

Considerations for Endurance Cycling



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- Objective is to enjoy multiple days of long rides
- Be prepared as support is not always there when you need it (food, water, critical clothing, basic bike repair equipment)
- Training is important now but the week before the event, the most important consideration to enjoying the ride;
 - Be well rested – get lost of sleep the week before (8 hrs plus a night)
 - Stay hydrated (most of us are chronically dehydrated so focus on drinking water several days ahead and your muscles will thank you by hurting less)
 - Get your bike tuned and check critical equipment versus checking the bike as you load it onto the rack for the start of the ride

Bike Gear You Need to Carry Every Ride

- Materials to change your tire (Cam is amazing but don't rely on him to fix your tire – you might be waiting a long time)
- You need to carry
 - A new inner tube (check to make sure it's the right type so ask the store). 700 by 23 – 25 is normal – if you have carbon wheels make sure valve stem is long enough – if you already have one, check to see the tube is not worn from being packed in your saddle bag for the last year
 - Tire levers
 - Pump or CO2 cartridge (I always carry a pump – buy one and permanently fix it to your bike and it buys lots of assurance – I would avoid the CO2 cartridge)
 - Multi-tool
- These items all fit well into a small saddle bag

Bike Gear – Don't Leave Home Without Them



Weather Gear – Be Prepared



Weather Gear

- Clothing can make or break your ride
- Never be concerned about “too warm” as you can always strip down or worst case you sweat a bit too much
- Layers ... layers ... layers
- Be aware of the weather forecast and where you are riding.
 - Many of our days are through the mountains so assume the temperature can and will vary dramatically (Storm Mountain on day 2 is has its name for a good reason)
 - Many riders were caught unprepared on Highwood despite the forecast and relied on clothing that was in a van instead of in a pocket or day pack

Impact of Cold

- Cold saps your energy and your body naturally diverts energy from arms and legs to your core when you get cold
- Muscles take energy to relax and your legs need to relax on every pedal stroke
- Muscle “stiffness” – arms, legs, shoulders in cold is from you muscles always being contracted – cycling forces the muscles to lengthen so if they don’t relax they get “ripped apart” like tearing Velcro
- Toes and fingers get cold first – less blood cells and ‘not vital’
- Leg don’t “feel” cold as they have poor receptors but rule of thumb is if your arms need covering you should also cover your legs as well
- When you are wet from sweating or rain, evaporation from skin steals heat from you so you need to slow the process with clothes
 - Once wet its important to reduce the impact of wind which speeds up evaporation

Clothing For Cold/Wet Weather

- Gloves – full finger best for fall riding
 - For rain – cheap alternative is heavy duty rubber gloves
- Head cover for inside of helmet
 - If covers ears even better – can use a buff as multi purpose
- Feet
 - Toe covers and or foot covers for full rain
 - Bring Glad freezer bags (thick) and duck tape and can from water/wind resistant for heavy rain
- Arm and Leg Sleeves
- Vest and a rain/wind jacket
- Long Sleeved jersey as back up

Be Ready for Weather – Cold, Wind, Rain



Wet Weather Fenders

- Called an Ass Saver for good reason
- Light and reduces wheel spray on your backside



Nutrition – Hydration on a Ride



Nutrition - Hydration is Critical

- Stay hydrated – water helps regulate body temperature, lubricates joints and transports nutrients key to keep you going
- General rule when it is warm (>20); one 750 ml bottle every hour to replace sweat loss (more if hotter or high effort and less if its colder or you are at a lower effort)
 - Sweat rate can vary significantly from person to person and is also related to fitness – can be 1.5 litres loss per hour
 - 1.5 litres fluid loss is about 2% of body weight
 - 1% BW loss – thirsty, feeling hot (temp regulation issues), performance declines, at
 - 4%, performance declines 20 to 30%,
 - 5% dizzy and weak
 - 10% comatose

Nutrition - Electrolytes

- You lose electrolytes when you sweat (mostly sodium and chloride but also lesser amounts of potassium, magnesium and calcium)
 - Low electrolytes causes fatigue, muscle cramping, irregular heart rate
- Electrolytes carry electrical energy in the form of ions that are critical for muscle contractions and transmission of nerve impulses (as well as for cardiac and digestive functions).
- For endurance cycling, replacement of electrolytes is very important especially in hotter weather.
 - For slow paced riding I have electrolytes in every other bottle.
 - Types of electrolytes. Nuun, Ultima, GU, Hammer (I try to avoid high sugar ones like Gatorade)

Nutrition – What to Eat and When

- You will burn 300 to as much as 1000 calories an hour riding depending on your size, effort and temperature/weather.
 - a 100 km ride that takes 5 hours (20 km/hr) will consume +/- 2000 calories which means its about double your daily burn rate when at the office.
- That said you still need to be smart about what you eat to help your body perform and recover to ride comfortably the next day
- Muscles need glucose to work – the body converts carbohydrates to glucose that fuel your body
 - You need to consider what you eat before the ride, during the ride and after the ride to keep the machine running well
 - Fat can also be converted to energy but it's a slower conversion for most so not as good for high intensity but your body has 25 times more fat energy than carbohydrates

Nutrition – Dinner

- Night Before a Big Ride
 - Eat a balance of protein, fat and carbs but don't over eat – you're not a squirrel preparing for winter
 - Generally eat food that digest relatively easy; A small steak, chicken or fish are good protein examples
 - Avoid excessive red meat protein as you don't want it to take a few days to digest (if you get the meat sweats that night you're going to hurting on the bike the next day)
 - Some starchy carbs like pasta, potatoes and rice are good but the more complex the better. (simple or high glycemic carbs covert to glucose too quickly)
 - Don't go crazy on sweet deserts
 - sugar is your best friend that last hour of a long day on the bike but also can your worst enemy to your stomach on multi-day endurance cycling events if over done

Nutrition – Breakfast

- Try to eat a decent breakfast at least 90 min before riding
- Important to have protein and fat in addition to carbs – yogurt, egg, some cheese are all good but avoid or easy on the bacon and sausage as they take all day to digest
- Complex carbs (slow burning) good as they will be your primary fuel – granola, oatmeal with berries (blueberries and raspberries good). Bananas ok as they are good potassium but keep sugar levels down.
- Don't over eat – should not feel like after a Mother's Day Brunch at the Banff Spring
- Drink water (at least a litre) – avoid or minimize fruit juice – pre-hydrate
- Avoid or keep milk to a minimum before riding (increases phlegm in chest)

Nutrition – During the Ride



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- Other than the first hour, you generally want to eat about 100 calories every hour. – eat often and in small bit to help digestion (take a bite of a bar every 30 min)
- Don't rely entirely on food at the aid station – bring at least three bars as a backup in case it takes longer to get there
 - Other than the last hour, if you “feel” hungry on the ride you have mismanaged your nutrition – listen to your body
- The down side of depleting your body fuel sources is your body looks to fat and protein to convert to energy and its goes after muscle protein as an easy source if there are no carbs to convert to glucose
 - This is “bonking” – body shuts down, energy goes to zero and you stop thinking rationally.

Nutrition – During the Ride

- Other than the first hour, you generally want to eat about 100 calories every hour.
- On a 5 hour ride, start with complex carbs with lower sugar (granola bar)
 - Avoid high glucose chews/gels early in the ride as it over rides your body converting the more complex carbs.
 - As your stores of carbs depletes you need to add more so the second half of the ride move to more simple carbs
 - The last hour or two you need to take carbs that digest quickly (bananas good and higher sugar content like chews – keep the gels for the last hill push or not at all)
- Try to keep to natural food as much as possible (peanut butter sandwich is far better than a processed bar and 100% better than candy)
- Some sodium carbs are good midway (potato chips at the aid station are great)

Nutrition – After the Ride, Time to Repair

- Riding for 5 hours feels great (when you stop) but your body needs to immediately start the process of repairing your muscles.
- You need protein, carbs, fat – the sooner the better – within 30 mins is best but still focus on easy to digest – if you take care of muscle recovery it will significantly increase the fun of a multi-day endurance event.
 - There are good “recovery” drinks that are good but a simple but good recovery drink is chocolate milk
 - Beer is of course a wonderful recovery drink but moderation is the key

What Else Helps Repairing Your Muscles

- Stretching – 5 hours of riding (especially in cold) is hard on muscles – some are stretched (back) and some are contracted (hip flexors)
 - 10 min of stretching – quads, hamstrings, hip flexors, gluts can go a long way to helping
- Don't wait to the end of the ride to stretch – I like to stand on my pedals at least every half hour to stretch the back, open up the hip flexors etc)
- Cold water soak – if accessible, a short leg soak in cold water (river, stream, pool, tub) can help flush the legs to help the repair
- Self massage and foam rolling – the evil roller or a ball on the quads, gluts, calves, IT band, neck (a tennis ball or hard ball is as efficient and easier to pack)
- Put your feet up after the ride – drain the blood down and rest