second Wednesday of December. If you have any ideas about a change in venue and/or date please let me know by mid October.

Regards

Alan

## A note from Bruce Donnelley

Hi Alan,

I was helping at a friend's charity function during the weekend for the Cambodian charity "Build Your Future Today" (BFT) and received a brochure for the charity BIKES 4 LIFE SYDNEY, an interesting concept.

There are many unused bikes in Sydney that could find a useful new home in Cambodia.

Could you please insert the attached into the next Trotters newsletter?

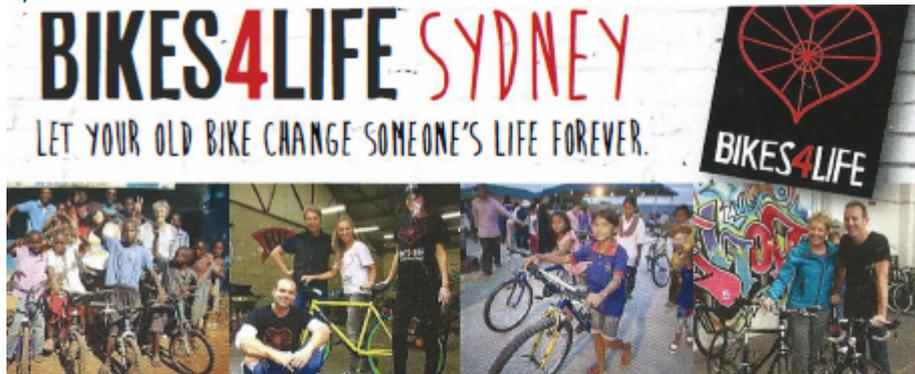
Our Trotters bike riding group and others maybe interested to help.

Regards,

Bruce

# Bikes4Life

flyer



At Bikes4Life, it is our mission to collect, restore and provide bicycles to the most marginalised & impoverished communities around the world.

One bicycle can support social rehabilitation & economic change. In remote societies a bicycle is not only a means of transport to places of employment and education but can provide many with access to remote sources of food, water, medicine and shelter.

If you have an unused bike in good working condition that you would like to donate or would like to get involved, we would love to hear from you. No mechanical experience needed and kids and families are welcome.

### When we are open

#### SUNDAYS - OPEN FOR BIKE COLLECTION & WORKSHOP VOLUNTEERS

The first Sunday of every month 9am - 1pm

If you can volunteer to help prepare bikes for shipments on Sunday's then we would love to hear from you. Please contact [sara@bikes4life.com.au](mailto:sara@bikes4life.com.au) to register your interest.

#### WEDNESDAYS - OPEN FOR BIKE COLLECTION / DROP OFF ONLY

~~See over for tips on how to prepare your bike for donation~~  
(See over for tips on how to prepare your bike for donation)

2-4pm

### Where to find us

UNIT 3/130 OLD PITTWATER ROAD, BROOKVALE

[WWW.BIKES4LIFE.COM.AU](http://WWW.BIKES4LIFE.COM.AU) or contact Sara at [sara@bikes4life.com.au](mailto:sara@bikes4life.com.au)  

PROUDLY SUPPORTED BY



How to prepare a bike for donation.



## Blackmores Running Festival – Marathon experience – Melanie Duncan

Wow, what a day! Had my first go at pacing today & loved it!! As 6hr pacers in the marathon, another runner (Paul Bernard) & I had to stick to an 8:30 pace, so it was a lot of walking with a bit of jogging.

It was drama filled, right from the start, with two pacers having their flags ripped out of their packs by other runners. There was a scuffle in the first km, but the flags were retrieved.

Sticking to such a slow pace meant that we had the sweeper's van right behind us (like, literally 5m behind us), then a police car or two behind that. One benefit of being so slow was that we just about had the Harbour Bridge & the Cahill to ourselves. It was a bit surreal.

I was definitely surprised to find a few runners struggling by the 10k mark. By about 12k, we were entering Centennial Park & the sweeper's van was starting to get busy. We caught up with one lady & tried to keep her with us, but she couldn't keep up. She dropped way back & was just ahead of the sweeper's van (which had also dropped right back) along with a couple of other runners. At one point I looked back & they were all gone, so I assumed they had been picked up by the van. Then a couple of kms later, she suddenly appeared in front of us! Hmm, dodgy! Paul & I were discussing what to do about it then we caught her again. Again she couldn't keep up with us & that was it - the van got her that time.

At about the 20km mark, I spotted Nick Drayson going really well & looking very strong.

For the record Nick (70-74 age group) finished in 4:22:13. ed

As we wound our way around the city blocks, the tall buildings played havoc with our watches, so we ended up totally unsure of whether we were ahead, on time or behind our target pace. Mental calculations from 26kms on, based on often inaccurate road markers made for a stressful next 10kms.

On the way out to Pymont, we passed Les's drink station which was in full swing, with everyone working hard.

Quite a few runners were really struggling over the last 10kms. We tried our best to keep them going. The determination of some of them was amazing to see. They were clearly struggling but absolutely determined to not give up.

Passing Les's drink station the second time & we were nearly finished. The last couple of kms were a bit overwhelming, with lots of people thanking us & cheering us on. The final 300m to the Opera House felt like we were walking down a 'red

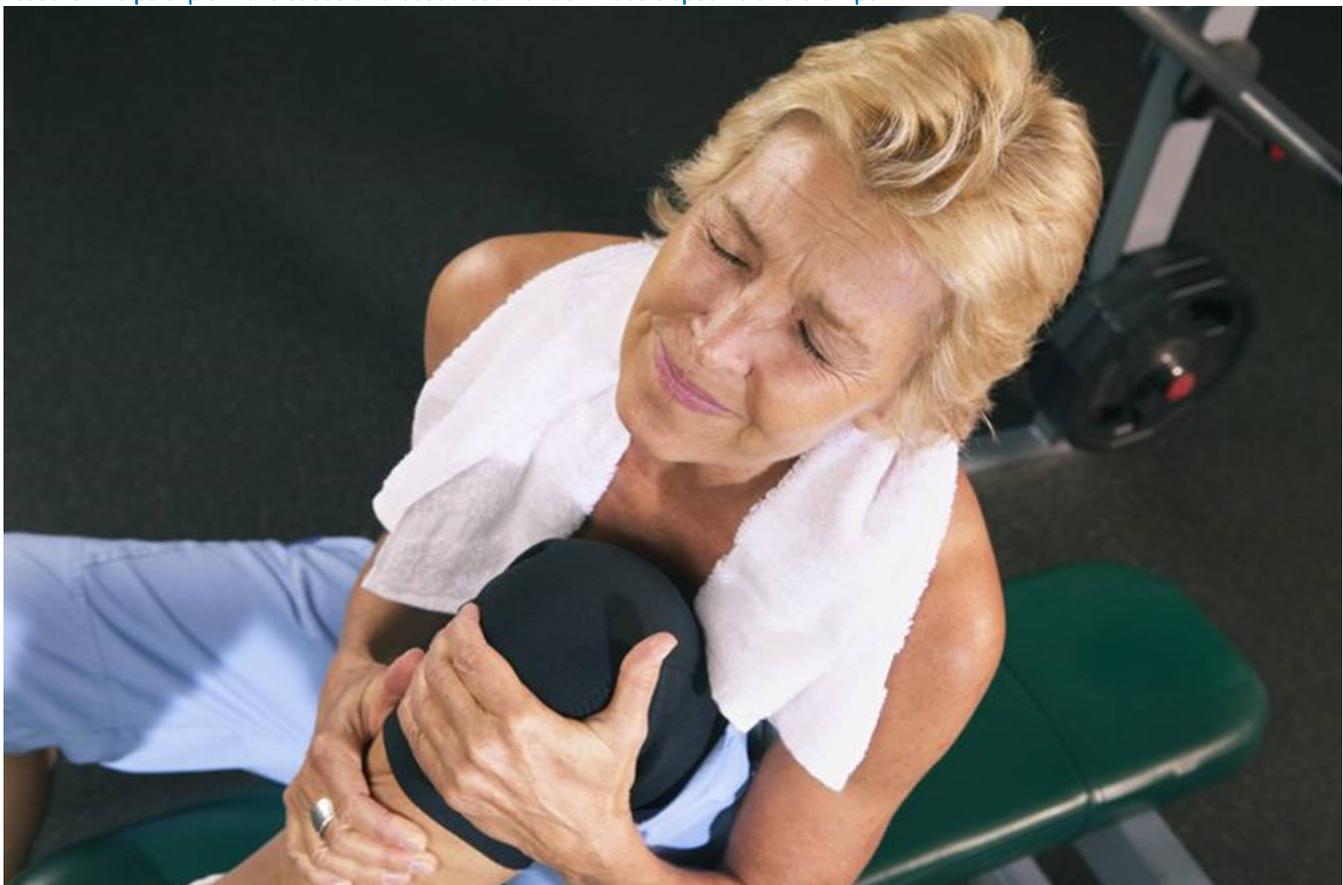
carpet', which was totally unexpected, but really special. We finished in 5:58:52 - not quite as good as Mike Morrissey, but not too bad for a first attempt.

All in all, it was one of the most amazing runs I've ever done. A totally incredible experience!!



## What Really Causes Muscle Spasms and Cramps?

Research helps explain the cause and best treatment of muscle spasms and cramps



### Muscle spasms.

If you've ever had muscle spasms or muscle cramps, you know they can be extremely painful. In some cases, a muscle may spasm so forcefully that it results in a bruise on the skin. Most muscle spasms and cramps are involuntary contractions of a muscle. A serious muscle spasm doesn't release on its own and requires manual stretching to help relax and lengthen the shortened muscle. Spasms and cramps can be mild or extremely painful.

While they can happen to any skeletal muscle, they are most common in the legs and feet and muscles that cross two joints (the calf muscle, for example). Cramps can involve part of a muscle or all the muscles in a group. The most commonly affected muscle groups are:

- Back of lower leg/calf (gastrocnemius).
- Back of thigh (hamstrings).
- Front of thigh (quadriceps).
- Feet, hands, arms, abdomen

Muscle cramps range in intensity from a slight twitch or tic to severe pain. A cramped muscle can feel rock-hard and last a few seconds to several minutes or longer. It is not uncommon for cramps to ease up and then return several times before they go away entirely.

## What Causes Muscle Cramps

The exact cause of muscle cramps is still unknown, but the theories most commonly cited include:

- Altered neuromuscular control
- Dehydration
- Electrolyte depletion
- Poor conditioning
- Muscle fatigue
- Doing a new activity

Other factors that have been associated with muscle cramps include exercising in extreme heat.

The belief is that muscle cramps are more common during exercise in the heat because sweat contains fluids as well as electrolyte (salt, potassium, magnesium and calcium). When these nutrients fall to certain levels, the incidence of muscle spasms increases. Because athletes are more likely to get cramps in the preseason, near the end of (or the night after) intense or prolonged exercise, some feel that a lack of conditioning results in cramps.

## Research Supports Altered Neuromuscular Control as the Cause of Cramps

While all these theories are being studied, researchers are finding more evidence that the "altered neuromuscular control" hypothesis is the principal pathophysiological mechanism that leads to exercise-associated muscle cramping (EAMC). Altered neuromuscular control is often related to muscle fatigue and results in a disruption of muscle coordination and control.

According to a review of the literature conducted by Martin Schwellnus from the University of Cape Town, the evidence supporting both the "electrolyte depletion" and "dehydration" hypotheses as the cause of muscle cramps is not convincing. He reviewed the available literature supporting these theories and found mostly anecdotal clinical observations and one small case-control study with only 10 subjects. He also found another four clinical prospective cohort studies that clearly did not support the "electrolyte depletion" and "dehydration" hypotheses as the cause of muscle cramps. In his review, Schwellnus concludes that the "electrolyte depletion" and "dehydration" hypotheses do not offer plausible pathophysiological mechanisms with supporting scientific evidence that could adequately explain the clinical presentation and management of exercise-associated muscle cramping.

He goes on to write:

"Scientific evidence for the "altered neuromuscular control" hypothesis is based on evidence from research studies in human models of muscle cramping, epidemiological studies in cramping athletes, and animal experimental data. Whilst it is clear that further evidence to support the "altered neuromuscular control" hypothesis is also required, research data are accumulating that support this as the principal pathophysiological mechanism for the aetiology of exercise-associated muscle cramping (EAMC)."

## Treating Muscle Cramps

Cramps usually go away on their own without treatment, but these tips appear to help speed the healing process:

## Preventing Muscle Cramps

Until we learn the exact cause of muscle cramps, it will be difficult to say with any confidence how to prevent them. However, these tips are most recommended by experts and athletes alike:

Most muscle cramps are not serious. If your muscle cramps are severe, frequent, constant or of concern, see your doctor.

- Stop the activity that caused the cramp.
- Gently stretch and massage the cramping muscle.
- Hold the joint in a stretched position until the cramp stops.
- Improve fitness and avoid muscle fatigue
- Stretch regularly after exercise
- Warm up before exercise
- Stretch the calf muscle: In a standing lunge with both feet pointed forward, straighten the rear leg.
- Stretch the hamstring muscle: Sit with one leg folded in and the other straight out, foot upright and toes and ankle relaxed. Lean forward slightly, touch foot of straightened leg. (Repeat with opposite leg.)
- Stretch the quadriceps muscle: While standing, hold top of foot with opposite hand and gently pull heel toward buttocks. (Repeat with opposite leg.)

## How to Walk for Beginners



Congratulations, you have decided it is time to start walking for health, fitness, and perhaps for weight loss. Walking is a great, natural way to achieve the daily physical activity amount recommended for good health.

We will lead you through a program for absolute beginners, with the goal to have you walking comfortably for 30 minutes to an hour, the level of physical activity recommended to reduce risks of heart disease, type II diabetes, breast cancer and colon cancer.

1. **Preparing to walk:** what you need to do before you begin a walking program. This includes whether you need to get medical advice before starting a walking program, what to wear for walking, and what kind of shoes to wear.
2. **Walking Technique:** Next, you will learn a good walking technique with proper posture, use of arms and leg motion.
3. **Beginner's Walking Schedule:** how often to walk, how fast and how far to build up to the level of 30-60 minutes per day.

## Preparing to Walk

We begin by getting you ready to head out the door -- or onto the treadmill. All of the advice included is good for walking either indoors or outdoors. To begin, we'll see if your body has any special needs before starting an exercise program. Then it's on to gear-up with clothing and shoes.

## When to Get a Medical Check-up Before Starting a Walking Program

Contact your medical provider for a check-up or consultation before you begin your walking program if any of these apply:

- You have been sedentary for a year or more.
- You don't currently exercise and are over age 65.
- You have been diagnosed with heart trouble.
- Pregnant
- High blood pressure.
- Diabetes
- You have chest pain, especially when exerting yourself.
- You often feel faint or have severe dizzy spells
- Other medical conditions.

## What Should You Wear When Walking for Fitness?

What should you wear for fitness walking? Your walking clothing should be comfortable and loose-fitting to allow you to move.

- Depending on your climate, dress in layers so you may remove a layer as you warm up while walking, and put it back on if you feel cool.
- If you do not plan to walk up a sweat, a system can be as simple as a t-shirt, light sweater, and windproof jacket.
- If you sweat while walking, you should invest in CoolMax or polypropylene shirts to wick the sweat away from the body.
- In cooler climates, you may want an insulating layer of polar fleece or wool.
- Socks should be comfortable, and the modern running socks made from CoolMax or other high-tech fibers are preferable to cotton, as they prevent blisters by keeping the feet drier.
- A hat is essential to preventing sun exposure or keeping you from losing heat.
- Sunglasses for outdoor walking prevent UV exposure for your eyes.
- Wear sunscreen.
- Carry keys and other articles in pockets or a hip pack. Pack lightly for most walks and leave the heavy purse at home.
- Carry water if you plan to be walking for a half hour or more with no water on your route. A hip pack with built-in water bottle holder is convenient.

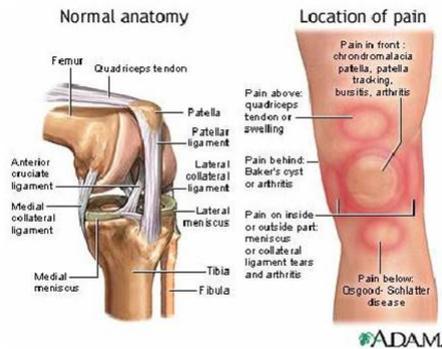
## What Shoes Should You Wear for Walking for Fitness?

Your shoes are your chief walking tool.

- **Fit:** Your shoes must fit well, but leave enough room so your feet can expand while walking. Your walking shoes should be a size to a size and a half larger than your dress shoe.
- **Flex:** Good walking shoes are flexible. Your foot flexes as you roll through a step from heel to toe. If your shoe doesn't flex with it, you can't get a good walking motion and your feet fight your shoes with each step. See if your shoe bends in the ball of the foot and if you can twist it from side to side. If it is stiff as a board, you need different shoes.
- **Flat:** Walking shoes should be flat, with little difference in height between the heel and the ball of the foot. This is one of the biggest difference between a good walking shoe and some running shoe designs. Look for designs that are flatter rather than having a built-up heel.
- A well-fit pair of running shoes is the best answer for most walkers. Many specialty walking shoes are too stiff and do not incorporate performance characteristics of today's running shoes to prevent overpronation.
- Replace your shoes every 800 km.

# Medical Definition the Patellofemoral Joint

## Where the Kneecap and the Thigh Bone Meet



The patellofemoral joint is where your patella (kneecap) and femur (thigh bone) meet at the front of your knee. The underside of your kneecap sits in a groove within your thigh bone called the patellofemoral groove. Within this groove, the kneecap mostly moves lengthwise, but it has some side-to-side movement and can tilt and rotate as well.

When you contract the quadriceps muscles of your thigh, they pull on the quadriceps tendon that attaches to your kneecap.

This makes your knee straighten. Two other thigh muscles keep your kneecap in the femoral groove during this motion -- the vastus medialis obliquus and the vastus lateralis, located on the inside and the outside of your thigh.

## How You Use Your Patellofemoral Joints in Physical Activity

Some daily motions that "work" your patellofemoral joints include:

- Walking uphill or downhill
- Going up or down stairs
- Kneeling, squatting, or getting up from a seated position

These are the types of everyday activities the patellofemoral joint was designed and evolved to perform. It works well, but, like the rest of your body, it undergoes wear and tear from almost constant use over the years. In addition, taking part in sports can lead to overuse and even abuse of the patellofemoral joint.

## Patellofemoral Pain Syndrome

Misalignment or repeated contact of the joint surfaces may lead to patellofemoral pain syndrome, which is characterized by joint irritation and inflammation, knee pain, and limited range of motion in the knee.

The key symptom of patellofemoral pain syndrome is pain under and around your kneecap.

Irritation of this joint is generally caused by the following factors:

- Acute injury to the kneecap, such as a blow to the knee, falling on the knee, wrenching the knee with a sudden twisting motion, or getting tackled in football
- Misalignment of the joint -- for example, when the kneecap no longer "tracks" properly within the patellofemoral groove
- Overuse from excessive running, particularly if the knee muscles are weak (the reason why "runner's knee" is another name for this syndrome)
- Chronic wear and tear of the knee joint from everyday activity and sports
- Poor foot mechanics

## Chondromalacia

Patellofemoral irritation may also lead to breakdown of cartilage (flexible connective tissue) on the underside of the kneecap (chondromalacia). In its most chronic form, this condition may require surgical repair. This is a common injury in runners, soccer players, skiers, and cyclists.

Symptoms of chondromalacia include a dull pain under or around the kneecap. This may be felt when going down or up stairs or getting out of a chair. Chondromalacia can be due to long-term wear and tear, muscle weakness, or knee-alignment problems, or it can develop after a fall.

### Patellar Dislocation

Knee dislocations happen when the kneecap slips out of the patellofemoral groove. This is very painful and can damage the joint cartilage. Causes of patellar dislocation include:

- Having a shallow patellofemoral groove
- Having a "high-riding" kneecap (more common in girls), a condition called patella alta, that makes it easier for the kneecap to slip out of the groove and dislocate -- for example, because of a strong contraction of the quadriceps or a blow or injury to the knee.

## How Exercise Might Increase Your Self-Control



For most of us, temptations are everywhere, from the dessert buffet to the online shoe boutique. But a new study suggests that exercise might be a simple if unexpected way to increase our willpower and perhaps help us to avoid making impulsive choices that we will later regret.

Self-control is one of those concepts that we all recognize and applaud but do not necessarily practice. It requires forgoing things that entice us, which, let's face it, is not fun. On the other hand, lack of self-control can be consequential for health and well-being, often contributing to problems like weight gain, depression or money woes.

Given these impacts, scientists and therapists have been interested in finding ways to increase people's self-restraint. Various types of behavioural therapies and counselling have shown promise. But such techniques typically require professional assistance and have for the most part been used to treat people with abnormally high levels of impulsiveness.

There have been few scientifically validated options available to help those of us who might want to be just a little better at resisting our more devilish urges.

Exercise is known to have considerable psychological effects. It can raise moods, for example, and expand people's sense of what they are capable of doing. So perhaps, the researchers speculated, exercise might alter how well people can control their impulses.

To find out, the scientists decided first to mount a tiny pilot study, involving only four men and women.

These volunteers, who had been sedentary and overweight, were told they would be taking part in an exercise program to get them ready to complete a 5K race, and that the study would examine some of the effects of the training, including psychological impacts.

The volunteers began by completing a number of questionnaires, including one that quantified their "delay discounting," a measure that psychologists use to assess someone's ability to put off pleasures now for greater enjoyments in the future. It tests, for instance, whether a person would choose to accept \$5 today or \$15 a week from now.

The delay-discounting questionnaire is generally accepted in research circles as a valid measure of someone's self-control.

The volunteers then undertook a two-month walking and jogging regimen, meeting three times a week for 45 minutes with the researchers, who coached them through the sessions, urging them to maintain a pace that felt difficult but sustainable. Each week the men and women also repeated the questionnaires.

Finally, a month after the formal training had ended, the volunteers returned to the university for one more round of testing. (Later, two of them also ran 5K races.)

The results were intriguing, the researchers felt. Three of the four participants had developed significantly greater self-control, according to their delay-discounting answers, and maintained those gains a month after the formal training had ended. But one volunteer, who had missed multiple sessions, showed no changes in impulsivity.

A four-person study is too small to be meaningful, though, so the researchers next repeated the experiment with 12 women of varying ages, weights and fitness levels.

The results were almost identical to those in the pilot study. Most of the women gained a notable degree of self-control, based on their questionnaires, after completing the walking and jogging program. (In this experiment, they were told they were training for better fitness.)

But the increases were proportional; the more sessions a woman attended or the more her average jogging pace increased, the greater the improvement in her delay-discounting score.

These gains lingered a month after the training had ended, although most of the women had tapered off their exercise routines by then.

The upshot of these results would seem to be that exercise could be a simple way to help people shore up their self-restraint, says Michael Sofis, a doctoral candidate in applied behavioural science at the University of Kansas who led the study.

These two experiments cannot tell us, though, how exercise helps us to ignore a cupcake's allure. But Mr. Sofis says that many past studies have concluded that regular exercise alters the workings of portions of the brain involved in higher-level thinking and decision-making, which, in turn, play important roles in impulse control.

Exercise also may have more abstract psychological impacts on our sense of self-control, he says. It is, for many of us, a concentrated form of delayed gratification. Exerting ourselves during a workout is not always immediately pleasurable. But it can feel marvelous afterward to know that we managed to keep going, a sensation that could spill over into later decision-making.

Of course, with a total of only 16 participants, these experiments remained small-scale and limited, relying on a fundamentally artificial, mathematical measure of self-control. The scientists did not, for example, track whether the volunteers became less impulsive in their actual daily lives. Mr. Sofis and his colleagues hope to conduct follow-up studies that will look at the real-world impacts of exercise on self-control.

But for now, he says, these results suggest that normal people “can change and improve their self-control with regular physical activity.”

## Hamlin 10 Day Ethiopian Adventure

March 4 - 13, 2018

Dear Alan,

### **Ever dreamt of travelling to Ethiopia and running for a cause?**

Hamlin Fistula Ethiopia would like to officially invite you and Turramurra Trotters to join us in March 2018 for the Hamlin 10 Day Ethiopian Adventure and Ethiopia's International Women's Day 5km run.

Founded by legendary Australian, Dr Catherine Hamlin, Hamlin Fistula Ethiopia is a healthcare network dedicated to the treatment and prevention of a horrific childbirth injury, obstetric fistula. By coming on this trip, you can help end obstetric fistula forever.

The ten day trip is packed full of activities. You will be treated to an exclusive insider's tour of Hamlin Fistula Ethiopia and of the breathtaking country Dr Catherine Hamlin has called home for over half a century, all whilst making lifelong friends.

### **What will you do?**

- **Participate in the International Women's Day 5km run with 7,000 Ethiopian women (at altitude)!**
- Visit the Addis Ababa Fistula Hospital, Yirgalem Fistula Hospital, Hamlin College of Midwives, Desta Mender and a rural Hamlin Midwifery Clinic
- Meet patients and key Hamlin staff members
- Experience Ethiopia's rich culture - eat traditional food, explore local markets and visit historical sites
- Help end obstetric fistula forever by raising funds for this important work

Make your 2018 a year to remember and join us on this trip of a lifetime. **Express your interest today and we'll send you some more information.**

Team Hamlin x

## Two Proven Ways to Keep Your Memory Sharp

Many people, from the age of 50, become concerned about declining memory and mental alertness. Actually, the start of brain changes that ultimately lead to Alzheimer's dementia start earlier, in the 40's. That's the bad news.

The good news is that there are two simple actions you can take right now that have been shown to stop the brain shrinking and keep your memory sharp. According to researchers at the US National Institutes of Health (NIH) researchers these two simple actions account for up to 44% of the risk for Alzheimer's<sup>[1]</sup> and, of all the prevention steps you can take to cut your risk, are the easiest for you to action.

These are:

1. Keep your homocysteine level below 10mcmol/l with B vitamins

2. Ensure an optimal intake of omega-3 fats According to a robust double-blind, placebo controlled trial at the University of Oxford, those with declining memory, a raised homocysteine level, supplementing B vitamins resulted in 73% less brain shrinkage in one year, compared to placebo provided they had sufficient intake of omega-3 fats.[2]

The point here is that you need both an optimal intake of omega-3 fats and enough B vitamins to keep your homocysteine down. If you read my recent special report 'How to Boost Your Intelligence' you'll know that your brain cells (neurons) are made out of a combination of omega-3 fats (mainly DHA) attached to phospholipids, and that the linking of these two depends on B vitamins required for healthy methylation, which is what the blood test homocysteine measures. If your H score is high it means you don't have enough B vitamins for healthy methylation.

Omega-3 fats keep your brain healthy & memory sharp

The average person in the UK consumes 1 to 2 fish servings per week (217g).[3] According to the NIH researchers low fish/omega-3 intake versus high fish consumption accounts for 22% of Alzheimer's cases and is associated with reduced brain volume.[4] Hence, the more fish you eat the more healthy grey matter there is in the brain.[5] Another survey found that eating one serving of oily fish a week was associated with halving the risk of Alzheimer's.

Supplements of one key essential fat found in omega-3 fish oil, called DHA, have been shown to enhance memory in adults [6] who don't eat fish, and to prevent memory loss in those in the early stages of memory decline.[7] Studies giving supplemental omega-3 fish oils have shown improved cognition in older people and positive structural changes in the brain.[8] Overall, what the studies to date show clearly is that memory significantly improves in people with or without mild memory complaints if given omega-3 supplements providing DHA/EPA at a daily intake of 1 gram of EPA/DHA or more.[9]

Also, having more omega-3 fats from diet has been shown to link to increase blood brain flow, according to researchers at the University of South Dakota School of Medicine. They selected a group of participants and found that the higher their omega-3 level in the blood the better was their blood brain flow rate, which is a hallmark of enhanced memory. According to study co-author William Harris "this raises the possibility that higher omega-3 EPA&DHA fatty acid level can improve underlying brain physiology that may in turn translate to better cognitive reserve".[10]

Omega-3s may also protect the brain from amyloid plaque. The accumulation of amyloid protein, leading to the formation of 'sticky' amyloid plaque that stops the brain working, has long been argued to be a cause of memory loss and drugs, unsuccessfully, have targetted blocking amyloid formation. However, a small trial giving people both omega-3 and antioxidants has shown improved clearance (phagocytosis) of amyloid deposits in the brain.[11]

There's another good reason to supplement omega-3 fish oils. Doing so may lower your homocysteine, which is the second proven memory protector. A meta-analysis of eleven trials in which people were given omega-3 fish oil capsules, the average drop in homocysteine was a significant 1.6 mcmol/l.[12]

While fish oil capsules only provide omega-3, eating oily fish gives you other nutrients, including the vital vitamin B12 that is the lynchpin of healthy methylation. But it's not just oily fish. The more fish you eat, the better your memory test performance. All fish are also excellent sources of vitamins B12 [13], D and choline, all essential for the brain.

My strong advice is to both eating three servings of oily fish a week, and supplement over 550mg of combined EPA&DHA. This will give you the equivalent of 2 grams of omega-3, providing close to 1g of EPA&DHA a day, which is optimal for brain protection. This is what I eat and take with my two daily essential omega capsules.

Keep your homocysteine low with B vitamins

A high blood homocysteine level, which is the best way to know if you're getting enough B vitamins for healthy methylation, is known to increase the rate of brain shrinkage.[14] You want to keep your 'H' score below 10mcmol/l. Something like one in three people over age 60 have an H score higher than this and are therefore at risk of dementia later in life.[15] This risk factor is estimated to account for 22% of Alzheimer's disease according to the US National Institute of Health researchers.

Giving B6, B12 and folic acid supplements to people with high homocysteine has already shown a nine-fold reduction in brain shrinkage and a substantial reduction in rate of memory loss (cessation in some cases).[16] This is the only proven disease-modifying treatment to date and is thus the strongest prevention factor.

In an enlightened health service we would screen people from aged 50 for the first signs of cognitive impairment and, if present, measure homocysteine.