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EDITORIAL

Decision Making

from the Executive Director's desk

I have always found that the final year of school is a defining time in a young person's life. In fact, there are many times that young athletes are put in a position to make important decisions. Decisions made can have a huge impact on the rest of their lives. Funny, but for me, these types of decisions at the end of school were always going to be easy. All I ever wanted to be was a Physical Education teacher and my biggest dream was to represent my country. Sport seems to have influenced my life in so many different ways – job, where I lived, hobbies, friends etc.

I am sure the lessons learnt in sport has influenced many of our lives. On a personal level, I always found that when my relationships and life were in harmony, my performance was at its best. I know this was the case when I competed in Los Angeles in 1984.

At the top level in sport there are many transition programs now in place to help elite athletes make choices which will, ultimately, take them down the correct pathway. There needs to be a balance between sport and life that reflects their interests, needs and priorities. There are many ways a young person can go about making an importance decision. Discuss with parents, coach, mentor, a close friend or all of the before mentioned. The network of relevant 'others' becomes an essential decision-making tool as it is extremely important to plan, have a purpose and refocus if necessary. This is the case, no matter what age you are.

Another way to analyse is to put together a decision matrix. This is a useful technique for making powerful choices, particularly when there is not a clear and obvious preferred option. Even if there is a preferred option, the matrix is a great way to confirm the right choice has been considered.

To do this, the athlete needs to make a grid – put the factors along the top and the options down the side. Each option can then be scored from 0 – 5 (0 being good, 5 being detrimental) so then a score can be achieved. I have done an example below to show what might be considered.

	*Cost	*Education	Personal Benefits	*Sport benefits	Correct college (NCAA)	Impact on family	Personal Impact
Go to local high education institution	4	1	1	3	NA	0	1
Move interstate for sport / change coaches	3-4	2	1	1	NA	3	2
Accept USA scholarship	1	1	1	0	1-2	4	2-3
Take a gap year	4	4	2	0	NA	2	2
Work for a year	1	3	2	2-3	NA	1	1

The scores already entered are then multiplied by the degree of weighting, if needed. In the table I have given, extra weighting would be given to sport benefits, cost and education as these are the most important areas for me.

Decision making process grids come into their own when the decision is complex with many possible outcomes and several different criteria to take into consideration. Broken down like this, it actually makes the overall situation reasonably clear. It is always good to write things down – just the same way it is always clearer when you write down all the pros and cons for a decision.

Ultimately, the decision made needs to be one that is going to make the athlete comfortable and ensure there has not been a missed opportunity to further their athletic potential.

The GCAS is proud of the core sessions we deliver as they are lessons focussed around fitness and lifestyle sessions. All theoretical units are designed to help individual sporting performance and personal development. The GCAS provide value-added lectures and opportunities delivered by professionals in their field that complement all programs and further develop the talent of the participating student athletes.

A reminder to all sports clubs, schools and parents to nominate their athletes, students and children for the Gold Coast Bulletin Young athlete awards. The lookout is on for young athletes that love their sport by being involved and contributing to their club and

team in many ways. With four (4) categories on offer, the young athletes are in the run for a share of over \$13,000 of cash awards.

The four categories are:

1. **Junior sports star** which is open to athletes who have competed at state, national or international levels. Athletes aged 18 years or under at 31 August this year who demonstrate the most outstanding achievement along with dedication fairness and sportsmanship will be acknowledged.
2. The **team of excellence** will be awarded to a team (max. of 20 people per team) who have competed and excelled in the above-mentioned age bracket.
3. The **inspiration award** will be awarded to an athlete or team who has demonstrated dedication and courage to excel in their chosen sport. No particular level of achievement is necessary – this is more about attitude and application of self.
4. The **service to sport** award will be awarded to the athlete or volunteer of a sport who has shown exceptional passion, determination and contribution to their club and sport. **There is no age restriction to this level.**

Recognition is the greatest form of thanks and achievement. It helps to retain athletes in sport and certainly is a contributor to those who give hours, days and many weeks of work to their sport. Get to it and nominate your athlete or volunteer.

SUNDAY 1 SEPTEMBER

Father's Day

**KIDS
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TREAT DAD TO AN ALL-HE-CAN-EAT BUFFET AT FRENZY'S THIS FATHER'S DAY.
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DATE CLAIMER

All GCAS athletes / parents please put this date in your diary

GCAS AWARDS EVENING



The Awards evening recognises the achievements of our scholarship athletes who will graduate from the 2017 sport programs.

Thursday 17th October, 2019
Commencing 6:30pm
RACV Royal Pines Resort,
Marquis Room



THE MAGIC OF HONEY

MAY is national honey month. It was a time to celebrate the only food on the planet that won't spoil or rot. Honey has been used in various foods and beverages as a sweetener for centuries, and also has a role in religion and symbolism. It has also been used in various medicinal traditions to treat ailments and researchers around the world are still proclaiming its health benefits.

A trial at Copenhagen University found honey made a significant improvement to arthritis sufferers. Of 200 patients treated with a mixture of one tablespoon honey and half a teaspoon of cinnamon powder before breakfast, 73 patients were relieved of pain within a week, and within a month, almost all the patients were able to walk without pain.

Other researchers claim two tablespoons of cinnamon powder and one teaspoon of honey in a glass of lukewarm water destroys germs and eases bladder infections.

A honey sandwich every day can help with cholesterol and if you catch a cold, a tablespoon of lukewarm honey with 1/4 spoon cinnamon powder daily for three days will cure a chronic cough and clear the sinuses.

In America and Canada, nursing homes have treated patients successfully by replacing jam with a paste of honey and cinnamon on toast for breakfast daily to strengthen heartbeat.

It is said to reduce the cholesterol in the arteries and reduce the risk of heart attack. According to studies in India and Japan, honey and cinnamon help relieve gas in the stomach and indigestion while a scientist in Spain claims to have proven that honey's natural "ingredient" kills influenza germs.

Scientists have also found that honey has various vitamins and iron in large amounts so that its constant use strengthens the white blood corpuscles to fight bacterial and viral diseases.

Weight and skin problems, fatigue and even hearing loss can all be improved and one study claims that it also beats fatigue.

Just one warning. Never boil honey or put it in a microwave as it kills the valuable enzymes.

Oh, and beware, it is a form of sugar, so too much isn't good for you either. And even if the "miracle" of honey may not eventuate, it's always a sweet treat.



Does your club, team or organisation require the services of a travel management company? Our sponsor All Sports Travel offers a TMC service to a number of Gold Coast and Queensland organisations including Qld Touch Football and Qld Gymnastics.

All Sports Travel are proud to be managing the travel arrangements for the Qld Touch Football Senior State cup being held on the Gold Coast in late November this year, as well as arrangements for over 60 groups coming to the Gold Coast for the National Clubs Carnival (gymnastics) in September.

With over 30 years' experience managing sporting group travel, All Sports Travel have the knowledge, systems, suppliers and passion to manage the travel needs of any size organisation, regardless of budget.

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SATURDAY 30 NOVEMBER 2019

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RACV Royal Pines Resort

Banana Cake (serves 12)

- 3 tablespoons margarine
- 1/2 cup caster sugar
- 2 eggs
- 1 teaspoon vanilla essence
- 1 cup self raising flour
- 1 cup wholemeal self raising flour
- 185 mL (3/4 cup) buttermilk

ICING

- 3/4 cup icing sugar
- 1 tablespoon lemon juice
- 2-4 teaspoons boiling water

Method

Preheat oven to moderate (180 C or 350 F). Lightly grease a 20cm round cake pan, and line the base with baking paper. Using electric beaters, beat margarine, sugar and bananas until well combined and banana is almost smooth. Add the eggs one at a time, beating well after each addition, then beat in the vanilla. Sift flours into the bowl and pour in milk. Fold in quickly and lightly until just combined, but do not overbeat or the cake will be tough. Pour into prepared pan and bake for about 70 minutes or until a skewer or knife inserted into the centre of the cake comes out clean. Leave in the pan for 5 minutes before turning out onto a wire rack to cool. If you are icing the cake, wait until it is completely cooled. Sift icing sugar into a bowl and stir in juice and enough water to make a thin icing. Spread over the cake and leave to set.

Hint

Buttermilk is used for low fat baking. It is cultured (like yogurt), and therefore quite acidic which makes the cake tender and moist.

Analysis

	Serves 12
Energy(kj/ Cal)	967/231
Carb (g)	41
Protein (g)	5
Fat (g)	5

Preparation time: 20 mins

Cooking time: 1 hour 10 minutes

Taken from: AIS Survival for the Fittest



Bircher Muesli (serves 4-6)

- 2 cups rolled oats
- 1/2 cup chopped dried apricots
- 1 cup orange juice
- 1 1/2 cups skim milk
- 1 up NESTLE All Natural 99% Fat Free Vanilla Yogurt plus extra, to serve
- 1/2 cup chopped nuts (hazelnuts / sliced almonds)
- 1 apple, grated
- honey – to taste
- Chopped banana or strawberries, to serve

Method

Combine oats, apricots, orange juice, mil yogurt, nuts and apple, cover and refrigerate overnight. Before serving, add honey to taste. Serve with banana or strawberries and extra yogurt.

Analysis

	High Fuel	Low Fuel
Energy(kj)	1631	1087
Protein (g)	15	10
Fat (g)	11	7
CHO (g)	55	37
Calcium, vitamin C		

Taken from: AIS Survival Around the World



Sports Report 2019 Spring

Future Stars - Upper Coomera State College

In August, the Academy conducted sessions to groups of students from Year 7 to Senior on the topic of Recovery and Body Maintenance. Each group was challenged with different approaches. The Year 7 students were introduced to trigger pointing and the use of foam rollers to aid recovery. It was great to see them engage with the activities and it is hoped they will now take the challenge up and do some work in their own time. The older age groups built on their previous knowledge and explored other recovery methods which included adequate sleep, warming down after sessions, rehydration and refuelling with foods, the place of ice baths, cryotherapy and hot/cold showers. The senior students were particularly good, actively learning novel ways to recover to suit their needs.



Rugby League

The 2019 Rugby League program began in July. We have 20 players in the program from the ages of 13 to 16, consisting of boys and girls. The first session saw the player being put through some fitness exercises. Not only does the coach concentrate on enhancing their skills, GCAS also delivers educational sessions. To date, the group has spent sessions with a sports nutritionist to explore their diets and a physiotherapist who discussed important recovery techniques. The weekly sessions, which are held at Robin Raptors JRLC will run into October.



Sports Report 2019 Spring

Future Stars- Southport Sharks

This year's Future Stars program commenced in May. Our new venue for the program is the Southport Sharks. GCAS has been able to use their facilities and our athletes are enjoying 6 months use of the Southport Sharks gym with each athlete being guided and given a program by a resident personal trainer. Our Future Stars athletes are from a variety of sporting codes. This year we have amongst our group a triathlete, sprinters, hammer-thrower, go-karter, BMX rider, rugby league players and hurdlers.

The Future Stars attend presentations on a myriad of topics, with each one delivered by an expert in that field. Some of the topics covered so far have been recovery techniques, various topics with a sports psychologist, cyber safety and personal branding, sports nutrition and dealing with media.



Our Future Stars were lucky enough to attend a function at Southport Sharks where they were able to get up close to the actual Melbourne Cup!

Upcoming Sports

The Academy will be coming some wonderful programs in the last part of the year. Surf Lifesaving has commenced in the last weeks of August which involves a number of very passionate and enthusiastic young athletes.

A football (soccer) program is planned to commence late October and continue on through November. If anyone knows of young players who would like to learn more let them know. The program will be run in conjunction with Gold Coast United and Socceroo player Michael Twaite.

It is also hoped in the later part of the year the Academy will be joining with the state and national BMX body to conduct a program for young excited riders who would like to improve their skills and learn how they can become better on their bikes.

BASKETBALL NEWS



In recognition of the huge number of untapped talent in Australian junior basketball, America's iconic Amateur Athletic Union (AAU) has chosen Australia as its first country for international expansion. This is exciting news for the many aspiring junior basketballers your organisation's coaches are developing. For decades AAU has been a vital element of the pathway to college sport and beyond for America's youth. In fact, almost 80% of current NBA and WNBA players participated in AAU ball as juniors. While Australians have been playing college basketball dating back to Andrew Gaze at Seton Hall in 1989, the pathway to the NCAA for our kids is so narrow that we see great talent dropping out of the sport discouraged and disappointed as teenagers.

Australian Ben Simmons has reportedly agreed to a

contract that will make him the highest paid Australian athlete in history. At only 22-year-old, he has signed a \$170 million (\$241.6 million AUD) contract extension that keeps him at the Philadelphia 76ers for the next five years. ESPN has reported that Simmons has eclipsed Andrew Bogut as the highest earning Aussie in the NBA.

In the last 20 years American college coaches have discovered Australian basketball. More and more of our players have been getting exposure to colleges scouts and coaches not through their domestic and rep comps here, but by flying over to the US and competing in AAU tournaments. This is both time consuming and costly for many players and their parents, and has restricted many talented kids from getting opportunities. By bringing AAU to

Australia, we can offer much broader exposure and development opportunities here, thus ensuring many more players having the opportunity to be seen in a format that is readily recognised and trusted by American coaches and scouts.

Clubs, schools and community teams now have the opportunity to assemble their best 14, 16 and 18 and Under budding all-stars to compete as an AAU team at the first ever AAU Australia Spring Madness National Championship being held 1 Oct - 4 Oct in Dandenong, Melbourne. Any questions should be sent to team@aauaustralia.com.au or call 0406 030 937. Check out the website <https://www.springmadnessbasketball.com.au/> for more information.

www.aauaustralia.com.au

Netball Results

Hinterland District Netball Association (HDNA) competed at the 2019 Netball State Age Titles held at Pine Rivers in July and what a finish from our amazing 80 girls. Congratulations to our U14 Purple who are now State Champions, our U12 Purple who came runners up in the State Championship and our U14 Green for winning the Challenge Division 1.

- U15 Purple won Championship Division 2
- U13 Purple won Championship Division 2
- U15 Green placed 5th in Challenge Division 1
- U13 Green placed 8th in Challenge Division 1
- U12 Green placed equal 3rd Challenge Division 2 Well done and Congratulations to all, bring on 2020!!

We would like to thank Gold Coast Academy of Sport and Chobani who generously provided the girls with a large supply of yoghurts for the Titles as well as GCAS providing a great nutrition based information session to help build great nutritional habits within our young athletes. Our teams had great results and we appreciate the assistance from GCAS and Chobani.

CONGRATULATIONS GIRLS.



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GOLD COAST ACADEMY OF SPORT PARTNERS WITH BOND EXERCISE AND SPORTS SCIENCE PROGRAM – LINK WITH THE COMMUNITY.

1. Programs include sessions on Nutrition – what is needed for performance / recovery / are supplements needed.
2. There will be two strength and conditioning sessions covering basic information spanning bodyweight work to machine usage to free weights and the advantages of each. Attendees will also learn how to plan a program for a specific purpose and sport.
3. Recovery and Injury Prevention – Learn how to make the best of your training by doing recovery work between training sessions and look after muscles and joints in the prevention of injury.
4. Psychology – Topics here will cover goal setting, dealing with anxiety, overcoming disappointment, resilience, positive mindset and much more.

HELD AT:

BOND UNIVERSITY SPORT CENTRE

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14 UNIVERSITY DRIVE, ROBINA

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GCAS / Bond Sports Science Seminars.

The Ins and Outs of Phar Lap

Nearly 90 years later, Phar Lap's remains are bringing new young fans to horse racing and allowing modern science a window into an important past.

Without doubt, Melbourne's most popular museum exhibit is the one that opened to the public on 10 January 1933. Phar Lap's preserved hide, a work of taxidermy performed in the US after his death, is a collection that is now so valuable, and so old, it cannot be moved. Likewise, the horse's heart, which is at the National Museum in Canberra, is so fragile it has often been removed from public space.

While these two exhibits are fascinating evidence of what Phar Lap looked like almost 90 years ago, in fact they are much more. Since 1932 they have been vital vessels of research into the life of an Australian icon.

Phar Lap raced from 1929 to 1932 across a unique era in Australian racing, one choked by the Great Depression. He was a hero when the common man most needed one, and his record of wins is such that only Black Caviar and Winx share his air. He died in the US in a storm of controversy, and the most persistent theory behind his loss is that he was poisoned.

In 1989, a team of researchers requested samples from both the heart and hide to detect arsenic levels. However, it wasn't until 2006 that thorough sampling

occurred. After 74 years on display, a sample of Phar Lap's skin was taken from under the mane, from which hairs were extracted and sent to Chicago. Scientists confirmed the horse had ingested a large quantity of arsenic about 40 hours before his death, but it took another two years to acknowledge the difference between ingested arsenic and arsenic used in the preservation of his hide.

It wasn't the only theory. In 2009, author and physicist Graeme Putt compared the arsenic results with autopsies of the time and concluded that Phar Lap had died from the then-unknown anterior enteritis, or common bacterial infection. So while modern science had opened many doors on the Phar Lap mystery, at times it seemed to open too many and the public was no closer to identifying the horse's reason for death, even if they had a cause.

Few of Australia's sporting icons have enjoyed the same scrutiny as has Phar Lap. He is one of the only athletes in this country that has incited as much interest in death as he did in life. Much of that is thanks to his owners who, in 1932, had little idea of how much they were contributing to future science when they sent his body parts home. They did, however, understand how much it would mean to the Australian people.

The Phar Lap exhibits have brought new fans to horse racing for decades, in particular young fans. Many are young athletes themselves who relate to both the courage of Phar Lap's story and his sporting effort. As such, the exhibits are an asset to Australian racing, priceless to modern science, and to a sporting nation they are national treasures.

Magic Millions



Does your child have Heel pain?

Heel pain in young athletes is one of the most common conditions presenting to our clinic. Read on to find out what it is and what can be done...

Sever's Syndrome (Also known as Calcaneal Apophysitis)

What is Sever's syndrome?



Figure 1. X-Ray of the heel showing the Growth Plate

The muscle group at the back of your lower leg is called the calf. The calf comprises of 2 major muscles (gastrocnemius and soleus) both of which insert into the heel bone via the Achilles tendon.

In children who have not reached skeletal maturity, a growth plate exists where the Achilles tendon inserts into the heel bone. (See Figure 1.) This growth plate is primarily comprised of cartilage. Every time the calf contracts, it pulls on the Achilles tendon which in turn pulls on this growth plate. When this tension is too forceful or very repetitive, irritation to the growth plate may occur

resulting in pain and sometimes an increased bony prominence at the back of the heel. This condition is called Sever's Syndrome. (Named after JW Sever who first described it in 1912)

Sever's syndrome is typically seen in children ages 7 to 15, with the majority of patients presenting between 10 and 14 years of age, quite often during periods of rapid growth.

Signs and symptoms of Sever's Syndrome.

Children with Sever's Syndrome typically experience pain that develops gradually in the back of the heel or Achilles region during and after activity. We typically find this occurs in very active children whose sports and activities require strong or repetitive contraction of the calf muscles such as running and jumping.

As the condition progresses, patients may experience symptoms that increase during activity and affect performance. (Limping and obvious discomfort)

Treatment for Sever's Syndrome.

Sever's Syndrome is a self-limiting condition that gradually resolves as the patient moves towards skeletal maturity. This usually takes between 6 to 12 months but may persist for as long as 2 years. Children with Sever's Syndrome typically improve gradually over time and full recovery is normal and expected with correct management.

The cornerstone of correct management primarily comprises of activity modification (a reduction in the volume and intensity of sport and activity) so the child gradually becomes pain free pain-free.

Whether a child should continue playing sport is dependent on symptoms. Patients with mild symptoms may be able to continue to play some sport with a reduced training load and elimination of unnecessary activities (i.e. lunchtimes at school, free time at home). Those with more severe symptoms will require time off all sport until pain free on normal, non-sporting activities such as walking. A very gradual return to sport can occur after this time with careful monitoring of symptoms and activity levels.

Contributing factors to the development of Sever's Syndrome.

There are several factors that may increase the likelihood of developing this condition. These need to be assessed and corrected with direction from a physiotherapist to ensure an optimal outcome. Some of these factors include:

- inappropriate training loads
- inappropriate footwear
- calf tightness
- calf weakness
- joint stiffness
- poor lower limb biomechanics
- poor foot posture

Continued overleaf

Does your child have Heel pain? cont.

Physiotherapy and Podiatry for Sever's Syndrome

Physiotherapy treatment is vital for children with this condition to reduce pain, allow for increased activity levels and ensure an optimal outcome.

Treatment may include:

- activity modification advice and education (absolutely vital)
- biomechanical correction
- exercises addressing any flexibility, strength or balance issues
- soft tissue massage
- footwear advice
- a gradual return to activity program

- comprehensive home program (this condition can be easily managed at home with minimal treatment required. Our aim is to give you the advice and tools for this and provide back-up assistance when needed)

A consultation with a Podiatrist may be indicated to correct abnormal foot biomechanics, which can impact on this condition. Your treating Physiotherapist can advise if this is required. Conversely, a skilled podiatrist can also advise in most of the areas outlined above.

Common questions.

Q: Is all heel pain Sever's Syndrome?

A: Certainly in the age groups that has been outlined it by far the most common, but not the only potential problem. That's why accurate

diagnosis by your Physiotherapist /Podiatrist is so vital.

Q: Is this simply "Growing Pains"?

A: No. There is no such thing as "growing pains" Certainly it affects the growth plate at the heel, but this is a growth plate injury.... not a normal consequence of growing.

Q: Can my son/daughter just "run through it"?

A: No. This is a sure-fire way to make things worse and may increase symptoms to a degree that a long and total rest from all sport will be required.

Richard Newton

Assistant Professor Bond University
Sports Physiotherapist
Pain Management Consultant
Health Management Consultant

Some Basic Advice on Improving Running Movement By Toni Dickson

Most sports rely on running in some capacity, so I thought this article might be of some use to parents and athletes within the Academy programs. Should anyone wish to learn more about running more efficiently please contact the Academy and we will endeavour to help.

Overstriding is one of the many common faults in the running action facing novice athletes. In the following article, the author discusses how athletes can avoid overstriding and further improve their performance by learning the basic technique.

OVERSTRIDING

Overstriding, in effect, is the lengthening or extending arms and legs to a greater than optimal distance. This usually occurs under fatigue or in a situation that requires extra speed, like in the last segment of a sprint or a middle distance race. Increasing stride length, especially when fatigued, will almost certainly produce a reduction in stride frequency, thus negating the assumed advantage of longer strides with full power. If longer strides occur at the start, the athlete will in effect "stand up" instead of "drive out" from the blocks.

A sprinter who overstrides reduces the stride frequency that introduces fatigue and can lead to injury. A hurdler who overstrides before the first hurdle will have a major problem at the hurdle, arriving either too near or too far. This, of course, will affect and efficient hurdle clearance.

Jumping events are also affected by overstriding. It will reduce the efficiency of the take off in the long and triple jumps, leading athletes to overshoot the board or take off behind it. In the high jump the athlete will not be in the optimal take off position for an efficient bar clearance.

Distance runners and walkers suffer from overstriding due to the reduced performance economy. This results in fatigue over the race distance and, in the case of walking events, can lead to a possible disqualification through lifting.

Overstriding cause a block effect as the foot strikes the track ahead of the centre of gravity, thus reducing momentum, causing extra stress on the knee joint, spine and pelvis, as well as an over-extension of the hamstring. The longer contact time in overstriding is responsible for a longer recovery time and therefore a slower stride time.

As arms play significant part in the action, the extended lever in overstriding will create instability

in the upper body, which will not allow the centre of mass to be in the strongest position. Keep in mind that the stride length and frequency is controlled by the arms and the length of the lever if responsible for the rate of motion. "A Long lever is a slower lever".

To reduce the effect of overstriding, strength and flexibility must be developed to enable the athlete to maintain the lift required to avoid overstriding. This increases the ability to "run off" the hips, making it possible for the foot to land under the centre of gravity. In relation to speed, it should be kept in kind that it is always more important to increase stride frequency and, if necessary, even chop the stride length under fatigued conditions. Fatigue related problems need to be corrected under the conditions which induce the problem, that is under fatigued conditions on the track.

Resistance training and plyometric exercises together with a correct technique are essential for an athlete to maintain the proper postural position in order to avoid overstriding. There is no advantage to overstriding if it is at the expense of stride frequency and body posture. As this usually occurs under fatigue, a reduced stride length and an increased stride rate will produce a better result.

CONCAVITY AND LIFT

Next to avoid overstriding, every athlete will improve with the use of concavity and lift. Novices should develop this basic concept right from the start and it is hard to understand why it seems to have been neglected.

The term concavity, sometimes referred to as "dynamic" concavity, simply means that the athlete runs with a body curve of between one to three degrees forwards of the vertical. This reduces the stress placed on the spine and allows the body to move more efficiently over the ground. It is assisted by the "lift", that requires to use the abdominal muscles to raise the frame, enabling the athlete to pass rapidly and lightly over the ground.

To gain a clearer understanding, the analogy can be related to a pit of hot coals. If you run flat footed

on the coals, the feet will be badly burnt, due to a longer contact time. To reduce the amount of contact time, the body is held high to allow for a quick, light passage over the coals. The same applies to passing over the rack. Lifting the body reduces contact time, thus enhancing speed.

When lifting occurs, the abdominal muscles are tightened and raised. This also lifts the shoulders, allowing the body to assume a more concave position to create a stronger downward arms drive and a forceful forward movement. By tilting the pelvis towards the front of the body at the same time lifts the hips to further improve the performance.

To achieve concavity, lift and tilt, extra emphasis must be placed on strengthening the abdominal and back muscles. The muscles need to be sufficiently strong to allow the athlete to achieve and maintain the technique over the required distance. However, the upper body needs not only to be strong to maintain the technique, it also needs to be relaxed, especially in the shoulder girdle area. This allows for a greater downward arm drive, similar to hammering a nail into a piece of wood directly in front of the body. As the athlete runs the downward hammering motion continues.

The athlete, who has the ability to maintain a relaxed concavity, lift and tilt whilst driving, will be in a position to utilise best his/hers optimal speed capacity. For the exploitation of the technique the athlete should use a driving arm action. This makes use of the entire range of movement through the shoulders and together with a tilted pelvis allows for greater mobility.

In learning this technique the coach must ensure that the athlete performs repetitions over a distance at a speed which allows the athlete to concentrate on the execution of the correct movements. Drills are best performed over distances between 40 and 50m, assisted by constant feedback from the coach. The speed should be sufficiently slow to allow the athlete to concentrate and "feel" the movements. As the athlete progresses, both the pace and distance are increased to fit the race requirements.



The GOLD COAST ACADEMY OF SPORT 2019 Collection

All tracksuits and hoodies are available from the GCAS office. Please either contact Joanne or Glynis with orders OR speak to Joanne at training sessions. Both of these uniform pieces will be great coming into winter.

Item	Price	XS	S	M	L	XL
Track Suit	\$50.00	•	•	•	•	
Hoodie	\$25.00	•	•	•		•

• Available size



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