THE COMPLETE NUTRITIONAL GUIDE FOR ATHLETES

the sports cookbook

Stephanie Scheirlynck

PHOTOGRAPHS: HEIKKI VERDURME

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Stephanie Scheirlynck in her capacity as **sports nutritionist**, is convinced that a proper diet can enhance athletic performance. Her aim is to help athletes as much as possible to achieve their sporting ambitions and their goals and part of that is offering sound advice on sports nutrition.
Stephanie is a qualified nutritionist and dietician with **specialised training in sports nutrition** (the Netherlands/Australia). She is also one of the first sports dieticians in Belgium to receive a **Diploma in Sports Nutrition from the International Olympic Committee**.
Stephanie worked as a sports dietician at Energy Lab for five years where she advised many top athletes, including **Sven Nys**, **Evi Van Acker** and the **Olympic Sailing Team**, along with the cyclists from **Lotto-Soudal** and **Topsport Vlaanderen (Flanders)**.
In addition she also counsels athletes from other sporting disciplines including players from **RSC Anderlecht**, **the Belgian Red Panthers (hockey), Greg Van Avermaet (cycling), Jolien D'hoore (track cycling), Nafi Thiam (athletics)** and **Lise Van Hecke (volleybal).**
Stephanie doesn't confine herself solely to working with top athletes. Anyone seeking advice on healthy nutrition, sports nutrition and/or improving body fat percentage is welcome to contact her.

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Introduction

THE IMPORTANCE OF SPORTS NUTRITION IS WIDELY RECOGNISED TODAY. THIS IS HARDLY SURPRISING SINCE THE FUEL YOUR BODY BURNS DURING SPORTING ACTIVITIES COMES FROM WHAT YOU EAT AND DRINK. THAT'S WHY IT'S IMPORTANT TO CONSUME THE RIGHT KIND OF NUTRIENTS AT THE RIGHT TIME. SIMILARLY, YOU WOULDN'T PUT DIESEL FUEL INTO A CAR THAT RUNS ON PETROL, WOULD YOU?

Your nutritional requirements will depend on your training load and, as a result, vary from day to day. That's why this cookbook is full of nutritious recipes that not only distinguish between rest days and heavy training days but also between days spent on resistance training and competition as well. Furthermore, our additional nutrition tips provide inspiration when choosing meals on these days.

The recipes are designed in such a way that they not only meet the nutritional requirements of any sportsperson but are easy to prepare as well. Wouldn't you rather be resting or doing something you enjoy than spending two hours in the kitchen?
Our recipes are well balanced, extremely varied and provide all the important nutrients you'll need to properly fuel your body for these different situations. You'll improve your stamina, speed up your recovery time and change your body composition so you'll not only feel better but perform better too.

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Daily caloric expenditure

THE ENERGY YOU EXPEND WHILE PURSUING YOUR SPORTING ACTIVITY IS MEASURED IN KILOCALORIES (KCAL). KCAL AREN'T ONLY ESSENTIAL FOR SPORTING ACTIVITIES. THEY'RE NECESSARY FOR EVERYDAY ACTIVITIES TOO.

Your body also expends energy when in a state of rest. This is what's known as the basal metabolic rate. If you were to lie in bed for 24 hours, wide awake and not moving, you would still expend energy to keep your heart pumping, your brain functioning, your lungs expanding, etc. Believe it or not, this amount of energy expenditure soon reaches levels from 1200 to 2000+ kcal, depending on your muscle mass. The more muscle mass you have, the more energy you expend when you're at rest. Calculate about 30 kcal per kilogram of lean body mass (see below) to determine what your basal metabolic rate actually is. Also factor in the energy needed for your job, your sport and other physical activities. And you must also eat during a 'rest day', albeit less and in proportions different to those during training load or competition days.

HOW TO CALCULATE YOUR BASAL METABOLIC RATE

For men, the equation is: **BMR = 66 + (13.8 x weight in kg) + (5 x height in cm) - (6.8 x age in years).**
The value for BMR in this equation is given in **kilocalories per day**.

Because women often (but not always) have less lean body mass than men, they will generally have lower BMRs. The BMR equation for females takes this into account: **BMR = 655 + (9.6 x weight in kg) + (1.8 x height in cm) - (4.7 x age in years)**.

Note: The BMR equation isn't perfect - it's just a convenient way of approximating your BMR

Once you know your BMR, you can multiply it by an activity multiplier to calculate your Total Daily Energy Expenditure (TDEE), which estimates the total number of calories you expend in a day. The activity multiplier for lightly active people (light exercise 1 to 3 times per week) is 1.375, moderately active people (moderate exercise 3 to 5 times per week) is 1.55, very active people (hard exercise 6 to 7 times per week) is 1.725, and extremely active people (hard daily exercise or training more than once in a day) is 1.9.

If you have tested your body composition, you can use your lean body mass to calculate your BMR very accurately. Body composition is a measure of how much of your body weight is fat. All weight that is not fat is considered lean body mass. This equation does not change based on gender. BMR = 370 + (21.6 x lean body mass in kg)

If you understand the principle of the basal metabolic rate, then you'll immediately understand why crash diets aren't a good idea for athletes (or non-athletes). With a crash diet, your caloric intake is reduced to less than what you would require at rest. You create a calorie deficit that you combine with work and sport. In response, your body will seek to preserve the current energy levels. This is an instinctive reaction that stimulates our resilience in times of war and in extreme situations and what pushes us to survive for long periods without food or water. Your body goes into survival mode and stores the energy as fat. Because you eat very little during a crash diet, your metabolism effectively shuts down, prompting your body to literally break down its own muscle tissue to release energy in order to carry out normal, everyday activities. Once you start eating again, you increase your calorie intake and, as a counter measure, your body will store the excess calories as fat leading to more weight gain and resulting in the so-called yo-yo effect. This type of diet combined with a high-intensity sporting activity leads to reduced energy and poor physical recovery. Does this sound familiar? In this cookbook, we'll show you how to lose weight simply, effectively and safely.

FATS

OUR BODY IS ABLE TO STORE LARGE AMOUNTS OF FAT. FAT PROVIDES MORE THAN TWICE AS MUCH POTENTIAL ENERGY (9 KCAL) PER GRAM AS CARBOHYDRATE. BUT FAT IS NOT AN IMMEDIATE SOURCE OF ENERGY DURING INTENSE BOUTS OF ACTIVITY BECAUSE IT SIMPLY TAKES TOO LONG TO DIGEST.

Fat is a slow-burning fuel and can be converted into two types of body fat: essential fat and storage fat. Having storage fat can be an advantage in certain sports. Consider rugby, where fat can protect the organs or long-distance swimming, where it offers buoyancy and extra insulation. In most sports, however, it is deemed more beneficial to have a lower percentage of body fat.

Fat is a primary source of essential fatty acids and vitamins. That's why we use healthy fats in all of our recipes. We include a balance of unsaturated, healthy fats such as those from vegetable oils, nuts and oil-rich fish in our dishes. These foods are especially beneficial on rest days. They are, however, limited on heavy training days and certainly on competition days due to their slow digestion. Saturated, animal, and unhealthy fats such as those from deep fried foods, creamy sauces, chocolate, cake or butter as part of your diet are okay once in a while, but it's generally a good idea to avoid them.

PROTEIN

PROTEIN IS COMPOSED OF SMALLER MOLECULES CALLED AMINO ACIDS. AMINO ACIDS ARE THE IMPORTANT BUILDING BLOCKS OF YOUR MUSCLES AND BODY. THEY PROTECT, MAINTAIN, STRENGTHEN AND REPAIR MUSCLE TISSUE.

Protein is an auxiliary fuel that your body doesn't tap into during your training load (unless you encourage the breakdown of muscle tissue by following a low-carbohydrate diet), but protein is essential to post-training muscle recovery and repair. Have you ever detected the odour of ammonia during bouts of high intensity training? This may be an indication of your body breaking

down muscle tissue to release energy.
Our daily diet provides us with more than enough dietary protein, so cases of protein deficiency are extremely rare. In some situations (weight training, post-training recovery), animal protein, which contains all of the essential amino acids, is more effective than vegetable protein. This can be a disadvantage to some vegetarians (and vegans) who do not include milk products in their diets.

The best sources of protein are dairy products, meat, fish, eggs, cheese, legumes, meat substitutes, etc.

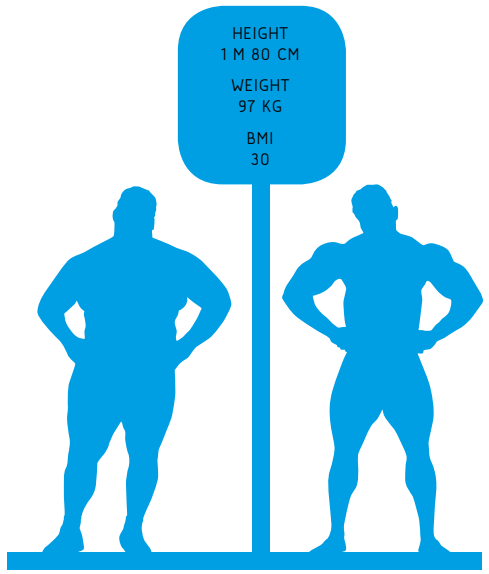
FLUIDS

DURING BOUTS OF INTENSE ACTIVITY, FLUIDS ARE LOST, MAINLY THROUGH PERSPIRATION AND RESPIRATION. A NUMBER OF STUDIES EMPHASISE THE IMPORTANCE OF PROPER HYDRATION DURING SPORTING ACTIVITIES.

Of course, the intensity, duration and type of activity are determining factors. A triathlete competing in an Ironman competition will lose more fluids than an athlete who takes part in a 200-metre race, but the sprinter will still need to rehydrate during his or her warm-up and cool-down periods.

The colour of your urine is a good indicator of adequate fluid intake. It should be pale and practically clear. Although it's important to bear in mind that even a well-hydrated person will have darker urine in the morning because at night you will have had little or nothing to drink. Your urine should become lighter during the day as you start to hydrate with water, coffee, tea or soup. Coffee can definitely be regarded as part of your daily fluid intake. You may need to pee relatively quickly after drinking coffee, but the amount of urine you pass isn't significantly more when compared to the amount of urine you pass when you drink water. Coffee is not a diuretic. Of course, there is the possibility that the caffeine could induce stress. You should limit the number of cups of coffee you drink per day.

BMI body composition comparison



ol levels, is a cause for concern. You can't determine your ideal weight based solely on height. You can always push your body to go further or harder, but there are limits.

The ideal standard body fat percentage doesn't exist. So, choose a realistic goal. Your own ideal body fat percentage is the level at which you perform well, which you can easily maintain and at which your blood chemistry (hormones, vitamins and minerals, haematocrit...) is not a cause for concern. Seek good advice, so you'll be fully informed and can deliver top results.

MUSCLE BUILDING AND DESIRED WEIGHT GAIN

Athletes who wish to gain weight tend to naturally want to build muscle. This can be achieved by the right combination of resistance training and nutrition. To gain weight, you must consume more calories than you expend. This is the only way your body can increase its muscle mass. Take note: it's a slow process and you need to be patient. A realistic goal is a gain of 0.5-1 kg per month, depending on your body type and genetic predisposition.

If you're able to maintain your weight, then you should be eating roughly an extra 500 kcal per day. There's a huge misconception that this should only be in the form of protein. These calories can be a combination of protein, carbohydrate and even a little fat. However, consistency is especially important. Read more on this in 'Resistance training'.

MUSCLE CRAMPS

Both top and recreational athletes are susceptible to muscle cramps. It has little to do with your level of training, but more to do with how much you perspire and drink. When you perspire, you lose fluid and electrolytes (such as sodium, potassium, magnesium...). You have to replenish both. Some athletes perspire a great deal and don't lose a lot of salt (sodium). Others end up with white residue (salt stains) on their face, clothing, cap, helmet... They lose a lot of salt and run an increased risk

of muscle cramps, especially in warm conditions. Keep in mind that if you train in cold conditions, you're dressed warmly and will tend to perspire profusely as well.

It's important to drink plenty of fluid beforehand. If you train in the morning, then thoroughly hydrate your body during breakfast. You're asking for problems if you start your training dehydrated. During training, choose a good sports drink that contains roughly 400-1100 mg sodium per litre and drink as much as comfortably possible. If you lose a lot of salt, add a pinch of kitchen salt to your sports drink and see if that makes a difference.

Muscle cramps can also be an indication of low magnesium levels. A blood test can detect if you are magnesium-deficient and require supplements.

LUNCH

HERRING SALAD WITH APPLE AND POTATO

PREPARATION TIME: 35 MINUTES
PER SERVING
NUTRITIONAL VALUE PER SERVING:
575 KCAL
81 G CARBOHYDRATE
36 G PROTEIN
14 G FAT

Ingredients:
200 g potatoes, peeled
100 g French beans
150 g broccoli, in florets
½ red onion
1 apple
1 handful fresh dill
1 tbsp low-fat mayonnaise
100 g Swedish herring
salt and pepper

Preparation method:
Dice the potatoes and cook in salted water. Remove the potatoes from the hot water and rinse under cold running water to cool. Slice the beans in bite-sized pieces and blanch together with the broccoli in salted, boiling water for 2 minutes. Remove the vegetables from the boiling water and rinse under cold running water to cool.
Peel and finely chop the onion. Finely slice the apple. Chop the dill and gently fold through the mayonnaise.
Slice the herring in pieces. Fold the fish through the salad of potatoes, beans, broccoli, onion and apple. Season to taste with salt and pepper and add the dressing.

BREAKFAST

BUCKWHEAT PANCAKES WITH STRAWBERRY-RHUBARB COMPOTE

PREPARATION TIME: 40 MINUTES
PER SERVING
NUTRITIONAL VALUE PER SERVING:
680 KCAL
103 G CARBOHYDRATE
33 G PROTEIN
16 G FAT

Ingredients:
250 g strawberries
200 g rhubarb
20 g sugar
2 tbsp stevia
2 star anise
1 handful of fresh mint
2 eggs
300 ml low-fat milk
pinch of salt
100 g buckwheat flour
1 tsp vegetable oil

Preparation method:
Wash the strawberries and remove the green stem. Peel and slice the rhubarb. Put the fruit in a saucepan. Add the sugar, stevia, star anise and a dash of water.
Leave the fruit to simmer for 20 minutes over a low heat. Remove the pan from the heat and add the chopped mint. This fruit compote keeps for at least a week in the fridge.
To make the pancakes: lightly whisk together the eggs, milk and pinch of salt. Use a whisk to blend the flour with the egg mixture until it forms a smooth, uniform batter.
Heat a teaspoon of the oil in a non-stick pan over a high flame. Spoon in one-quarter of the batter and reduce the flame. Flip the pancake when the top sets and cook the other side until nice and brown.
Serve the pancakes with the fruit compote.


SPECIALIZED
DOLMAN
Boels
RENTAL
etixx
sports nutrition

LIZZIE ARMITSTEAD

cyclist

I've noticed a tremendous improvement in my performance since I started taking healthy eating seriously. I'm really convinced that loading and recovering in the right way brings out the best in sports performances.

My longest period of training took about five hours, an endurance session in the winter. However, I much prefer to train for long hours in the summer, preferably in the mountains. I love the feeling of freedom that I have on my bicycle and, in addition, a climb is much more pleasant when you know a beautiful vista awaits you at the top.

If I plan on completing long hours of training, I opt for a protein-rich breakfast, usually oatmeal with milk and powdered whey protein and some seasonal fruit to garnish. Gummies are nice to have during training. In the winter, they're practical and easy to hold with gloves on and in the summer they taste like sweets.

I've been utilising sports drinks and sports nutrition for years. When I raced track with British Cycling, we were accompanied by a sports nutritionist who I would often approach and ask for advice. I also received advice from my cycling team on which products I should specifically buy.

I don't believe in extremes. For example, I would never train on an empty stomach, I don't believe in that method of training. I don't believe that you have to follow extreme detox methods and that it's better to have sports drinks than eat solid, proper food. I have a balanced routine in my diet and that works for me.

For a professional athlete, it's all about peaking and recovering. At peaks in an event, I try to stay focussed and eat very healthily. When it comes to a recovery period, I'm less strict and I'm usually mentally in need of a break, even from my healthy diet.

DINNER

COFFEE CHICKEN WITH FENNEL AND SWEET POTATOES

PREPARATION TIME: 45 MINUTES
PER SERVING
NUTRITIONAL VALUE PER SERVING:
555 KCAL
79 G CARBOHYDRATE
31 G PROTEIN
14 G FAT

Ingredients:
300 g sweet potatoes
½ fennel bulb
1 handful of lemon thyme
1 tbsp coriander seeds
salt and pepper
1 tsp olive oil
150 g chicken fillet
1 tsp ground coffee
1 handful of parsley leaves
zest of 1 orange

Preparation method:
Preheat the oven to 200°C.
Peel and slice the sweet potatoes. Wash and clean the fennel and cut into large pieces. Place the vegetables on a baking tray. Remove the lemon thyme leaves from the stalk and sprinkle over the vegetables. Season with the coriander seeds, salt and pepper. Drizzle with olive oil.
Cover the dish with aluminium foil and bake in the oven for 20 minutes.
Slice the chicken lengthways into long strips and season with the coffee, salt and pepper. Mix the chicken with the potatoes and fennel and return to the oven for a further 5 minutes until the chicken is cooked through.
Garnish with the chopped parsley and orange zest.

Nutrition during and after intense training

DURING TRAINING

In the first part of this cookbook, we specified the quantity of carbohydrate you would need during any of the particular training days. We created a number of recipes that are easy to prepare and offer you a great deal of nutritional choice other than simply the proverbial energy bar or banana. Choose a sports drink that you like and can tolerate. Include it as part of your diet. In this way, you'll get the best results out of your training loads and your competitions.

The most important ingredients are carbohydrate-rich foods such as dried fruit, flour, maybe a little muesli or oatmeal (but not too much because of the fibre content), bananas, white bread, grain drinks – which are high in carbohydrate but low in protein (oat, spelt, almond, hazelnut and rice milk) – eggs, cane sugar, coconut palm sugar, honey, apple syrup, agave syrup, maple syrup, etc.

Don't wait until you're hungry to eat because, if you do, it's likely to be already too late. If you expend 60 g of carbohydrate per hour during heavy training, your calorie intake should be within the first hour. Start to drink after ten minutes of training and eat after twenty to thirty minutes. If you wait a whole hour, then you've already used up a part of your carbohydrate reserves. The longer you can store your reserves, the better.

AFTER TRAINING

Begin with muscle recovery as soon as possible after training. That can either be in the form of a recovery drink or a recovery meal, which consists of carbohydrate, fluid and protein. The carbohydrate will replenish your depleted reserves, the fluid will compensate for your sweat loss and the protein will give your muscles the building blocks to recover from the intense energy expenditure.

Often after a competition, there are a number of obligations to fulfil such the podium ceremony or interviews. There's usually a car journey or bus trip scheduled as well. In that moment, it's prudent to drink a recovery drink. A recovery drink contains everything that you need to start the recovery process. Your sports drink, which you can make yourself, provides roughly 20 grams of protein and 75-80 grams of carbohydrate.