



NUTRITION IN CYCLING

NUTRITIONAL BASICS



Before we give you specific, compact nutrition tips for your sport, we have summarized some **general information** that you should consider in advance:

Whether it's nutrition in cycling or in general, **your diet should always have a healthy base**. This means that your diet should have **a good overall nutritional quality and variety**. To do this, you can follow these **three guidelines**:

- Eat plenty of fruits and vegetables
- Regularly resort to legumes and nuts
- Reduce meat and sugar consumption

There is **no standard diet** that you can use for every workout/competition. To know how to fuel yourself in the best way possible during training, you should **consider beforehand what you want to achieve** with the upcoming session:

- Improvement of carbohydrate metabolism
- Improvement of fat metabolism
- Reduction of VLamax (maximum lactate formation)
- Weight loss

Please also consider: What training phase are you in right now? What time of year is it, is it warm or cold?

Our nutritionist Robert Gorgos has summarized in this table which foods you could specifically use. You should always make sure to include these four categories in your daily diet:

Proteins	Fat	Carbohydrates	Protective Substances
Egg, Poultry	Almonds, Walnuts	Oats	Cabbage
Salmon	Flaxseed Oil	Whole grain bread	Onions, Garlic
Beef, Liver	Olive oil	Berries, Apples, Pears, Bananas, Raisin	Curry, Tarragon, Rosemary
Legumes	Coconut oil	Peas, Red Lentils	Fresh herbs
Natural Yoghurt	Butter, Dark Chocolate	Basmati rice, Pasta	Green tea, Coffee
Vegetables	Avocado	Vegetables	Vegetables

ENDURANCE UNIT



General Info	Before Training	During Training	After Training
<p>Training goals: Improvement of fat metabolism/ reduction of VLamax Training</p> <p>Method: Continuous, alternating</p> <p>Intensity: Low</p> <p>Duration: Medium – long</p> <p>Example units:</p> <ul style="list-style-type: none"> • Easy bike ride • „Train Low“, e.g.: Fasting training in the morning or depleted glycogen stores due to pre-load of a previous training session <p>Those who are on the road intensively for more than 2.5h need carbohydrate amounts of more than 60g/h</p>	<p>Basic consideration: Requirement for effective training of fat metabolism is control of intensity (avoid high intensity)</p> <p>Nutrition: Moderate carbohydrate food 2-3h before exercise, increased protein portion</p> <p>Example: Muesli with yogurt/quark, salmon with baked vegetables, sweet potato</p>	<p>Basic consideration: Due to the lower intensity (up to FatMax range) primarily free fatty acids are used as energy source, nevertheless carbohydrates are also burned</p> <p>Fueling: Supplying slow carbohydrates during exercise avoids a too high energy deficit and promotes positive effects of optimally training the fat metabolism. Later, insulin effects are negligible and more concentrated, faster carbohydrates are recommended</p> <p>Example:</p> <ul style="list-style-type: none"> • 30-35g/h <u>SLOW CARB</u> <p>Note: Carbohydrate requirements are higher for training durations over 2h, therefore:</p> <ul style="list-style-type: none"> • Use <u>POWER CARB</u> after 1/3 to 1/2 of the total load time, as higher dosage is possible here (60-80g/h) or 1-2 <u>GEL 40</u> (depending on what you also take in in terms of carbs via drinks) • Additional energy demand can be covered by <u>PORRIDGE BARS</u>, for very long sessions additionally <u>PROTEIN BARS</u> 	<p>Basic consideration: REFUEL (carbohydrate intake) = replenish depleted glycogen stores</p> <p>REBUILD (protein intake) = support the regeneration of the stressed muscles</p> <p>REHYDRATE (fluid intake) = compensate for water and electrolyte losses due to sweating</p> <p>Nutrition: Combination of high-quality carbohydrates and proteins</p> <p>Example: Within 30min after end of exercise:</p> <ul style="list-style-type: none"> • 30-40g <u>RECOVERY SHAKE</u> + 5 apricots or dates <p>Follow-up:</p> <ul style="list-style-type: none"> • High carbohydrate meal within 2h after exercising + protective substances through fruits & vegetables, some protein • E.g. couscous salad, pasta, chickpeas or feta cheese

NUTRITION INTENSIVE UNIT



General Info	Before Training	During Training	After Training
<p>Training goal: Improvement of carbohydrate metabolism/ increase VO2max Training</p> <p>Method: Interval, repetition, competition method</p> <p>Intensity: Medium – intense</p> <p>Duration: Medium</p> <p>Example units:</p> <ul style="list-style-type: none"> • Intervals, e.g.: 3x (8min high intensity/4min normal intensity) • Competition specific units, e.g.: 3x (20min competition tempo/ 20min relaxed intensity) <p>From a duration of 1 to 2.5h, a carbohydrate intake of 30-60g/h is recommended</p>	<p>Basic consideration: Requirements for effective training in the area of carbohydrate metabolism are filled glycogen stores</p> <p><i>Note:</i> <i>The refilling of glycogen stores requires a certain amount of time. If an intensive session is scheduled for the next day, a carbohydrate-rich meal should be consumed the evening before</i></p> <p>Nutrition: Carbohydrate-rich meal 2-3h before exercise</p> <p>Example: E.g. overnight oats, quinoa bowl, bread with almond butter and banana</p>	<p>Basic consideration: Exponential carbohydrate consumption when training around or above threshold range</p> <p>Fueling: Supply of rapidly available carbohydrates to avoid the body having to rely on the third source of energy, proteins</p> <p>Example:</p> <ul style="list-style-type: none"> • 40g/h <u>FAST CARB</u>, for longer/ harder 60-80g/h <u>POWER CARB</u> or 1-2 <u>GEL 40</u> (depending on what you are also consuming in terms of carbs via drinks) • For „train-the-gut“ workouts, the amount of carbs can be increased up to 120g/h (the digestive tract needs to be trained to potentially higher carbohydrate intakes in competition; for example, 1x per week carbohydrate intake in training of up to 120g/h can be „trained“) 	<p>Basic consideration: REBUILD - REFUEL - REHYDRATE OPEN</p> <p><i>WINDOW EFFECT: Increased sensitivity to infection after intense exercise + improved absorption of nutrients = immediate supply of proteins and carbohydrates after the end of exercise</i></p> <p>Nutrition: Combination of high quality carbohydrates and proteins</p> <p>Example: Within 30min after end of exertion:</p> <ul style="list-style-type: none"> • 30-40g <u>RECOVERY SHAKE</u> + 5 apricots or dates • Additionally after a particularly intense session: 40-50g <u>RECOVERY 8</u> <p>Follow-up:</p> <ul style="list-style-type: none"> • Carbohydrate-rich food within 2h after exercising + protective substances through fruit & vegetables, some protein • E.g. vegetable curry with rice + chicken meat or natural yogurt

NUTRITION TIME TRIAL / MOUNTAIN TIME TRIAL



Before Competition	During Competition	After Competition
<p>Basic consideration: Requirements for optimal performance in competition are filled glycogen stores</p> <p>Nutrition: 2-3h before the start last meal: high carbohydrate, low fiber and low fat</p> <p>Example: Breakfast: roll with honey, oatmeal with almond milk, raisins, banana</p> <p><i>During the run-in: half bottle (250ml) with <u>FAST CARB</u> (20g)</i></p>	<p>Basic Consideration: At high competition intensities, the body needs a fast-available & well-tolerated energy source</p> <p>Fueling: Supply of rapidly available carbohydrates to avoid a drop in performance due to an energy deficit</p> <p>Example:</p> <ul style="list-style-type: none"> • 60-120g/h <u>POWER CARB</u> or 1-3 <u>GEL 40</u> (depending on the amount of carbohydrates you also take in through drinks) • Can be supplemented with <u>PORRDIGE BARS</u> or for very long stages <u>PROTEIN BARS</u> (for additional amino acid supply) <p><i>TRAIN THE GUT: Carbohydrate tolerance can be trained, carbohydrate amounts up to 120g/h are possible. Testing the dosage in training and slowly increase!</i></p>	<p>Basic consideration: After the competition, it is important to supply the body with high-quality energy sources and thus actively promote the regeneration processes</p> <p>Nutrition: Post-supply of the high load with high-quality & complex protein source + carbohydrates</p> <p>Example: Within 30min:</p> <ul style="list-style-type: none"> • 40-50g <u>RECOVERY 8</u> <p>Follow up:</p> <ul style="list-style-type: none"> • High carbohydrate meal with easily digestible, low fat protein source • E.g. rice or pasta pan with parmesan or kefir

NUTRITION LONGER DISTANCES / STAGES



Before Competition	During Competition	After Competition
<p>Basic consideration: Requirements for optimal performance in competition are filled glycogen stores</p> <p>Nutrition: <u>CARBOLOADING</u></p> <ul style="list-style-type: none"> • 2-3h before the start, last meal: carbohydrate-rich, low-fiber and low-fat, small addition of protein <p>Example: Breakfast: bread roll with jam, natural yogurt, soft egg or oatmeal fine with oat milk + raisins + omelet, spelt bread with some butter</p>	<p>Basic consideration: For long duration of competition, the body needs a constant & well-tolerated source of energy</p> <p><i>Important: Supply yourself early & not only when you run out of energy. This will prevent a sudden drop in performance (supply every 30min)</i></p> <p>Fueling: Supply with fast available carbohydrates, high dosage in competition</p> <p>Example:</p> <ul style="list-style-type: none"> • 80-120g <u>POWER CARB</u> or 1-3 <u>GEL 40</u> (depending on the amount of carbohydrates you also take in through drinks) • Can be supplemented with <u>PORRDIGE BARS</u> or, for very long stages, with <u>PROTEIN BARS</u> (for additional amino acid supply) 	<p>Basic consideration: After the competition, it is important to supply the body with high-quality energy sources and thus actively promote the regeneration processes</p> <p>Nutrition: Recommended post-supply after long physical activities includes a high-quality & complex protein source and carbohydrates</p> <p>Example: Within 30min:</p> <ul style="list-style-type: none"> • 40-50g <u>RECOVERY 8</u> <p>Within 60-90min:</p> <ul style="list-style-type: none"> • 30-40g <u>RECOVERY SHAKE</u> + 5 dates <p>Follow-up</p> <ul style="list-style-type: none"> • High carbohydrate food with easily digestible protein source • E.g. potatoes with vegetables + feta cheese or kefir

FINAL TIPS



Conclusion on nutrition in cycling

In summary, when it comes to nutrition in cycling, you should:

- Optimize your basic diet
- Keep the goal of each training in mind
- Adjust your nutrition before, during and after training so that it helps you to achieve your training goal
- Basically pay attention to a natural, nutrient-rich diet / food in order to be healthy and perform well in the long term

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