

WELCOME TO ACTIV8

In March, if you are a member or a 10 packer you can get a month's free membership if you refer a friend and they join in March. You just have to introduce me to your friend before they have their first Activ session.

“BB” (Before Bunny) pre-Easter weight loss challenge!

If you would like some extra motivation to achieve your weight loss goal, register your current and goal weight with an Activ coach and we will support you in your weight loss journey in the weeks before Easter.

It doesn't matter if your goal is to lose a little or a lot, all members that register and achieve their goal by the 21st of April will go into the draw for the major prize of one month's free membership!!!



DURING EASTER THE ACTIV COACHES WILL BE HAVING A WELL EARNED BREAK!

ACTIV WILL BE CLOSED FROM FRIDAY 22ND TIL TUESDAY 26TH APRIL.

This edition of Activ8 contains:

- ❖ **Our latest News and Specials**
- ❖ **Reminder about bunch riding etiquette – Cameron's advice**
- ❖ **Fixing a puncture – Toby's Step by Step guide**
- ❖ **An update about fuelling your body – Peta's advice**
- ❖ **Optimal crank length – what length should I ride – Ben's thoughts**
- ❖ **New Swim App**
- ❖ **Our Member of the month – Ms March – Emma Hassall**

Cameron

OUR LATEST NEWS AND SPECIALS

- ❖ **Lights!** Now that lights are required to start our outdoor rides you must be safe and have front and rear lights. A safe ride is a good ride so respect yourself and your group and do the right thing.
- ❖ Our **beginners course** finishes soon so we will have some new riders for the social group. Please make our newbies feel welcome.
- ❖ **Windtrainer Wheels/Tyres** are available at Activ. A Trainer tyre is made to enhance rolling efficiency and speed (from \$54.95). They will save your road tyres from unnecessary wear. To take the hassle away from changing tyres around we can provide you with a Computrainer wheel and will store it here at Activ for you for FREE. For \$140 you can purchase the wheel with a Vittoria tyre and then you just have to fit a cluster to suit your gearing system. Discuss your needs with the Activ staff.
- ❖ The **8 additional CompuTrainers** are soon to be ready for use. Keep an eye out for an email letting you know when the additional spots are available.
- ❖ If you are **unable to attend a CompuTrainer session** which you have booked would you please let us know as soon as possible so other members on the waiting list do not miss out.
- ❖ **Activ going to Mooloolaba Tri!** Activ is going to have its third trade display at the Mooloolaba Triathlon. So please pop in and even better if you want to do a demo ride on the CompuTrainer please let us know!
- ❖ **Congrats** to all cycle and tri members achieving awesome race results. We love to hear your race stories and how your training is paying off so keep them coming.
- ❖ **Tyre special** this month is Continental Gatorskins for \$50 each. These tyres are a good value all round training tyre. Inspect your tyres and see if you have a need for them while you can pick up a bargain.
- ❖ **Tri gear.** Don't forget to get your tri gear well before race day and wear it training so you know you will be comfortable. Annual Activ Tri Members get their tri suits at cost and 6 month members cost + 10%.

REMINDER ABOUT BUNCH RIDING ETIQUETTE

By [Cameron Hughes](#) (Accredited Cycling & Triathlon Coach)
Activ's Head Coach

We have decided to revisit our previous newsletter article on bunch riding etiquette. There have been many new riders since the last reminder and we want to ensure we all continue to improve our bunch riding skills and enjoy the safety and social aspect of our bunch rides. Riding safely in bunches depends on all members of the group adhering to the road rules and correct cycling etiquette. The consequences of disobeying these rules and etiquette can have disastrous outcomes. Most bunch rides are well disciplined, however, if they are not the incidence of crashes and/or accidents can be high.

So here are our tips to ensure all in the Activ bunch enjoy their ride safely.

- ❖ Obey the road rules. Be aware and courteous of all riders in the bunch that way we can trust each other.
- ❖ Look up through the helmets of the riders in front so you can see and anticipate changes in the bunch.
- ❖ Communicate – always point and call out obstacles and directions loud and clear. The communication must be 'up' and 'down' the bunch to ensure the safety of all riders. It is helpful to the coach if when you are on the front of the bunch you can signal the up-coming turn.
- ❖ Relax – trust other riders, use your brakes minimally and don't tense up your arms and shoulders, relax your hands and elbows.
- ❖ Legally we can ride two abreast, however at times there needs to be common sense used, sometimes single file may be more appropriate. When riding give yourself a little bit of space, do not hug the gutter. This forces cars to drive around you, not to squeeze by. By allowing a little space from the gutter you have room to move left or right to avoid any obstacles. If single file is required then the formation starts with the rider of the front left then right rider, left, right etc.
- ❖ No "half wheeling". Ride beside the person next to you, not in front or behind them. Always ride handle bar to handle bar, side by side approximately 1.5 meters apart.
- ❖ Ensure you always "hold the wheel". You should ride about half a metre behind the wheel in front. Don't look at the wheel in front, rather look through their helmet so you can see what is happening in the bunch.
- ❖ Always pedal when you are on the front, especially downhill, to minimize the amount of slowing and/or braking in the bunch.
- ❖ Keep the pace smooth and steady. Keep an eye and ear out for the need to ease the pace when needed. If the group splits, slow down, or in some cases stop to allow the bunch to regroup.
- ❖ Avoid sudden braking or changes in direction. If you are unsure what action to take, be predictable and maintain your line so others can go around you eg other bunch riders, other riders in general or drivers.
- ❖ At roundabouts always hold your lane so cars in the other lane can be avoided.
- ❖ Follow the direction of the ride leader and communicate their directions up and down the bunch as needed.
- ❖ Everyone can have a turn at the front even if for only a short time. The roll over procedure is easy. The rider on the right moves to the left by slightly accelerating and moving over to the left while the next rider on the right moves forward to the front. This means the right side of the bunch moves forward while the left side of the bunch moves back. Once at the back of the bunch on the left, you move to the right and start moving forward again as the rider in front of you moves forward. If you don't feel you should take a turn at the front then request to stay at the back of the bunch or roll through and off the front when you get there. Please communicate a change at the front.
- ❖ Be aware of the roll back. The roll back is when the rider in front gets out of the saddle to ride up an incline. When they do this the back wheel momentarily comes back. If the rider following is a little too close they may touch wheels, possibly causing a fall.
- ❖ Whilst riding in a bunch it is etiquette for no cyclist to be down on their aerobars, using a phone or iPod, etc.
- ❖ Keep your bike well serviced, clean and with good, inflated tyres, as the safety of the bunch relies on each rider being responsible.
- ❖ Now that lights are required to start our outdoor rides you must be safe and have fully **charged** front and rear lights. Why not try some Belt-up high vis products too and 'Be safe – Be seen'

A safe ride is a good ride, so respect yourself and your group and always do the right thing!

FIXING A PUNCTURE

By [Toby Hood](#), *Activ's Mechanic*

Due to current poor road conditions the rate of punctures has been high. Here are my tips for a quick puncture fix and if you get multiple flats with the same tyre consider buying a new one. Gatorskins are on special for \$50.

Back Wheel Puncture

- ❖ Change into your smallest cog of the rear cluster
- ❖ Release the rear brake
- ❖ Remove the wheel by undoing the quick release
- ❖ Check the tyre for the cause of the puncture and remove if found and take note of where the puncture occurred
- ❖ Using two tyre levers, insert one lever under the bead of the tyre opposite the valve. Then insert the second lever about 8cm in front of the first and slide it around the tyre so one side of the tyre comes away from the rim.
- ❖ If you found the cause of the puncture, remove the tube completely.
- ❖ If you didn't find the puncture, remove the tube until you get to the valve then pump the tube up and try to find the hole in the tube. If you find the hole then check the tyre in the matching spot for the cause of the puncture, remove the cause then remove the tube.
- ❖ Run your hand around the inside of the tyre to make sure there isn't another foreign object.
- ❖ Take your new tube and slightly inflate it.
- ❖ Put the valve in the rim and slowly work the tube in under the tyre.
- ❖ Roll the tube into the rim.
- ❖ Then starting at the valve start putting the tyre back on. Only use a tyre lever as a last resort to get the final part of the tyre on.
- ❖ Work your way around the tyre ensuring that the tube hasn't been pinched
- ❖ Gently push the valve up into the tyre and release.
- ❖ Then slowly start to inflate the tyre
- ❖ Inflate the tyre fully. Tightened the valve.
- ❖ Put the wheel back on the bike ensuring that the chain is on the smallest cog of the rear cluster.
- ❖ Tighten the rear brake. Spin the wheel and test the brakes.
- ❖ Put the chain in an easy gear and you are away!

Front Wheel Puncture

- ❖ Release the front brake.
- ❖ Remove the wheel by undoing the quick release.
- ❖ Check the tyre for the cause of the puncture and remove if found and take note of where the puncture occurred.
- ❖ Using two tyre levers, insert one lever under the bead of the tyre opposite the valve. Then insert the second lever about 8cm in front of the first and slide it around the tyre so one side of the tyre comes away from the rim.
- ❖ If you found the cause of the puncture, remove the tube completely.
- ❖ If you didn't find the puncture, remove the tube until you get to the valve then pump the tube up and try to find the hole in the tube. If you find the hole then check the tyre in the matching spot for the cause of the puncture, remove the cause then remove the tube.
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- ❖ Inflate the tyre fully. Tightened the valve.
- ❖ Put the wheel back on the bike.
- ❖ Tighten the front brake. Spin the wheel and test the brakes. You are away!

A UPDATE ABOUT THE IMPORTANCE OF FUELLING YOUR BODY

By [Peta Hood](#) (Accredited Practising Dietitian/Sports Dietitian/Exercise Physiologist)
Lifestar Nutrition and Exercise Physiology www.lifestarnutrition.com.au

Carbohydrate plays a fundamental role in sports performance, but very few athletes understand exactly *why* and *how* optimising their carbohydrate intake can optimise performance. Carbohydrate is a macronutrient (along with protein and fat) made up of small units of sugars - the main one being *glucose*. When carbohydrate foods such as rice, pasta, or fruit are eaten, they are broken down into glucose, which enters the bloodstream, providing important fuel for working muscles and the central nervous system (brain) during exercise. Carbohydrate is therefore of benefit to both physical (muscles) and cognitive (brain) performance.

Carbohydrate (glucose) is the predominant fuel source for exercise of moderate to high intensity, because it can be metabolised anaerobically (when oxygen availability is limited), whereas fat cannot. Excess glucose not metabolised during activity is combined with water and stored in the muscles and liver as *glycogen* – a storage form of energy for later use. Rarely is glucose converted to fat. Carbohydrate is present in foods such as bread, cereal, pasta, rice, potato, sweet potato, corn, fruit, yoghurt, milk, crackers, muesli bars, sports drinks, bars, gels, lollies, cordial, honey and sugar.

So how much Carbohydrate do I need?

Daily... The daily carbohydrate needs of athletes vary with training intensity, volume, and level of fitness. High intensity bouts of training such as efforts, hill work or sprints may warrant a higher daily carbohydrate intake, as well as phases of training with sessions of longer duration (> 90 minutes), as the muscle glycogen is depleted after this time. Interestingly, one of the adaptations that occurs with aerobic training is an enhanced ability to burn fat, and therefore less reliance on carbohydrate as a fuel, during moderate intensity exercise. Therefore, someone who is new to training or returning from a break will need more carbohydrate in their daily diet than a well-trained individual.

Situation	Recommended Carb Intake
Daily refueling needs for training programs less than 60-90 min/day or of low intensity	5-7 g per kg bodyweight/day
Daily refueling for training programs greater than 90-120 min per day (standard training)	7-10 g per kg bodyweight/day
Daily refueling for athletes undertaking extreme programs - 6-8 hours per day (tour)	10-12+ g per kg bodyweight/day
Carbohydrate loading for ultra endurance events	7-10 g per kg bodyweight/day

Source: Australian Institute of Sport . Fact Sheet: *Carbohydrate – How Much?* URL: www.ausport.gov.au

During Exercise... To determine your carbohydrate requirements for an individual exercise session you need to ask yourself two questions: 1) how long will the session last, and 2) how hard will it be? The body metabolises glucose at a rate of about **1g per minute** during moderate to high intensity exercise¹. Therefore, you utilise approximately 60g of carbohydrate per hour, and even more at high intensities. If your session is longer than 90 minutes, take some carbohydrate on board with you. Recommendations are to consume **40-60g carbohydrate per hour during exercise** (e.g. a gel + sports drink). This can be via consumption of whole foods, gels, or sports drink. Recent research² also suggests that when multiple carbohydrates (e.g. glucose + fructose/maltodextrin – available in gels) are ingested together, carbohydrate availability and oxidation increase, which improve performance.

A word about shorter sessions... Most cyclists wouldn't think of taking carbohydrate on board for short, high intensity sessions such as efforts or a crit; but in a crit for example, a small amount of carbohydrate consumed around the 20 min mark, may improve your ability to perform in the sprint. Carbohydrate in the form of sports drinks or gels takes around 15-30 mins to be absorbed and utilised by the body, so you should aim to commence consumption of carbohydrate early in a race or training session so that you are well-fuelled for the entire event.

For Optimum Recovery... It can take up to 24 hours to replenish muscle glycogen stores when they are completely depleted³. If you are planning to race or train again within 24 hours, rapid replenishment of muscle glycogen via carbohydrate consumption becomes particularly important for optimising performance the next day. Recommendations are: **1-1.5g/kg bodyweight of carbohydrate in the first 30-60 minutes following exercise** eg a bar, recovery drink, jam sandwich, lollies, banana, etc. If you have any concerns please call me for an appointment

1. Coyle, E. (2004) Fluid and fuel intake during exercise. *Journal of Sports Science*. 22: 39-55.

2. Jeukendrup, A. (2008) Carbohydrate feeding during exercise. *European Journal of Sports Science*. 8(2): 77-86.

3. The Australian Institute of Sport. (2001) *Powerbar. Current Concepts in Sports Nutrition*.

OPTIMAL CRANK LENGTH - WHAT LENGTH SHOULD I RIDE?

By [Ben Ward](#) (Sports Physiotherapist)
Cycle Dynamics www.cycledynamics.com.au

In the field of bike fitting one issue that has remained very much a grey area is the issue of optimal crank length. As most cyclists are aware, the cranks act as a lever with a central fulcrum that allows the rider to exert torque force on the rear wheel via the chain. Theoretically different crank lengths have the potential to dramatically affect power output, however, the issue becomes clouded when you begin dealing with the marriage of a biological system (you) to a machine (your bike).

Issue 1 – Torque vs cadence

On the bike longer cranks will allow you to generate greater torque for a given amount of muscular effort and superficially this sounds like a good thing, however, with longer cranks the circumference of the circle that the pedals travel in is longer and will result in a lower cadence for a given amount of effort and the end result is that there is little difference in power to the road for a given amount of effort. Some riders naturally have a preference for a higher cadence and shorter cranks will facilitate this and vice versa (see issue 2). There are also circumstances where increased torque with lower cadences is beneficial such as in mountain biking when riding over a large obstacle such as a log.

Issue 2 – Muscle properties

Muscles are versatile and adaptable force generators but are characterised by an individual length-tension relationship that is dependent on the muscle's physical structure. Put simply, a muscle has an optimum range of length that it can generate the greatest force within and if the joint/s that the muscle acts upon operate in a range of motion where that muscle is either too short or too long then it will be incapable of generating optimum power. Muscle can be trained to work better over certain joint range of motions but ideally should not be forced to extremes. Crank length affects the range of motion of the joints in the legs so it stands as a general rule that short people have short cranks and taller people have longer cranks.

Muscles are also comprised of different muscle fibre types (eg. fast and slow twitch) with differing contractile and fatigue properties. The ratio of these different types differs from person to person and muscle to muscle and can affect an individual's preferred cadence for a given crank length. Unfortunately this is difficult to test for and is overshadowed to an extent by training effects. When the above muscle properties are considered together this is responsible for large amount of the uncertainty in choosing an optimum crank length.

Issue 3 – Riding position and hip flexibility

This is where things get a little less grey and an experienced bike fitter can identify when excessive crank length relative to a rider's position (eg. upright vs drop bars vs TT position) and hip flexibility is compromising their power/efficiency, or if asymmetries in hip range of motion are inducing asymmetrical rocking on the saddle which has implications for hip, back and knee pain. Sometimes hips are restricted by tight hip muscles (or a bit of extra padding around the abdomen) but can also be restricted due to bony alignment. In the latter case shorter cranks may be required if adjustments in cleat, saddle and handlebar position are insufficient to keep the hip open enough as no one except an orthopaedic surgeon can do much about the bony configuration.

In summary, crank length selection can be guided by your physical characteristics, riding position and style, however, at the end of the day you will ultimately adapt to whatever you ride and most people do ok with the cranks that come with the bike. If you have concerns about your current cranks or are planning to purchase a new bike and would like to get advice on appropriate lengths give Cycle Dynamics a call on 0402438342 or email ben@cycledynamics.com.au.

NEW SWIM APP

Have you seen the NEW Australian video coaching app for swimmers (used with iPhones, touch iPods and iPads). It's a simple to use, technique and training tool called Swim Coach Plus. During training and competition, video can be recorded on a phone then replayed in real time, slow motion and frame by frame and any two videos can be displayed side by side or overlaid to facilitate immediate technique comparison, analysis and discussion. The app recognises the importance of visual feedback in the development of better biomechanics and performance, has reference video clips of each stroke (including open water) and brings the functionality of products like Dartfish (used in elite sports settings) to the realm of the humble phone whenever it's required. It has apparently already created quite a buzz internationally with the US, Australian, Mexican and Canadian swimmers and coaches significant early adopters and editors of international swimming magazines and newsletters are requesting background stories. If this is of interest to you more information can be found at <http://www.c4e1.com.au/products/Swim-Coach-Plus.html>. Swim Coach Plus is available for download internationally from the iTunes App Store for AUS \$3.99.

The pic below provides an example of the product in use with the synchronised action of expert on the left and squad member on the right. Equally useful for recording changeover technique and other legs of events as well!



MEMBER OF THE MONTH – MS MARCH – Emma Hassall

Congratulations! Thanks to Dave and Connie Silvestri you have won a \$50 voucher to Arrivedici Pizza, Park Road, Milton. ENJOY! Thanks also to members for the nominations it was great to receive the feedback! (guess who Ms April will be?? ☺)

Why did you become a member of Activ?

I became a member of Activ after completing the Beginner's Course in February 2010. I really enjoyed the Beginner's Course and wanted to continue learning and improving. Becoming a member of Activ seemed like a great way to achieve this.

What are your cycling goals for 2011?

To become a stronger and faster rider (and to beat Stacey up hills!). I'm tempted to try a triathlon but the thought of swimming in open water terrifies me. I have the swimmers, cap, and goggles sitting in a cupboard at home in anticipation of overcoming my fear.

What do you do when you are not riding your bike?

I'm at work! Boring but true. I have a job with the Government which takes up a lot of my time and energy. Fortunately, cycling has helped me to add more 'balance' to my life. I'm no longer accused of working every weekend!

Cycling words of wisdom you would like to share:

Every ride, whether you ride well or not, is an opportunity to improve.