

TRAILBLAZERS

A quarterly newsletter for the reading pleasure of all SMTFA members



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Masters athletes, typically defined as racers over 40 years of age, often have bigger challenges than the younger set when finding consistent training and adequate recovery time. Work, family, increased recovery needs and a general lack of available time can all impede progress towards race success.

That doesn't mean that older athletes don't have goals. Perhaps you're on a PR quest, or maybe taking on a new race distance. Whatever your motivation, being prepared is key. No one wants to show up on the starting line lamenting missed workouts and a lack of preparation. Some simple steps and planning can help every busy masters athlete reach their goals. Draw out the plan on your calendar and get go!

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A time to reflect, a time to plan

Success consists of going from failure to failure without loss of enthusiasm.

By the time this copy goes to print, 2016 would have burned itself out and we raise our glasses to toast the advent of a whole new year. HAPPY AND SUCCESSFUL NEW YEAR everyone! May 2017 be a more bountiful season for all - more PBs, more medals, more excitement and, of course, more glory and joy.

As 2016 fades into history, no doubt each, especially the more serious ones amongst you, would have given thoughts to what could, should or would have been; what went right and what went wrong. Heartiest congratulations to those whose successes gave a much-needed inspiration to all, as well as to those who did their best but fell short of a podium finish or set goals. However, giving your all in competition, especially against the odds, reveals character which goes a long way towards earning the respect and adulation of your team and adversary alike.

Then, there are those for whom nothing went right. There is no reason to feel forlorn or to panic, or to doubt your own ability to turn things around in the new season. Perhaps it was a case of "bad hair year" all round - too much work and family

commitments, too many injuries, frequent travelling, never really tried, or what have you. Whatever the reason or reasons, be candid and come to terms with yourself before re-arranging your priorities for the new season, and resolve to soldier on without loss of enthusiasm.

Basically, it's a question of how important masters athletics is to you (or how bad do you want it): if it's important, you will find a way, if not you would probably rationalize yourself out of it. If your passion and aspiration are still intact despite a lackadaisical performance, the work-play balancing act task should not be too difficult. Again, you just have to ask yourself: Is it all going to be worth it? Only you have the answer.

However, if you prefer to carry on without any goals or plans (without a coach, even), to just take things as they come, that's your prerogative. Nowhere is it written that you must take masters athletics so seriously. But be wary of the dangers of this casual approach towards competitive athletics - endless injuries, wasted time and money (to fix your injuries), nothing of note to preserved for posterity, not to mention the loss of *amour-propre* along the way. Unpleasant, to say the least, but entirely avoidable.

No doubt, 2017 promises to be an exciting year, especially for those looking for new challenges. Apart from local meets, they

can choose from a variety of overseas options, e.g. Thailand, Korea (Indoor WMAC), Taiwan, Hong Kong and China (AMAC) (see 2017 Calendar of Events for the full list). For the serious-minded, it's time to mark their calendars for possible killing-two-birds -with-one-stone vacation with the family at these destinations.

It's taken that you'd have laid the all-important foundation (in the Off Season) for the 2017 season, i.e. getting fit to train. Come mid-January, you'd be ready to get fit to compete as the Early Season begins in earnest.

That proverbial pot of gold at the end of the rain is there for the taking. Fortune favors the brave, so they say, but bravery is simply not enough. You must also be prepared.

Good Question, Good Answer

By coach Philip

Q. What should I eat prior to competition?

A. The pre-contest meal is often a neglected part of an athlete's preparation, both in terms of its timing and content. In general, the pre-contest meal, no matter what its content, should be given no later than three hours prior to the contest. The emotional climate and nervousness usually present at this time would suggest also that the meal be easily digestible.

Nathan J. Smith, in his book, *Food for Sport*, lists five goals that should be considered in planning the pre-contest diet. These are as follows:

1. Energy intake should be adequate to ward off any feeling of hunger or weakness during the entire period of the competition. Although pre-contest food intakes make only a minor contribution to the immediate energy expenditure, they are essential for the support of an adequate level of blood sugar, and for avoiding the sensations of hunger and weakness.

2. The diet plan should ensure that the stomach and upper bowel are empty at the time of competition.

3. Food and fluid intakes prior to and during prolonged competition should guarantee an optimal state of hydration.

4. The pre-competition diet should offer foods that will minimize upset in the gastrointestinal tract.

5. The diet should include food that athletes are familiar with, and are convinced will "make them win."

It is also important that the athlete not eat anything with a high sugar content two hours or less before competition. Such heavy sugar load would produce more insulin than needed and result in a very sharp decrease in the blood sugar level causing the athlete to become hypoglycemic. This condition may reduce the performance potential of the athlete. Research has also shown that feeding athletes with glucose 30-45 minutes before endurance exercise increased the rate of utilization of carbohydrates and impeded the mobilization of free fatty acids, thereby significantly reducing the exercise duration.

Q. I am a M47 distance runner and have a PB of 18:45 for the 5,000m. To what extent am I trainable at this age, that is, can I still improve?

A. A quick glance at the world's 10-20 best performances by masters athletes should convince all but the most skeptical that despite the decrements associated with aging, middle-aged and older athletes are still capable of exceptional performances. The ability of masters athletes to adapt to endurance and strength training is well-documented. Although studies to gauge the degree of adaptation to training among middle- and older- have produced some conflicting results, it is generally agreed that older individuals are not able to improve

their strength and endurance capacities to the same extent as their younger counterparts.

Since the precise mechanisms responsible for triggering the body's adaptations to training are not understood, it is impossible to determine why ageing reduces trainability. Perhaps it is the combined result of age-related decrements in the neurological, muscular, and cardiorespiratory systems, or alterations of protein synthesis and hormonal regulation of growth and development. These factors are known to be important in the body's adaptation to the physical stress of training.

The relationship between age and the percent improvement in aerobic capacity are well-documented and shows that the amount of improvement is dependent on age of the individual and his or her initial level of fitness. When athletes already have high levels of endurance to others of similar age, they are unlikely to improve as much as younger individuals having the same initial fitness level.

It has been suggested that middle- and older-aged individuals require more training to achieve the same training benefits as younger individuals. There are no data with human subjects to substantiate this theory. However, studies with animals have reported that it takes longer to train older rats to the same fitness level and they experience less muscle hypertrophy than younger animals during training. It has also been suggested that the rate of adaptation and recuperative powers are less in older individuals than in young men and women. Again, we have only anecdotal evidence to support this contention.

It is possible that the rate and degree of adaptation to training may also be

influenced by the lifelong activity habits of the individual. For those who have been inactive for many years, the ability to adapt to training may be reduced, compared to those who have actively trained and competed in sports throughout life. While there is limited evidence to support this concept, some longitudinal studies with a few runners and swimmers have shown that there is little decrease in aerobic capacity over a 26-year period when the athletes continued their training. Other studies have shown that the losses in endurance normally associated with aging can be remarkably reduced with a continued, lifelong program of intense training.

The above caveats notwithstanding, there is no reason why you should not continue to pursue the sport that you love, and to aim for a higher goal. Trends are very often strewn with exceptions - individuals who seem to break the rule with alacrity. The power of belief can often change the status quo and so can your level of motivation. Combined with self-discipline and a well-designed training program, they could help you reach a level you've never thought possible.

The short answer to your question is, therefore, a resounding YES!

My First AMAC Experience

By Lien Choong Luen



- Now that the dust has settled and time freed up, I'm writing an account of my experiences in the 19th Asian Masters Athletic championships held earlier this year, and the events leading up to it. Masters Athletics is the opposite of Olympics excitement– no glory and lots of old bodies, but still lots of guts!
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- **Preamble:** It began, as all good stories do, with a hot sweaty midnight encounter with an anonymous stranger whose face I didn't even see; Things escalated and then got quite serious. There were late nights away from the family, friends began to ask questions, doubting my judgement and life choices. There was also self-doubt as I wondered if I was making the right choice, and whether the end goal was worth the pursuit. But in the end, faith and persistence worked out, helped by a strong dose of teamwork and friendship.
 - I'm talking of course about Masters athletics, also known as a mid-life crisis escape for old men and women =0 It is like a secret club. The members are easy to spot if you know what to look for. They are the ones out running, jumping, hurdling, throwing with their racing spikes on. They have a stop-watch in hand, and an intense look on their face. With a quiet nod of acknowledgement, or quiet conversations, we would encourage each other. Especially the ones who trained at the track near my house, I would subsequently find out their names – Belinda, Angsar, Thomas, Foong Wee, as well as meet up with old friends, such as Jason, and make new ones, such as Steven, Eddie, coach, KT, Xikun, Ranjit, Sharon, Yew Yong, Henry, and many others.
 - **Chapter 1 (Training):** It was sometime in early August 2015, not long after I had just returned to Singapore. One night after work around 1am, I headed over to the track near my house to do my usual work-out. Surprisingly, on the completely dark track, I met someone else who was also doing intervals. This wasn't an amateur plodding along slowly, but someone quite serious – 10 x 400m intervals, so I followed him. After we were done, he asked me what I was training for – I told

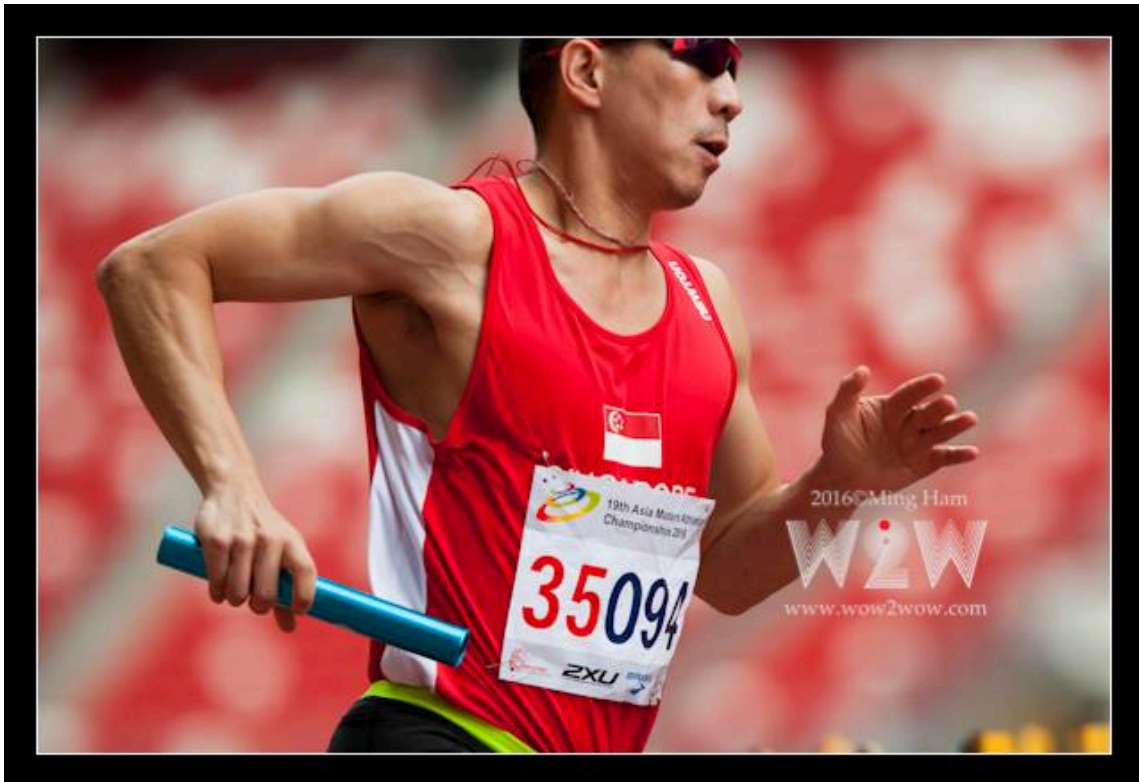


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- With a goal in place, there followed days of waking up at 6am to run before sun-rise or pounding the pitch-black track at midnight, with a headlamp, the finish line lit by the lonely light of my phone. There were sessions of interval trainings with a face-mask on during the haze in the punishing noon-day heat, lungs heaving. There were sessions of painful intervals in the pouring rain. After the workouts, completely exhausted and then pushing the body back to work.
- The objective was to run the 800m for the Singapore Masters in Oct 2015 – but I pushed too hard one day and pulled my hamstring and had to scrap my participation in the Singapore Masters. It was a frustrating time. As with all injuries, a lot of it was about confidence, and my physio gave me the confidence that things would be OK.
- **Chapter 2 (Racing):** After 4 weeks of not running, it was Foong Wee, the same trouble-maker, who told me about this inter-club race. I had just started slowly running again after a 4 week lay-off and this was just 7 days out from my first run back. It was a Sunday, but I had an event to attend so I turned up at the race-site, stripped off my coat and tie and reported to the marshalling station. What with pinning on the race-numbers and other admin, I only had time to change and stride for a minute before it was time to report to the start-line. There was significant worry about whether my hamstring would hold up. This was CLEARLY a bad idea. It was a crowded field, full of young faces. If I were 18, I would relish the challenge. Here, I just felt like an old imposter. I turned to the kid to my left – he was 18, the one to my right – he was 19. Their combined age was still less than mine! They were polite, addressing me as “Sir”. If this were in the context of the Army, I wouldn't mind, but there was the same sense of politeness one would have helping an old grandmother across the road.



- It had been so long since I last ran, that I had to ask instructions when I could cut in, and was scolded by the inimitable umpire, Miss Jaya – “If you don’t know the rules, you shouldn’t be here” Talk about humbling. The last time I was subject to such a withering put-down was in basic military training (BMT). Meanwhile, I was telling myself – the first priority is to come back with body intact, then come back with dignity intact!
- As I stood there, eyeing the 15 other runners, the pre-race excitement began to hold. The point of all the training and pain was to buy one the right to stand at the start-line, with something at stake, to test the body and mind against itself. That sense of feeling incredibly alive – priceless!
- With a bang, the race took off. I didn’t have a clear strategy in mind, with no idea how my body would respond. I just tried to stay with the front pack. At the 200m mark, then the 400m mark, I wasn’t too far off the pace. However, at the 600m mark, my woeful lack of training made itself felt. I felt my breathing go ragged, and was just pumping the arms to stay moving. The final 200m were agonizing, and felt like everything was seizing up and out of sync. Eventually I finished in a time of 2:11 (a Masters season best) and beat more than half the field, dignity and body intact.
- As a coda to that – the next day, my whole body seized up, starting from the back. This was clearly a case of executive over-ride, as the mind had told the body to ignore the pain and the circuit breakers. They weren’t injuries per se, but just a case of over-exertion. It took three weeks before I could hit the track again.
- As far as I was concerned, that was it – this was an enjoyable diversion and I had run a respectable time. However, on my way out I met Jason, my RSM in battalion who was the Masters Athletics captain. He threw out the idea that I consider running the Asian Masters Athletics Championships. It would be in 7 months’ time in Singapore held at the new national stadium. This was a bi-annual event, with the last edition in Japan in 2014.

- I recalled the last time I was at the Kallang national stadium in 199X, it was the old open air stadium. We were competing in the final race of the Inter-school Athletic championships. On paper it would be a close fight – ACJC had 3 gold medalists on their team, while my team-mates were national athletes and future national record holders. I was clearly the weak link. Thinking back to those days brought back powerful memories, and a desire to close the circle.
- Aah, the power of conversations – Foong Wee and Jason – these two guys were real trouble-makers!
- It was one thing to run a week-end race, but to compete at the AMAC, the time to beat based on previous editions would be a low 2 minutes. So a plan took shape in my head – if I wanted to be really competitive, I would have to turn back the clock 20 years and be faster than I had ever been in my life. Do-able? Not sure, but I would give it a serious shot. It was time to get serious.
- **Chapter 3 (The grind):** I began to get more systematic about the training and joined the fraternity. During a race, I had met another athlete, who looked very unapproachable, but became one of my closest friends – Eddie. Training with the others at Bishan made it much more pleasant and productive. There followed further days and nights of training in the sun, and rain, through fatigue and injury. I recall my New Year's Eve celebration on Dec 31 was a long solo run in the pouring rain at MacRitchie at night. For each training session, squeezing out time to do the prescribed stretching and exercise was a real commitment and exercise in discipline. After that, trying to get back to work was agonizing and painful. I remember nights after training where I finished running at 11pm, ate dinner, and just lay there, unable to sleep, with a night's work ahead but completely exhausted.
- 5 months goes by very quickly. I tried to be as scientific as possible, with vitamins, recovery supplements, but the challenge was always going to be stay injury free. I even bought a baby wading pool to dip ice in for recovery, as I did not have a bath tub. There were further subsequent prep races, where I at least learnt not to get scolded by Miss Jaya.
- In series 1 (~Dec 2015), the only race that I turned up on time, I ran a disappointing 2:12. I felt great, but obviously hadn't pushed myself as hard as I could have.
- In series 2 (~Jan 2016), I was late again, coming from an important work meeting on a Sunday, clad in coat and tie, but with a new Masters Season best at 2:08. I was getting closer to the striking zone!
- In series 3 (~Mar 2016), I did a 2:05.1, and an hour later, did a 54.0 for the 400m in the scorching noon-day heat. Given that hand-timing is usually ~0.5s faster, this meant that I was faster than when I was 18!
- I then went to Taiwan for a Masters race (~Mar 2016). I knew that if it weren't a close race, I might have to lead and pull all the way, which was different than the SAA series races, where I was competing against younger, faster runners. This was fantastic fun, and I came away with the 800m and 4x400 gold. In the cold wet environment, we managed to have a great event.
- Meanwhile, work was continuing at its crushing pace. With many sleepless nights, my energy levels were low and balance wasn't possible. Eventually I was clocking my 600m

~1:31, so was really looking forward to bringing PB even lower, and targeting 2:00 for the 800m.

- **Chapter 4 (The Race):** A few days before the race, I finally had a chance to step inside the national stadium to look at the track. With the big dome overhead, and the empty seats, in a few days, this would be the venue where hopes and dreams would be realized (or not)!
- As I entered the three days of taper before the race, I was in fine fettle, and my legs were felt strong. However, as I stood up from the chair to take a phone call, I suddenly felt a massive seizure of my lower back. I knew it was a recurrence of my slipped disc, and it was not a simple case. That day I was bed-ridden, and could only lie down with a hot-water bottle the whole day. The following two days, I couldn't even walk properly, and could only frantically visit my physio (Mark and Jo), hoping for miracles from them! Jo was encouraging, but I knew that the odds were slim.
- On race day morning (May 8), I woke up at 4am to take some pain-killers, worked for a bit (if you can't run, you can still make slides) and then turned up at the race-site. I couldn't even bend over to tie my shoe-laces. This was psychologically crushing, however, one can only keep on going. There was no need to quit prematurely – life is a series of “real options” (as the corporate finance types will tell you), there are more than enough people to tell you that you should quit without you telling yourself to quit.
- That morning, standing in the call-room in the new National Stadium, it was an orgy of activity. I didn't really try to warm-up, as I didn't know if my body could take it (Thankfully, I had good experience racing with minimal warm-up). The race field was quite small, but was supposed to have some very fast runners, but you can only ignore these things. As I stepped out onto the track, in the vast edifice that was the new national stadium, the scene wasn't how I had envisaged it. I had been dreaming about stepping into the new national stadium for months, but not with this cloud of uncertainty over my head, but quickly, the race mindset took over. Nobody cared, nor should they, about my injury. In life, everybody takes different paths to get to the start line, it was how you performed that day and finished that day that really mattered. My race strategy was to go hard in the first 50m to take the lead, and see how the body responded. If it hurt, I would simply scratch. No pride at stake.
- And just like that, the gun rang out and the race started. The first 50m went well, and my body was holding up. I was alone in the lead, and as I expected, I would have to run alone for the rest of the race, with no looking back or behind me. With the adrenaline, I went out very fast in the first lap, ~58s, quite a bit faster than what I had planned. The second lap was smooth, but in the last 50m, I started to really feel the lactic acid, probably a result of not warming up thoroughly. In the end, it wasn't a PB, but enough effort for a gold medal. Not bad, being the fastest old man in Asia over two laps. What made it extra heartening was to see my dad there at the track-side, taking photos and supporting me.
- After the race, I had a conference call, took part in the Opening Ceremony officiated by Min Tan Chuan Jin, then rushed back to work, changed to my suit (without showering), attended a client proposal (where I was a token participant without speaking a word), ate half a salad and had another conference call en-route back to the office. After the proposal, I rushed back to run in the 400m heats. I qualified, but decided to give up the 400m and 1500m to save myself for the 4x400m, and spare my body further damage.

- On Sunday, our fastest runner for the 400m (the silver medalist) pulled out at the last minute because of injury, so I had to run the anchor leg, which was really stressful, as we weren't sure if we would make it to onto the podium. The Sri Lanka team had the 400m gold medalist and a strong team, so they would likely have a lock on first place. Stepping up to the start line, a team-mate mentioned that our sunglasses weren't for show, but to hide the uncertainty in our eyes. Life is about expectations – If you had told me a week before the 800m that I would run a 2:06, I would be highly disappointed, but if you told me an hour before the race that I would run a 2:06, I would have been ecstatic. Similarly for the 4x400m – on Friday, our silver medalist was a surprise find, and we were excited that we could challenge for the gold. On Saturday when he pulled out, we were downcast over our medal chances. On Sunday, seeing how the race developed, we were ecstatic, as the silver medal was the best we could hope for, with an amazing crew of Eddie, Tino and Steven.
- That night at the closing dinner, I walked around and thanked all the officials and volunteers that had made the race possible. The one I most wanted to thank was Miss Jaya, who had been the one scolding me, but had made the race series possible where we got to improve.

In retrospect

- 1) Someone asked me what the toughest event I've done is. Which is tougher?
- I've been on expedition races covering 800km, and mountaineering trips that took two months up 8000m mountains, but the commitment required to navigate 800m in 2 minutes required greater effort. This was a measured course, there was no threat to life, unlike being on big mountains like Everest or K2. Yet, when it is man vs. man, or man vs. self, there is no such thing as "good enough". And so the smell of competition is an incredible driver for training.
- 2) But given the challenge, why do we even bother?
- Were we trying to recapture lost youth? Trying to feel alive? Turning back entropy (the laws of physics suggest it's not possible, but we can try anyway)? My answer is simple – witnessing the 70 or 80 year old athletes competing, giving their all was truly inspirational. You want to know what it means to feel alive? When you're standing there, when there is something at stake and you know that the outcome matters. The stakes are tiny, and personal, these aren't the Olympics. But feeling the rush as you line up and wait for the starter's pistol, that is worth the price of admission and training.
- 3) The power of inspiration and friends. This was a long journey, sparked by the power of two conversations. As we walk through life – hopefully we can find the time to inspire others along the way.
- A month before the race, I received a short SMS "Did you hear – YLW passed away". I was in shock. LW was my running mentor in secondary school. He was a rather strange sort, but I guess we were all misfits in our own way, which is why we got along so well. He ran the 400m and 800m, the same distances I would subsequently take up. I remember my first MacRitchie training session with him, which was long and slow and painful, yet he continued to follow my progress closely. That first year, when I ran with him, we came in 5th in the inter-school X-Country, the following year, we came in 2nd, narrowly missing out on the Inter--school title. He had an accident not long after, and injured his ankle and had to stop running.
- I was looking to share the story with him – but I guess too late. He passed away from a very rare form of cancer. I spoke to his girlfriend and talked about the old days. Along the way, Coach also fell ill, but even with his treatment, he was always on hand to give us

pointers, time us and provide feedback. And so I say, for the Masters athletes – the golden boys and girls, when you lace up the spikes, when you feel the burn, when there are pre-race palpitations, when you see your waist-line slim down, you know that you're alive. There may be no medals, and our times may get slower, but while we are alive, we should never, ever stop running and pushing ourselves to the absolute limit.

- The 4x400 silver medal and 800m gold medal at the 19th AMA, dedicated to YWL – for the speed you gave me. And to all the Singapore Master's Athletes – Coach, Jason, Wee Wong, Eddie, Tino, Steven, KT, Angsar, Belinda and the rest of the team.



- Keep running!

Hamstrings Injury

provided by The Physiolink @ The Plaza Pte Ltd

Picture this..... You are running the last leg of the 4x100m sprint. All the excitement in the air has built up and it's all up to you to finish the last leg of the race and hopefully pull a win for the team. Your team mate passes you the baton, and you're off!

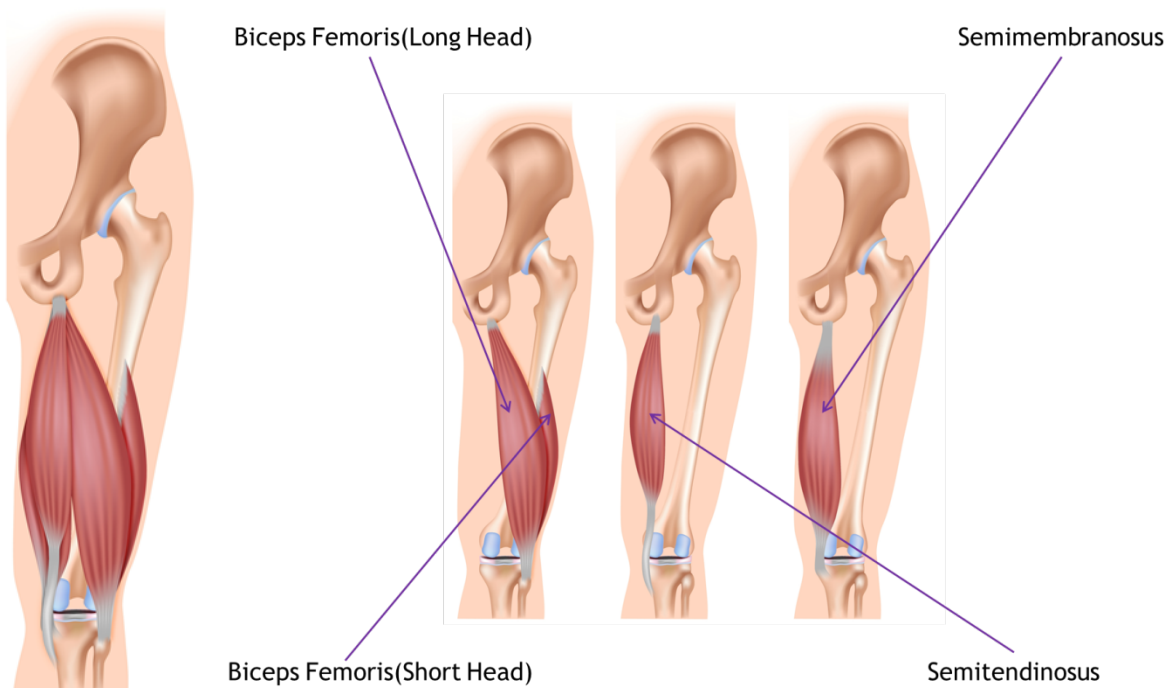
You see the finish line at the last 50m mark. You push yourself to try to take the lead when you felt a sharp pull in the back of your thigh and you fell forwards, clutching your thigh and rolling over to your side, grimacing in pain. Unfortunately, your team missed the chance and lost the finals. You were taken off the track, and assessed by your sports trainer/coach to discern the extent of your injury. You realise that you are unable to walk without a limp, and you can't sprint or jump. You were advised to ice the hamstrings. You continued to ice over the next couple of days but you noticed more swelling and bruising around the back of the thigh and you are still having difficulty walking, climbing stairs and you were unable to participate in any practice sessions.

What do you do?

A Principal Physiotherapist of The Physiolink @ The Plaza Pte. Ltd. will be sharing her professional opinion on the topic of Hamstrings Injuries.

What are hamstring injuries?

It is a muscular injury that involves the hamstrings, which are made up of 4 parts:



The main function of the hamstrings is to bend the knee and bring the thigh backwards (behind the hips).

Risk factors to injuring the hamstrings are:

1. Muscle tightness
2. Muscle imbalance (quadriceps much stronger than the hamstrings, hamstrings fatigue faster and incapable of contracting to slow down the leg during sprints when the knee is being straightened in front of the body)
3. Poor conditioning
4. Muscle fatigue
5. History of back, knee injuries
6. Growth spurts

Injury to this muscle is usually caused by muscle overload, in which the muscles are stretched beyond its ability to or when challenged with a sudden load (typically when the muscle contracts as it is being lengthened). When that happens, you will:

Most hamstring injuries involve the muscle belly or the junction between the muscle and tendon. More severe injuries can involve the tendon pulling away the bony attachment, causing an avulsion injury/fracture.

1. Notice a sudden, sharp pain in the back of the thigh
2. Suddenly stop your activity (e.g. sprinting), hop or fall
3. Notice swelling during the first few hours post injury
4. See bruising over back of leg and below knee over the next few days



5. Experience weakness in hamstrings that can last weeks

Grade	Description
I (mild)	<ul style="list-style-type: none">• Tear few muscle fibres• Mild pain• Little loss of strength• Pain reproduced with opposed muscle activation and manual stretch
II (moderate)	<ul style="list-style-type: none">• Partial tearing of muscle fibres• Significant pain• Some loss of strength• Pain reproduced with unopposed muscle activation and manual stretch• Feel a small tear/"break" in the continuation of the muscle belly
III (severe)	<ul style="list-style-type: none">• Complete tear of muscle• Significant pain and loss of strength• "Balling" of muscle seen• Feel the torn off portion of the muscle

njuries involving the muscles are called strains and can be described as mild, moderate and severe.

Phase	Description	Treatment/Rehabilitation
Inflammatory	<ul style="list-style-type: none"> • Last up to 72 hours • Pain, swelling, redness, increased local temperature • May notice some muscle spasm 	<ul style="list-style-type: none"> • R - Rest, may need to use crutches • I – Ice 3-4 times/day for 7-10 minutes (wrap ice with thin towel) • C – Compress with tubigrip and tape (see picture below) for support to prevent further bleeding and swelling • E – Elevate the leg above the level of your heart • R – See a medical professional like a doctor for medication to reduce the swelling \pm pain, seek physiotherapist to help with pain and swelling, and to start rehabilitation • Surgical intervention often used in tendon avulsion injuries
Regeneration and Repair	<ul style="list-style-type: none"> • Lasts form 48 hours to 6 weeks • Scar tissue formation 	<ul style="list-style-type: none"> • Use of modalities like ultrasound, interferential currents, icing to facilitate the regeneration and repair process • Gentle stretching and strengthening exercises • Soft tissue mobilisation • Open chain to closed chain exercises
Remodelling	<ul style="list-style-type: none"> • Lasts 3 weeks to 3 months • Stronger scar tissue, will impact restoration of muscle tissue to its state before injury as it slows down muscle healing • Scar tissue has poor blood supply, and not as strong and resilient as the original tissue 	<ul style="list-style-type: none"> • Scar tissue mobilisation • +/- use of heat therapy • Continue with stretches • Strength training • Functional rehabilitation
Ongoing Repair and Remodelling	<ul style="list-style-type: none"> • Lasts 3 months and greater 	<ul style="list-style-type: none"> • Higher level strength training • Sport specific drills

Now that you understand how and why hamstrings injuries occur, let us discuss the treatment and rehabilitation during the process of recovery and how the physiotherapist and strength and conditioning coach can help bring you back, as much as possible, to pre-injury status.

There are 4 phases of healing. Let us look at the forms of treatment during each phase of healing.

The duration of healing varies from person to person.

Example of taping can be found below. My colleague had used rock tape on an athlete who just had a hamstring tear.

In the regeneration and repair, and remodelling phase, examples of exercises can be found below, starting from low-intensity to high intensity, open chain to closed chain exercises.



Dynamic Hamstrings Stretch



Static Hamstrings Stretch



Open-Kinetic Chain Hamstrings Strengthening



Closed-Kinetic Chain Hamstrings Curls with Gym Ball



At the remodelling phase, once advised by your physiotherapist, you should start more functional rehabilitation, which means exercises that are specific to your specialisation (be it sprints, distance etc.). The exercises shown above are just some examples. Please do not start an exercise routine after a hamstrings injury without consulting your physiotherapist and/or sports doctor.