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Are you training for a marathon and looking for ways to optimise your diet? Your diet plays a critical role in performance and endurance during long-distance running. This article will guide you to enhance your optimal performance leading to athlete status. Training for a marathon requires a lot of commitment and determination. It is one of the most challenging events you can put your body through, so getting your nutrition right in your marathon training diet is a massive bonus to support your training and keep you fit and healthy. As you edge closer to the competition, practising your race-day nutrition is important to maximise your performance when it matters most. Get the most out of your training plan and arrive at the start line with these healthy marathon training diet strategies. What you eat should reflect your energy requirements to fuel your daily training volumes. Consistently under fuelling your body during intense training can negatively impact your performance and lead to illness and injury. Many years of research have consistently shown that muscle glycogen is the primary energy source during endurance exercise, and depletion of these stores is directly linked to fatigue (Bergstrom et al., 1967). Carbohydrates supply the muscles with glycogen, the primary energy source for marathon runners. Carbohydrates are therefore considered to be the best energy foods to fuel as nutrition for marathon training. For 10k runners, consider reading what to eat before a 10k run. You should include carbohydrates in your meal plans in the hours before training to fuel your run. The timing of your pre-race meal and what you eat will be down to your preference. However, allow sufficient time (2-4 hours) for the food to be digested to prevent gastrointestinal issues during the race.Here are a few examples to get marathon runners started: Porridge with dried fruit and honey Bagels with peanut butter Eggs on toast & fruit juice Smoothie Start thinking about what foods work best for you to plan how to structure your marathon training diet plan. As the duration of your training plan increases beyond 90 minutes, you should also practice consuming carbohydrates during training as part of your marathon training diet to maintain energy levels during the all-important long runs. This can be done through carbohydrate-electrolyte drinks, gels, or solid foods. For a marathon, you should consume approx60 g of carbohydrates per hour (Jeukendrup et al., 2014). Two Energels provide 50g of carbohydrates. Staying hydrated is also essential during prolonged training to replace fluids and electrolytes lost through sweat. As previously mentioned, monitoring your strategies is important as gastrointestinal issues may occur. Minimising this risk is vital to improving performance. Recovery is just as important as the training session. If your body doesnt recover properly, you increase the risk of illness and injury, and training performances may be hindered. High-quality proteins help to repair damaged tissue and promote training adaptations, and 25-30g leucine-rich foods with each meal and after training are an important part of your marathon training diet to maximise this response. Its also important to replenish your muscle glycogen stores and rehydrate after training. Milk is the best thing to have after intense training as it is more effective for stimulating protein synthesis and rehydration, improving subsequent exercise performance, and attenuating exercise-induced muscle damage than any commercially available sports supplement (Karp et al., 2006; Shirreffs et al., 2007; Cockburn et al., 2010). Milk is also rich in calcium to promote bone health. You can also make a smoothie with antioxidant-rich fruits if you require additional carbohydrates in your training diet. Check out my previous article on what to eat after a workout. If youre doing a short 30-minute run, does that mean you need a huge bowl of porridge before it? No, it doesnt. So what do you eat on easy training days and rest days? Remember that carbohydrates are energy foods, so you dont need as much nowadays. Reduce carbohydrate intake, increase protein, and include high-quality unsaturated fats (e.g. omega-3).Easy/low-intensity runs can be done before breakfast to increase training adaptations (Van Proeyen et al., 2011). This helps the muscles to become more efficient at using fat and carbohydrates as an energy source, reducing the reliance on carbohydrates for fuel, thus preserving glycogen stores for periods of increased intensity, e.g. hill climbs and sprint finishes. A marathon training diet must include adequate amounts of carbohydrates, protein, and healthy fat to balance macronutrients. Carbohydrates are the primary fuel for marathon runners. Highly active individuals and athletes typically have higher needs for carbohydrates and fats than inactive people. Good sources of carbohydrates for marathoners include fruit and veg, rice, pasta, potatoes and cereals. Protein is crucial after training to aid recovery and helps rebuild and repair damaged muscles, cells and tissues. Good protein sources for marathon training include lean meats, poultry, low-fat dairy, eggs, legumes and soy alternatives. Good sources of dietary fat for marathon runners include nuts and nut butter, seeds, coconut, avocado, fatty fish and fish oils, and healthy oils like olive oil. It is also important to choose nutrient-dense foods and eat three meals and multiple snacks daily to meet high caloric needs. In the days before the competition, its important to ensure your primary energy stores (muscle glycogen) are full and youre well hydrated, so you arrive at the start line ready to race. Carbohydrate loading diet involves increasing the number of carbohydrates you eat the day(s) before a competition. Consuming 8-10g of carbohydrates per kg of body mass is generally recommended. Therefore if you weigh 70kg, you should aim for 560-700g of carbohydrates. This is the equivalent of 9 large potatoes, 750g raw pasta, or 17 500ml bottles of Lucozade sport. In other words, a lot of carbohydrates! Reducing total fibre intake and avoiding large quantities of dairy, fat and protein-rich foods are recommended to prevent gastrointestinal discomfort.Instead, focus on energy-dense carbohydrate foods with adequate protein and unsaturated fats sources, and hydrate well to support muscle glycogen synthesis. Check out our Performance Nutrition services for extensive nutrition coaching and support. Performance Nutrition for Athletes Food IntakeCarbohydrate (g)Breakfast100g porridge oats70300ml skimmed milk15Tbsp. honey172 tbsp. raisins252 slices wholemeal toast with jam60400ml apple juice40Mid-morning Snack1 Energy gel251 banana25Lunch100g chicken breast0100g white basmati rice, raw weight85250g passata15250g low-fat rice pudding401 banana25500ml Hydration formula11Afternoon Snack80g cornflakes (or similar)73250ml skimmed milk12500ml Lucozade sport32Dinner100g grilled cod/haddock fillet0400g mashed white potato, raw weight802 grilled tomatoes10400ml apple juice40Total700g The main preparation is done the days before race day, so the aim of the nutrition before a marathon is to top up the already loaded muscle glycogen stores and replenish liver glycogen stores, which can be reduced to maintain blood sugar levels whilst you sleep. By this point, you should have extensively practised your pre-race meal in training to be comfortable with it and not cause any digestive discomfort. Based on personal preference, a typical pre-race meal will be a combination of the options listed above, depending on when you should contain 1-4g/kg carbohydrate (1g/kg/hour). For example, a 70kg athlete eating 3 hours before the race (3g/kg/hour) will aim to have approx210 g carbohydrates. You need to focus on hydration in the hours leading up to the race. Water and Nutrition Xs Hydra+ are recommended to ensure you start the race well-hydrated. Also, Learn about carbohydrates intake recommendations for athletes **Get 20% off all Nutrition X products using code 20NX. See Supplement Range Here A well-planned marathon training diet with the right balance of carbs, protein, healthy fats, vitamins, and minerals is crucial for optimal performance and endurance. It reduces inflammation, aids muscle recovery, and boosts your overall performance to achieve your marathon goals. Remember, every runners needs are different, and its essential to consult a nutritionist or sports dietician to create a personalised diet that works best for you. Bergstrom, J., et al. (1967). Diet, muscle glycogen, and physical performance. Acta Physiologica Scandinavica, 71, 140-150. Cockburn, E., Stevenson, E., Hayes, P., Robson-Ansley, P., & Howatson, G. (2010). Effect of milk-based carbohydrate-protein supplement timing on the attenuation of exercise-induced muscle damage. Appl. Physiol. Nutr. Metab. 35: 270277. Jeukendrup, A. (2014). A step towards personalized sports nutrition: carbohydrate intake during exercise. Sports Med, 44, S25S33. Karp, J., Johnston, J., Tecklenburg, S., Mickleborough, T., Fly, A., & Stager, J. (2006). Chocolate milk as a post-exercise recovery aid. Int J Sport Nutr Exerc Metab. 16: 78-91. Van Proeyen, K., Szlufcik, K., Nielens, H., Ramaekers, M., & Hespel, P. (2011). Beneficial metabolic adaptations due to endurance exercise training in the fasted state. J Appl Physiol 110: 236245. Shirreffs, S., Watson, P., & Maughan, R. (2007). Milk is an effective post-exercise rehydration drink. Br J Nutr. 98: 173-180. All fruits effectively support marathon training, so having a wide variety of 3-5 portions a day is the best approach.Supplements are not a necessity for marathon training, and any recommended supplements will be advised based on the individual athletes diet and fueling needs. Contact me to discuss your needs. The main considerations might be: 1) Carbohydrate gels, 2) Electrolyte tablets, 3) Whey protein, 4) Vitamin D3 during the winter, 5) Omega 3.You are overeating for the training you are doing. A common reason for this is that you are underfilling before and during training and therefore overeating when you get home because youre starving. Get in touch as I can help you with this.Water is always the best choice throughout the day, but including an electrolyte tablet can help you replace salts lost through sweat during and after training. Cows milk is the best option after your long runs to promote recovery.A marathon typically starts in the morning, so a combination of (well-practised) breakfast options such as porridge with banana and honey, bread with jam/honey/peanut butter and fruit juices are all good pre-race breakfast options.Recovery should start soon after you finish training, especially for long weekend runs. A pint of milk or a smoothie is a great option, especially for runners who do not have an appetite after training, but a well-balanced recovery meal should follow this.1-2 days before a marathon is ample time to carb load to maximise muscle glycogen stores.Yes, very easily, so long as you have a well-planned nutrition strategy to maintain sufficient energy levels to train and you dont sacrifice performance for weight loss.A common reason for gaining weight during marathon training is because you are underfilling before and during training and overeating when you get home because youre starving. Get in touch if you need help with this.Marathon runners should eat what they plan to eat on race day before training, so it is tried and tested, known to work well when performance matters most, and wont cause any upsets!! Eating for marathon training doesnt have to be stressful. These easy recipes will help boost your recovery and ensure youre eating a variety of easy meals to boost performance. this Post! As an Amazon Associate, I may earn from qualifying purchases. You can read more here about our Disclaimer and Privacy Page. As marathon training continues to ramp up, I know quick, easy dinners will become more and more important. So, I thought putting together a list of EASY, QUICK recipes would be helpful not only for me, but for others who are looking for an eating plan for marathon training. Ive previously shared my meal prep for athletes and easy freezer meals for new moms, but I havent yet talked about my favorite quick dinner recipes and healthy meals for marathon training. I love to load up on my pantry must haves from Thrive Market, because their variety and prices are unbeatable! We have an annual membership and save hundreds of dollars each year. Many of these are perfectly aligned with our sports nutrition course recommendations for fueling well, too! CLICK HERE TO GET YOUR FREE GIFT AND SAVINGS Whether youre marathon training or not, you gotta love and appreciate the tiniest bit of meal prep to make your post run meals and snacks easier. Eating for marathon training is much less intimidating when you understand the basics of nutrition, like making a performance plate, and making your meals work for you. And theres a reason meal delivery for athletes exists, too. Im a big fan of being practical and utilizing Blue Apron when necessary. But, its still possible to eat healthy while training long distances and just being generally busy. When thinking about making meals for marathon recipes, you definitely want to have ingredients and appliances in your kitchen to speed up cooking. Heres what I suggest: Whether you prep for a few hours on Sunday or spend 15 extra minutes every day prepping, this really helps make your subsequent days and meals much easier. As any runner knows, even the act of washing and cutting up produce the night before, makes it more accessible and therefore, makes you more likely to eat it the next day. So, lets talk about how we can use these products to make easy recipes for marathon training season. When eating for marathon training, you want to have a loose marathon eating plan. Meaning, a strategy to eat sufficient energy to avoid being in a relative energy deficit state or underfueling. This post goes more into the dangers of not eating enough calories, which will certainly affect your energy, injury status and general training enthusiasm. With work, kids, church, family and other obligations, theres a lot to be done, on top of training and sleep. Ideally, at least 7 hours a night to help with recovery and performance. As mentioned in theCurrent Sports Medicine Report, Along with being an integral part of the recovery and adaptive process between bouts of exercise, accumulating evidence suggests that increased sleep duration and improved sleep quality in athletes are associated with improved performance and competitive success. Carbohydrates should always be the base and main part of a runners platefor many reasons. First, it is the quickest and most efficient source of fuel for endurance activity, so athletes will constantly be relying on carbohydrates for activity and recovery. Having ready-to-make meals available or that can be made quickly will greatly improve your nutrition. Furthermore, carbs during exercise are the gold standard. Here are some examples of what to eat during a marathon and half marathon. We know that the co-ingestion of carbohydrate and protein has positive effects on post-exercise recovery in endurance athletes, in comparison to carbohydrate alone (2). Secondly, eating ample carbohydrates means the muscles can be sufficiently filled, and draw from those glycogen stores when necessary. Therefore, make lots of meals that revolve around carbohydrates and dont worry about the low carb diet for running. This is what carbs are the mainstay of what to eat before running in the morning. These foods include: Many of these healthy snacks for athletes are also high in carbs, making easy eating-on-the-go! Having protein sources available, like fish, dairy products, beans and lentils, chicken, seafood, whole grains and more, will increase the likelihood of eating enough protein throughout the day and around training workouts. Protein need for endurance athletes is higher than you may think! Plus, protein-rich foods are going to be high in micronutrients, like iron and zinc. Some protein-rich foods include: meat and poultry seafood beans and legumes whole grains protein powder dairy foods eggs Specifically, ingesting protein (especially post exercise leucine) after exercise has been associated with reduced post-exercise muscle soreness, attenuated biomarkers of sarcolemmal disruption (i.e., creatine kinase and myoglobin), enhanced mood/energy states, recovery of muscle function, and subsequent exercise performance. So, lets get to some easy meals for marathon training that have this important combination of nutrients (protein + carbohydrates). Electrolytes for runners are extra important when doing long distances, like marathon training. Make sure to have sodium-rich electrolyte drinks available, or make your own electrolyte drink. However you get them in, know that electrolytes will help you stay hydrated for training. As a mom and with a husband who travels for work, 20-30 minute meals are a must in our kitchen, which is what I detail in this meal prep ebook. Every once in a while, I can go for a long, drawn-out homecooked recipe that takes an hour or so, but that is not the norm when eating for marathon training. More often than not, I need quick recipes that taste good and provide nutrition for my family and myself, which is why I usually recycle many of these Wednesday night dinner ideas and Thursday night dinner ideas. You can use these ideas for your marathon training meal plan. Many of these recipes fall into the following categories: As you can see, there are several easy recipes that make marathon nutrition and healthy eating easy with a busy training schedule. If you want more breakfast recipes, snack recipes or vegetarian recipes for athletes, this post includes over 50 Healthy Recipes for Athletes that span the board for pre-workout breakfasts, post-workout smoothies and easy portable snack options. References: References: Recommended nutrient breakdownRunning a marathon is arguably one of the most rewarding experiences, and can be more than just a bucket list item for many runners. Indeed, marathon training can be a lifestyle. When one marathon is done, the recovery period is often used to start planning the next one. However, as rewarding as running a marathon is, marathon training is demanding in many ways. It takes a lot of time, effort, and energy, and is harsh on your schedule, mind, and most of all, body. Therefore, your marathon training diet is a crucial component of your overall training plan in order to fuel your workouts and help you recover after each one. A marathon training diet needs to do two things: provide all the nutrients you need for overall health and support your marathon training and racing. But what should you be eating while you are training for a marathon? What is the ideal marathon training diet? Keep reading to find out. In many ways, any good marathon training diet will look much like any other healthy diet. Marathon runners need rich foods that contain carbohydrates, protein, healthy fats, vitamins, minerals, and water, just as non-runners do. However, marathon training obviously requires a fairly significant energy expenditure, so a marathon training diet should be higher in calories than a standard diet to keep energy levels up. The number of calories you need depends on your metabolic rate, training volume, and weight goals. Your metabolic rate depends on factors such as age, body size and composition, and overall activity level. The number of calories you burn during training runs depends on your size, speed, and run duration. Because carbohydrates are the primary fuel burned during higher-intensity physical activity training sessions, marathoners carbohydrate intake needs are higher than those of non-athletes and low-mileage runners. Protein needs can also be higher, as protein helps build and repair muscle tissue and enzymes. For example, a standard diet might have 45% of the daily caloric intake coming from carbohydrates, 35% from fat, and 20% from protein, whereas a marathon runner might feel better with 60% of the daily caloric intake coming from carbs, 20% from fat, and 20% from lean protein. When it comes to diet, it seems the only universal generality that can be made is that there are no hard-and-fast best diets, best practices, or best meal plans. Eating seems highly personal. Some people feel best eating three square meals a day without snacks, while others feel more energized and even-keeled with three smaller meals and three snacks. Others like intermittent fasting or other timing variations. That said, in general, marathon runners often find it best to space their calories out throughout the day with meals and snacks at fairly consistent intervals. Depending on the time of day you do your runs and your nutrition and weight goals, aim for three meals and two to four snacks per day. Most marathon training diets encourage breakfast, lunch, and dinner, a snack between breakfast and lunch, one between lunch and dinner, and one before bed. Runners who do their long runs or hard workouts first thing in the morning should also consider a pre-run snack. After the morning run, you can have breakfast. Depending on the time of that meal, you might skip the snack before lunch or find you need that snack as well. Essentially, there are no rules. Find what works best for you, but dont be afraid to play around with different options and meal-timing configurations. So, what exactly does a marathon training diet look like in terms of food? As mentioned, marathon runners need carbohydrates, protein, fat, micronutrients, and water. Carbohydrates provide energy for high-intensity exercise, like most of your runs and workouts. There are two primary types of carbohydrates: simple and complex. Simple carbohydrates are sugars like fructose, glucose, and lactose that are digested and absorbed quickly. Simple sugars are great before and during a run to supply energy and top off glycogen stores without sitting around in your stomach while trying to work out. Good sources of simple carbohydrates for marathon runners include fresh and dried fruits, rice cakes, crackers, etc. Complex carbohydrates have longer chains of sugar molecules called polysaccharides and often contain fiber. Complex carbohydrates provide sustained energy, and fiber improves digestion and increases satiety. Good sources of complex carbohydrates for marathon runners include whole grains, vegetables, legumes, and tubers. Protein provides 4 kcal of energy per gram and helps rebuild and repair cells and tissues. Because muscle is composed of protein, protein is crucial after training to aid recovery. For example, a review of 11 studiesStearns, R. L., Emmanuel, H., Volek, J. S., & Casa, D. J. (2010). Effects of Ingesting Protein in Combination With Carbohydrate During Exercise on Endurance Performance: A Systematic Review With Meta-Analysis.Journal of Strength and Conditioning Research,24(8), 21922202. investigating the recovery benefits of ingesting protein along with carbohydrates after a bout of cycling versus ingesting carbohydrates alone found that adding protein to the post-exercise recovery fuel increased performance by an average of 9% in the subsequent endurance ride. Therefore, a marathon training diet must have adequate protein intake. Even though its important to refuel with protein after your run, studies have demonstratedAreta, J. L., Burke, L. M., Ross, M. L., Camera, D. M., West, D. W. D., Broad, E. M., Jeacocke, N. A., Moore, D. R., Stellingwerff, T., Phillips, S. M., Hawley, J. A., & Coffey, V. G. (2013). Timing and distribution of protein ingestion during prolonged recovery from resistance exercise alters myofibrillar protein synthesis.The Journal of Physiology,591(9), 23192331. that protein is absorbed and used most effectively when its spaced out throughout the day: every three hours in 20g doses rather than less frequently in 40g doses. This is one reason why a marathon training diet that has meals and snacks rather than just meals is often more ideal for recovery and health. Good sources of protein for marathon runners include lean meats, poultry, low-fat dairy, legumes, soy, seeds, nuts, and some veggies. Dietary fats contain nine kcals per gram. Fat is the bodys preferred fuel source for resting conditions and low-intensity training, such as zone 2 workouts and long runs. Fats also support hormone production and healthy cell membranes and are necessary for the absorption of vitamins A, D, E, and K. Good sources of dietary fat for marathon runners include nuts and nut butters, seeds, coconut, avocado, fatty fish and fish oils, and healthy oils like olive oil and flaxseed oil. Hydration is key for any runner. Drink enough water throughout the day so that your urine is light yellow. When considering the caloric content of food, each gram of fat contains nine calories, while carbohydrates or protein each contain four calories per gram. This information can help you determine the number of grams of each macronutrient you should eat per day. For example, lets say your daily caloric needs based on your basal metabolic rate and general activity level are 1800 kcals. With the added average energy expenditure of your running, you are following a 2,400-calorie diet in order to maintain your body weight and support your marathon training. For endurance performance, if you want to consume a recommended ratio of 55% of your calories from carbohydrates, 30% from protein, and 15% from fat, you can determine the grams of each macronutrient as follows: Carbohydrates: 2400 x 0.55 = 1320 calories1320 calories / four calories per gram = 330 gramsFiguring out what to eat before a marathon could make or break your race. Why? Because if you eat something your body is still digesting, you could wreck your stomach, have GI issues, and steal much-needed fuel away from your body. On the flip side, you could also supply your body with the fuel it needs to go 26.2 miles, especially when its running low on glycogen stores that last 10K. So, its a delicate balance: eat enough to fuel yourself, but dont eat too much that your tummy is still working hard when you hit the start line. To get the best insights, we spoke with NYC-based licensed dietitianAmy Stephens, to break down everything you need to know about pre-marathon fuelingfrom the importance of breakfast timing and carb loading to race-day meal planning, foods to avoid, and even whether yourpace, body size, and weather conditions should influence what you eat. Plus, well share asample marathon morning meal planto help you start your race fueled and ready to go. Eating the right breakfast in the morning before your marathon can help you go that extra mileor, more specifically, that extra 6.2 miles. Most seasoned marathon runners know the race doesnt really begin until the last 10K. Thats when our bodies start to run out of fuel and essentially run on guts. But what you eat can keep you from bonking (which is when your body runs out of energy to keep going). Think of the meal before the race as fuelforyour last 10K. The longer you can preserve those muscle and liver glycogen stores during the race, the more fuel is left in the tank for the last 6.2 miles, explains Stephens. Why? Our bodies can only store about 300 grams of glycogen, which can keep us running for about 1 1/2 hours.After that, we typically see runners hit the wall or bonk, which is when they run out of glucose. You can take in gels or a sports drink at that time, but it will take 15 min to a half-hour for your body toconvertthe food into usable energy for your muscles, says Stephens. The goal of race fueling is to eat enough to preserve those precious glycogen stores and use them up at a slower rate. Your pre-race meal will delay the use of your muscle glycogen.Many people who end up bonking didnt take in enough fuel early on with a good breakfast or fueling at in the first half, explains Stephens Hence, that pre-race meal could be the difference between a PR or a DNF. Think of your fuel stores as a bucket thats leaking as you run your marathon, says Thomas Watson, Marathon Handbook coach and founder. Your job is to ensure the bucket is nice and full at the start line and is topped up regularly throughout the run such that the bucket never runs empty. Thats why what to eat before a marathon is essential youre looking to fill up that bucket as effectively as possible. You want to ensure you eat at least two hours before the race, says Stephens. Ideally, you eat your breakfast 3-4 hours before the marathon and then a snack an hour before. At the Chicago marathon, (American female marathon record holder) Deena Kastor would wake up at 4 am, eat a bowl of oatmeal and go back to sleep. (Then eat a snack an hour before). We want those carbs to be digested and in our bloodstream at the time of the race, shares Stephens. Carb loading requires a bit of thought, theres more to it than a pre-race pasta feast the night before. Its the strategic increase of carbohydrate intake before a marathon, specifically to boost glycogen stores in muscles and the liver. When done right, carb loading helps to prevent us hitting the dreaded wall or bonking during a marathon by ensuring a sustained supply of carbohydrates staving off the dreaded fatigue at the end or a race. Carbohydrates also play a crucial part in adequate hydration, with every gram of stored glycogen accompanied by four grams of water. This hydration aspect is crucial for optimal race day performance. Gradually increase carbohydrate intake in the days leading up to the race, replacing fat and fiber in meals with complex carbohydrates like rice, legumes, and potatoes. If you want to get your marathon nutrition right, timing matters. Start carb loading 3-4 days before the marathon, gradually increasing carb intake while reducing fat and fiber consumption. For half marathons, follow a similar protocol, aiming for 70 percent of calories from carbs in the days leading up to the race. Check out our complete guide to carb loading. The perfect night-before meal should consist mainly of simple, easy-to-digest carbohydrates like pasta, white rice, potatoes, or bread to top off your glycogen stores. Add a small portion of lean protein such as grilled chicken, tofu, or eggsbut only if youre used to itto help keep you satisfied without overloading your digestive system. Avoid heavy sauces, spicy foods, and too much fat, which can interfere with sleep or cause GI distress on race morning. Think of this meal as your final tune-up: familiar, comforting, and focused on fueling, not indulging. Its essential to moderate fiber intake to avoid digestive issues during the race and stay adequately hydrated. Stick to familiar foods that agree with your stomach, and aim to eat your well-balanced pre-marathon dinner23 hours before bedto allow for proper digestion. That way, youll wake up feeling fueled, rested, and ready to run. To avoid GI distress during the marathon, focus on when and what you eat. Your body can fully digest a meal in about two hours, Stephens explains. Focus on timing your foods so they are fully digested, and the energy is available when you start the race. Stomachaches usually come from eating too close to the start, so youre running and trying to digest food at the same time. The working muscles divert blood away from the gut when we start running, and whatever is left in the stomach can cause some GI issues. The goal of your breakfast is to maximize the amount of carbs your body can use without causing GI upset: Eating breakfast more than two hours before running a marathon will help you avoid stomach issues during the race. Avoid high-fat and high-fiber foods because they can delay stomach emptying and cause gastrointestinal distress. Dont eat a new food. If you want to try a new food, try it before race day. Also, dont eat too much; otherwise, your body may still be digesting by the time you start running. If you have a hard time eating race morning, have a carbohydrate snack the night before so your glycogen stores are topped off. Its good to have a nutritional plan before your marathon, particularly if it is your first one. When considering what to eat before the race, you want to stick with simple carbs and a bit of protein the morning of. This gives your body what it needs to work hard and store energy. Avoid foods that are hard to digest. This includes high-fiber foods that can make you gassy and bloated. Running stimulates the GI tract, and fiber can exacerbate this problem, explains Stephens. Avoid high-fat foods and protein, which slow digestion and release energy more slowly. So, do not eat beans, lentils, or high-fiber cereals before your marathon. As always, there is room for individual preferences here; if you love a bean burrito before setting off, enjoy it! The longer a food sticks around in your gut, the more likely it will cause diarrhea, bloating, or gas, says Stephens. That is definitely not something runners want. Simple and familiar is the name of the game the morning of your marathon. Eat simple carbs (for energy) with a little bit of protein (for tissue repair).Macnaughton, L. S., Wardle, S. L., Witard, O. C., McGlory, C., Hamilton, D. L., Jeromson, S., Lawrence, C. E., Wallis, G. A., & Tipton, K. D. (2016). The response of muscle protein synthesis following whole-body resistance exercise is greater following 40g than 20g of ingested whey protein.Physiological Reports,4(15), e12893. The exact ratio of macronutrients you should aim for is 4:1, 4 grams of carbohydrate for 1 gram of protein. But an estimate is fine. Whether you are trying to BQ or just finish the race, you want foods to digest and convert into usable energy quickly, says Stephens. Chose low-residue carbs such as white rice, bread, bagels, energy bars, or low-fiber cereals. (See a sample meal plan at the end of this post) A long-term nutrition plan would have you consuming a variety of meals full of veggies, healthy fats, and whole grains. Foods that are rich in nutrients, such as quinoa, sweet potatoes, and nut butter. But not on race day. On race day, the focus is maintaining your energy levels via easy-to-digest carbohydrates until you reach the finish line. More food is not necessarily better because too much food can take longer to digest and lead to diarrhea or stomach cramps, warns Stephens. Aim for something with about 100 grams of carbohydrate intake and some protein. Save the more adventurous meals for the next day; youll have earned whatever you want to eat by then. The exact equation is 1 hour before a big race, 1 gram carbohydrate per kilogram of your body weight from food and liquids, explains Stephens. Thus, the earlier you eat, the more you can eat. And, the more you weigh, the more you eat. (You can divide weight in pounds by 2.2 to find kilogram.) Two hours/2 grams of carbs per kilogram of weight Three hours/3 grams of carbs per kilogram of weight Four hours/4grams of carbs per kilogram of weight Use this information as you are training to see what your gut can handle when planning what to eat before a marathon. Some people digest foods faster or slower, adds Stephens. No matter the weather, stick with mostly carbs and a little bit of protein. However, if it is going to be extra hot or cold (roughly warmer than 60 degrees Fahrenheit), hydrate more and add salt to your breakfast. This will help maintain electrolyte balance, Stephens adds, noting that many runners in the 2021 Chicago Marathon had a difficult time racing in the second half due to dehydration. If it is going to be cooler than 30 degrees Fahrenheit, you still need to hydrate with water or a sports drink. If you are used to coffee in the morning, then, by all means, drink your coffee. Coffee is definitely a performance enhancer, says Stephens. Studies show caffeine gives runners pep in their step.Higgins, S., Straight, C. R., & Lewis, R. D. (2016). The Effects of Preexercise Caffeinated Coffee Ingestion on Endurance Performance: An Evidence-Based Review.International Journal of Sport Nutrition and Exercise Metabolism,26(3), 221239. Stephens recommends 200 mg one hour before a race. Be sure to test thisbeforerace day if youre not a coffee drinker. See how your body feels with caffeine, warns Amy. Some people get GI distress with coffee, or it makes them need to use the bathroom a lot. Some peoples hearts also race with caffeine, which is not something you need the morning of the marathon. You can also try chews or gels with caffeine, which canalso give a performance boost. Here is a meal plan for what to eat on the morning of a marathon: 2-4 hours before the race starts: Bagel with peanut butter, banana, honey Bowl of oatmeal, banana, peanut butter Bowl of rice, nuts, banana Granola bar, banana, toast + 20 oz fluids 1 hour before the race starts: Fruit Dried fruit Honey Stinger Waffle + 10 oz fluids 15 min before the race starts: Check out our free-to-download Marathon Training Meal Plans for four weeks of meal planning ideas during your training and carb-loading period! Running a marathon is arguably one of the most rewarding experiences, and can be more than just a bucket list item for many runners. Indeed, marathon training can be a lifestyle. When one marathon is done, the recovery period is often used to start planning the next one. However, as rewarding as running a marathon is, marathon training is demanding in many ways. It takes a lot of time, effort, and energy, and is harsh on your schedule, mind, and most of all, body. Therefore, your marathon training diet is a crucial component of your overall training plan in order to fuel your workouts and help you recover after each one. A marathon training diet needs to do two things: provide all the nutrients you need for overall health and support your marathon training and racing. But what should you be eating while you are training for a marathon? What is the ideal marathon training diet? Keep reading to find out. In many ways, any good marathon training diet will look much like any other healthy diet. Marathon runners need rich foods that contain carbohydrates, protein, healthy fats, vitamins, minerals, and water, just as non-runners do. However, marathon training obviously requires a fairly significant energy expenditure, so a marathon training diet should be higher in calories than a standard diet to keep energy levels up. The number of calories you need depends on your metabolic rate, training volume, and weight goals. Your metabolic rate depends on factors such as age, body size and composition, and overall activity level. The number of calories you burn during training runs depends on your size, speed, and run duration. Because carbohydrates are the primary fuel burned during higher-intensity physical activity training sessions, marathoners carbohydrate intake needs are higher than those of non-athletes and low-mileage runners. Protein needs can also be higher, as protein helps build and repair muscle tissue and enzymes. For example, a standard diet might have 45% of the daily caloric intake coming from carbohydrates, 35% from fat, and 20% from protein, whereas a marathon runner might feel better with 60% of the daily caloric intake coming from carbs, 20% from fat, and 20% from lean protein. When it comes to diet, it seems the only universal generality that can be made is that there are no hard-and-fast best diets, best practices, or best meal plans. Eating seems highly personal. Some people feel best eating three square meals a day without snacks, while others feel more energized and even-keeled with three smaller meals and three snacks. Others like intermittent fasting or other timing variations. That said, in general, marathon runners often find it best to space their calories out throughout the day with meals and snacks at fairly consistent intervals. Depending on the time of day you do your runs and your nutrition and weight goals, aim for three meals and two to four snacks per day. Most marathon training diets encourage breakfast, lunch, and dinner, a snack between breakfast and lunch, one between lunch and dinner, and one before bed. Runners who do their long runs or hard workouts first thing in the morning should also consider a pre-run snack. After the morning run, you can have breakfast. Depending on the time of that meal, you might skip the snack before lunch or find you need that snack as well. Essentially, there are no rules. Find what works best for you, but dont be afraid to play around with different options and meal-timing configurations. So, what exactly does a marathon training diet look like in terms of food? As mentioned, marathon runners need carbohydrates, protein, fat, micronutrients, and water. Carbohydrates provide energy for high-intensity exercise, like most of your runs and workouts. There are two primary types of carbohydrates: simple and complex. Simple carbohydrates are sugars like fructose, glucose, and lactose that are digested and absorbed quickly. Simple sugars are great before and during a run to supply energy and top off glycogen stores without sitting around in your stomach while trying to work out. Good sources of simple carbohydrates for marathon runners include fresh and dried fruits, rice cakes, crackers, etc. Complex carbohydrates have longer chains of sugar molecules called polysaccharides and often contain fiber. Complex carbohydrates provide sustained energy, and fiber improves digestion and increases satiety. Good sources of complex carbohydrates for marathon runners include whole grains, vegetables, legumes, and tubers. Protein provides 4 kcal of energy per gram and helps rebuild and repair cells and tissues. Because muscle is composed of protein, protein is crucial after training to aid recovery. For example, a review of 11 studiesStearns, R. L., Emmanuel, H., Volek, J. S., & Casa, D. J. (2010). Effects of Ingesting Protein in Combination With Carbohydrate During Exercise on Endurance Performance: A Systematic Review With Meta-Analysis.Journal of Strength and Conditioning Research,24(8), 21922202. investigating the recovery benefits of ingesting protein along with carbohydrates after a bout of cycling versus ingesting carbohydrates alone found that adding protein to the post-exercise recovery fuel increased performance by an average of 9% in the subsequent endurance ride. Therefore, a marathon training diet must have adequate protein intake. Even though its important to refuel with protein after your run, studies have demonstratedAreta, J. L., Burke, L. M., Ross, M. L., Camera, D. M., West, D. W. D., Broad, E. M., Jeacocke, N. A., Moore, D. R., Stellingwerff, T., Phillips, S. M., Hawley, J. A., & Coffey, V. G. (2013). Timing and distribution of protein ingestion during prolonged recovery from resistance exercise alters myofibrillar protein synthesis.The Journal of Physiology,591(9), 23192331. that protein is absorbed and used most effectively when its spaced out throughout the day: every three hours in 20g doses rather than less frequently in 40g doses. This is one reason why a marathon training diet that has meals and snacks rather than just meals is often more ideal for recovery and health. Good sources of protein for marathon runners include lean meats, poultry, low-fat dairy, legumes, soy, seeds, nuts, and some veggies. Dietary fats contain nine kcals per gram. Fat is the bodys preferred fuel source for resting conditions and low-intensity training, such as zone 2 workouts and long runs. Fats also support hormone production and healthy cell membranes and are necessary for the absorption of vitamins A, D, E, and K. Good sources of dietary fat for marathon runners include nuts and nut butters, seeds, coconut, avocado, fatty fish and fish oils, and healthy oils like olive oil and flaxseed oil. Hydration is key for any runner. Drink enough water throughout the day so that your urine is light yellow. When considering the caloric content of food, each gram of fat contains nine calories, while carbohydrates or protein each contain four calories per gram. This information can help you determine the number of grams of each macronutrient you should eat per day. For example, lets say your daily caloric needs based on your basal metabolic rate and general activity level are 1800 kcals. With the added average energy expenditure of your running, you are following a 2,400-calorie diet in order to maintain your body weight and support your marathon training. For endurance performance, if you want to consume a recommended ratio of 55% of your calories from carbohydrates, 30% from protein, and 15% from fat, you can determine the grams of each macronutrient as follows: Carbohydrates: 2400 x 0.55 = 1320 calories1320 calories / four calories per gram = 330 gramsFiguring out what to eat before a marathon could make or break your race. Why? Because if you eat something your body is still digesting, you could wreck your stomach, have GI issues, and steal much-needed fuel away from your body. On the flip side, you could also supply your body with the fuel it needs to go 26.2 miles, especially when its running low on glycogen stores that last 10K. So, its a delicate balance: eat enough to fuel yourself, but dont eat too much that your tummy is still working hard when you hit the start line. To get the best insights, we spoke with NYC-based licensed dietitianAmy Stephens, to break down everything you need to know about pre-marathon fuelingfrom the importance of breakfast timing and carb loading to race-day meal planning, foods to avoid, and even whether yourpace, body size, and weather conditions should influence what you eat. Plus, well share asample marathon morning meal planto help you start your race fueled and ready to go. Eating the right breakfast in the morning before your marathon can help you go that extra mileor, more specifically, that extra 6.2 miles. Most seasoned marathon runners know the race doesnt really begin until the last 10K. Thats when our bodies start to run out of fuel and essentially run on guts. But what you eat can keep you from bonking (which is when your body runs out of energy to keep going). Think of the meal before the race as fuelforyour last 10K. The longer you can preserve those muscle and liver glycogen stores during the race, the more fuel is left in the tank for the last 6.2 miles, explains Stephens. Why? Our bodies can only store about 300 grams of glycogen, which can keep us running for about 1 1/2 hours.After that, we typically see runners hit the wall or bonk, which is when they run out of glucose. You can take in gels or a sports drink at that time, but it will take 15 min to a half-hour for your body toconvertthe food into usable energy for your muscles, says Stephens. The goal of race fueling is to eat enough to preserve those precious glycogen stores and use them up at a slower rate. Your pre-race meal will delay the use of your muscle glycogen.Many people who end up bonking didnt take in enough fuel early on with a good breakfast or fueling at in the first half, explains Stephens Hence, that pre-race meal could be the difference between a PR or a DNF. Think of your fuel stores as a bucket thats leaking as you run your marathon, says Thomas Watson, Marathon Handbook coach and founder. Your job is to ensure the bucket is nice and full at the start line and is topped up regularly throughout the run such that the bucket never runs empty. Thats why what to eat before a marathon is essential youre looking to fill up that bucket as effectively as possible. You want to ensure you eat at least two hours before the race, says Stephens. Ideally, you eat your breakfast 3-4 hours before the marathon and then a snack an hour before. At the Chicago marathon, (American female marathon record holder) Deena Kastor would wake up at 4 am, eat a bowl of oatmeal and go back to sleep. (Then eat a snack an hour before). We want those carbs to be digested and in our bloodstream at the time of the race, shares Steph