



Pre and During Kokoda Nutrition

It is recommended to consume 200-300 calories 2-3 hours prior to Kokoda (this can be tricky as we all need sleep!), however if you find this hard, consume 50-100 calories immediately prior to the start and 100 -300 calories/hr (this can vary depending on your body size, weight and intensity of the effort- hence the difference in calories). The following lists of foods are suitable for endurance are generally easy to digest and provide useable carbohydrates.

The following are examples of pre and during workout ideas for you to assist in a great performance, they are very healthy and packed with nutrition. Please make sure that you PRACTICE your nutrition prior to the race as you need to find out what works best for you!

50 calories is approximately:

- 1 small piece of fruit such as apple
- 12 strawberries
- 1 slice of pineapple – my favourite!
- 10 grapes
- 2 squares of dark chocolate
- 1 small pack raisins

100 calories is approximately:

- 14 almonds
- 1 cup blueberries
- 1 banana
- 2 pieces of fresh fruit
- 2 cups of watermelon
- 1 small sweet potato (baked/steamed and salted)
- 1 cup of white potato (baked/steamed and salted)
- 1 gel (check your brand)
- 1/ 2 sports bar (check your brand)
- ½ cup of boiled pasta
- ½ cup of boiled white rice
- 20g of potato chips
- 1 ½ slices of thin white bread
- 1 slice white bread with vegemite
- 1 Anzac biscuit (small)
- 1 medium sized plain pancake
- 10-12 jelly beans
- 7 jelly lollies
- 4 squares of dark chocolate
- 1 heaped scoop of powdered sports drink (check your brand – this is what *Hammer Heed, Trail Brew and Tailwind Nutrition* provide)



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Here is how we can put some of the above suggestions into practice

- **Energy Drink (electrolytes and carbohydrate mix)**
- **Energy Bar** – ½ - 1 bar (depending on distance/ time training) Homemade or a sports bar (eg. *Hammer Bar*)
- **Energy Gel or Energy Chews**
- **Raw Fruit** – 2 small or 1 medium-large/hr. Best choices are banana pieces, mandarin, oranges, pineapple, figs, dates, raisins (caution during longer workouts, as dried fruit can cause bloating/diarrhea).
- **Berries** easier pre-workout if they will get squashed or have at checkpoints
- **Fruit Puree in squeeze sachets or preserved natural fruit**- easy to carry
- **Boiled Baby Potatoes** sprinkled with sea salt (these carry well in a zip lock bag)
- **Sweet Potato** sprinkled with sea salt (these carry well in a zip lock bag)
- **Sweet Potatoes with Sea Salt & Honey** This is a higher carbohydrate meal perfect for the demands of Kokoda. Bake or boil 1-2 sweet potatoes and consume with sea salt and 1-2 tablespoons local raw honey or organic maple syrup. For added calories (especially prior to a 2+ hour training session or race), you can include a dollop of organic, pot-set yoghurt or 1-2 tablespoons almond butter.
- **Sandwich** -avocado, vegemite, nutella, peanut butter, honey
- **Easy to digest whole foods that are warm for the evening**
- **Homemade vegetable soup:** If you are walking and know that you will be out there for a long time hot foods are perfect when it gets late. Vegetable soup provides a source of liquid, electrolyte and some nourishing vegetables. Minestrone Soup (Serves 8-10). Use whatever vegetables are in season and try a variety of ingredients to keep the recipe fresh. Ingredients: 1 can cannellini beans (or beans of choice); 4 cups chicken or vegetable stock; 1/4 cup olive oil; 1 small onion, finely diced; 1/2 cup celery, finely sliced; 1/2 cup carrot, diced; 3 cloves garlic, minced; 4 cups baby spinach or other dark leafy greens; 1 cup fresh flat-leaf parsley, chopped; 2 zucchini, trimmed, diced; 1 can diced tomatoes; Salt and pepper to taste. Directions: In a saucepan over medium-high heat, add the olive oil, onion, celery and carrot. Cook, stirring often, until the vegetables are softened, about 5 minutes. Add garlic and cook, stirring, for 1 to 2 minutes. Add zucchini, tomatoes, spinach, parsley and stock. Reduce heat to medium-low and simmer for 20 minutes. Meanwhile, puree half (optional – will make soup thicker) of the cooked beans in a blender or food processor. Add it to the soup along with the remaining beans. Continue to simmer it for 5 minutes. Season with salt and pepper.



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RACE NUTRITION PLAN FOR KOKODA	
PRE-WORKOUT SNACK	Breakfast as usual or at least a bar or piece of fruit prior to race
DURING WORKOUT SNACKS	<p>You need around 90g per hour of CHO (as this is the max you can absorb)- your body actually needs more than this which you can get from the body's stores of glycogen and fat.</p> <p>Per hour 100-300 calories:</p> <ul style="list-style-type: none"> • Drink 750-1 litre of water • If using an electrolyte drink this can be counted in the fluid and calories per hour (best choices are Hammer Heed/Perpetuum/Endura/Tailwind/Trailbrew) • Eat food every hour to make up the difference remember we need 100-300 cal easy to digest food examples below: <ul style="list-style-type: none"> Pineapple 2 slices= 100cal Date 1 = 20 calories Watermelon 1 cup = 50 calories Sweet potato ½ cup= 57 cal Banana 1 small= 90 cal ½ sandwich- 100 cal 1 bar- 120 cal
FLUID AND ELECTROLYTE PLAN	<p>Approximately 750- 1litre per hour of water</p> <p>If plain water you have to increase food and consider electrolyte capsules like hammer endurolytes1-2 per hour</p> <p>If using an electrolyte drink you still may not need additional electrolytes – I suggest carrying them in case or have at least 1 team member carry.</p>



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Recipe

Homemade Anti-inflammatory Energy Bar

- 1/2 cup sweet potato, peeled and chopped
- 1/2 cup raw cashews, pre-soaked for at least 8 hours*
- 1/2 cup raw almonds, pre-soaked for at least 8 hours
- 4 fresh Medjool dates, pitted
- 4 tablespoons goji berries
- 2 tablespoon real maple syrup
- 1 teaspoon pink Himalayan salt
- 2 tablespoon coconut oil, melted
- 2 tablespoon raw cacao powder
- 30g fresh ginger, peeled and finely grated
- 10g fresh turmeric, peeled and finely grated

Steam the sweet potato for 10 minutes, or until soft and cooked through. Allow to cool completely. Add the nuts into a food processor with the sweet potato, goji berries, maple syrup, salt, coconut oil and cacao. Pulse until just mixed through.

Add the ginger and turmeric and pulse again until well combined. The mixture should start to stick together in your machine. Transfer the mix into a shallow dish, lined with baking paper. Press down firmly with a spatula. If you'd like, at this point you can press coconut flakes, goji berries or cacao nibs into the top of the bars. Place in the freezer for at least 2 hours to set firmly. Slice into 12 even bars.

Nutrition per bar: 565 kilojoules, 7g fat, 17g carbohydrate, 3g protein, 2g fibre.

*Ideally it's important to soak nuts before using or eating them, as this reduces the phytic acid content – a protective mechanism within nuts and grains that reduces our ability to absorb nutrients in the gut.

Fluid and electrolyte intake

The major electrolytes found within the body include calcium, magnesium, potassium, sodium, phosphate and chloride. Because these crucial nutrients help stimulate nerves throughout the body and balance fluid levels, an electrolyte imbalance can cause a variety of serious negative symptoms.

Dehydration

Any level of dehydration will decrease sports performance – a 1% loss of body weight generally decreases sports performance by 5%.

Adverse effects of dehydration

There are many adverse effects of dehydration including:

- Heart rate and body temperature increase.
- Perception of work / effort increases.
- Muscular endurance and aerobic capacity are reduced.
- Reduced concentration, mental functioning, and skill learning ability.
- Cramps, nausea and headaches.



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- Delayed gastric emptying, making it harder to rehydrate. Fluid intake when dehydrated can lead to stomach upsets.
 - Inability to urinate a several hours after an endurance event.

To assist in the fluid and electrolyte balance you can use food as sources as well as sports drink replacements and supplements.

- To understand your hydration needs weigh yourself before and after a training session (such as a long weekend training session) and this will show how much weight you have lost in fluid and hence approximately what needs to be replaced. You can then use this as a guide for future rides.
- If you are relying on a very low calorie source of fluid you need to consider your energy requirements particularly on your long training sessions and in Kokoda. When purchasing a sports drink the Institute of Medicine recommend the formula to contain the following ratios of sodium to potassium to carbohydrate to ensure maximal uptake and a correct electrolyte balance in the body:
 - 10 parts sodium: 1 part Potassium or 6 sodium:1 potassium
 - With a 5-10% carbohydrate content to maximise absorption
 - Hammer Nutrition-(Heed, Perpetuem or Sustained Energy- has some protein in it), Trailbrew (locally made by a trail runner), Tailwind. These are all at the right ratios to maximise absorption and balance electrolytes. Both Trailbrew and Tailwind can be bought with no flavour so they taste more like water – you can detect a difference but these can be easier to get down than very sweet flavours which can become sickening.
 - The electrolytes will also help to hydrate you better than just straight water
 - I carry Hammer Endurolytes which are electrolyte capsules – I usually only have 1 every few hours whereas the boys take 2 per hour.
 - All of the mentioned products can be purchased online via the websites.

Foot Care

On the morning of Kokoda you may like to spray your feet with “slick spray”. Spray whole feet, in between toes and around the backs of heels.

Make sure your socks have been worn and washed before and check that they don't bunch anywhere when you put your shoes on.

You may wish to have a spare pair of shoes and socks with your support crew in case you want to change shoes.

If you have used taping and like this than you can do this – just make sure the tape is firm and not too tight (as your feet swell). Also make sure that the skin won't be vulnerable to blisters anywhere with the way you have taped.



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Chaffing

You may not have any issues with chaffing. If you are concerned then use the slick spray. Vulnerable areas are around the arms of the packs, over your shoulders, lower back, inner thighs and yes for some people the butt crack! Wear what you know hasn't chafed in training- tights are always helpful for guys as well as girls.

Paw-paw cream is also good as anti-chafe.

Your lips may get very dry from exposure out on course and having some paw-paw (or other preferred balm) in your drop bags or in your pack can make you feel so much better!

Team Cohesion

Having a team plan worked out prior to Kokoda can make such a difference in your overall performance. We would have pulled out the last few years had it not been for such a tight team. We worked together and made it to the finish line as a team of 4, if we had not done this we would have fragmented and fallen apart.

I think you always need to keep in mind what the spirit of the event is all about – Team work!

- Never let the person who is struggling fall to the back
- Check in with each other throughout the event – is everyone ok?
- If someone is very quiet – they may be ok but check that they are- we all have quiet stages and that is fine but if you notice someone is not talking at all this may be a sign that they need some extra care
- If anyone starts to feel crappy first check physical- when is the last time you ate or drank?
- Walk in a group of 4 wherever possible or in pairs. Always as a pair do not pair the 2 more fatigued members (at the time as this changes throughout the day/night – we all have lows)
- If 2 people are paired and they feel like they are slowing everyone down you will quickly find that negativity creeps in and thoughts of pulling out and it being too hard start to come up. They will also start to lag and a gap will open up. Re-group and come together as a team – we cannot stress this enough!
- If you are in single file have the strongest people at the front and back and the other two in the middle. Never let the most fatigued person fall to the back.
- If possible/required you can help by carrying someone's pack for them
- Up hills stick together – use poles if you have them. If you have a person struggling put them in between 2 of you and put an arm each around their



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- back- have them use poles and you use a pole each in your free hand. The other person can be behind and help to push or carry the pack
- Feeling a part of the team is so important. Often someone who has struggled can come good again so don't give up!
- When you are united use this team feeling as you pass other teams and it can further boost your morale. The teams that you see fragmented are the ones that pull out – so stick together
- Motivate yourselves by using funny stories and staying a little light hearted
- Know how far approximately to the next checkpoint. The finish line at times is overwhelmingly far away so it is about getting to the next checkpoint.
- You can phone ahead to your crew if anyone has specific needs and they can be ready for you on the way in
- If possible have one support crew member walk out about 500m and meet you as you come into the checkpoint they can guide you on where to register as you come in and where your crew is set up – this is a HUGE boost and you feel loved and looked after. You can also let them know what people need. Anti-chafe cream, foot care, Panadol, extra assistance etc.
- Be kind to your crew – they are there to help and also sacrificing their time to help you. Thank the volunteers on course and say hi to other teams and check that they are also ok. Having good spirits helps to boost others and make them feel appreciated.

First Aid

Have one of your team carry some basic first aid items. You may also wish to have carry a few painkillers.

Do not over use pain killers as they are very bad for the liver and other organs if abused. Use only if necessary and definitely be cautious around ibuprofen as it can cause some internal bleeding, heart issues and other issues if you are vulnerable. Other adverse effects in ultra-events have been reported. You can research this – I have attached a link to one situation that happened.

<http://www.runnersworld.com/injury-treatment/what-runners-should-know-about-pain-medications>

Some people use paracetamol, Panadol extra (has caffeine), codeine based formulas can cause nausea so please seek advice before considering taking these.

Just remember it IS GOING TO HURT! It is the furthest distance you have ever gone and we can't train that distance- but it is also ok. We are strong! When you get to that finish line it is incredible and so worth the inner demons and the battle.



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Here is a link to a podcast by Radiolab about the limits we can push ourselves. I like to hear the Central Governor theory – if you listen to this it also makes for an interesting discussion on the course. <http://www.radiolab.org/story/91709-limits/> it got one of our crew up Army land!

Organisation

If possible have a team meeting with your crew and discuss aspects of the event so they are prepared as well as you are. We include our crew in a team run prior to the event and buy them something little for their time to show how much we appreciate them.

Over-pack food and a variety of sweet and savoury foods

Pack warm gear for the night when you stop at checkpoints – especially if your team is a going to be out there for longer.

My team also write out a list of what they will need at each checkpoint – water, electrolytes, what food, head lamp, high vis etc. This may be a little tricky for you if it is your first but is worth considering. Your support crew will have these items ready to pick up.

Tapering

Rest up and enjoy the easy week.

Work on your mental strategies and be as organised as possible for the big day!

Eat healthy and get plenty of sleep.