



What’s the Deal with Stretching?

You might ask yourself during practice, I just want to play ball why do we spend the beginning and end of practice doing those stretches? To take it a step further, you might be wondering why we move around and stretch in the beginning of practice, but hold the stretches for longer at the end of practice. So what’s the deal with stretching and is it a waste of time?

What is active stretching? - At the start of practice, we usually begin with **active** or **dynamic stretching**, which involves moving a limb through its full range of motion to end ranges and repeating this several times (Riebe et al., 2018). For example, our “butt-kicks” repeatedly moves the knee through full bend and straightening and provides a stretch to our quadriceps muscle.

Why do we perform active stretching during warm-ups? - Incorporating dynamic stretching during our warm-up exercises help to decrease injury risk and increase athletic performance (Slauterbeck et al., 2017; Woods et al., 2012). Pre-activity warm-up exercises are beneficial for increasing muscle temperature and increasing joint range of motion to optimize athletic performance (Slauterbeck et al., 2017, Woods et al., 2012). At a cellular level, it has been hypothesized that warm-ups may lead to the increase in the speed and force of muscle contractions by increasing metabolic processes (Woods et al., 2012). An increase in muscle temperature may allow the muscle to more readily access oxygen from our blood supply and may increase the speed of nerve conduction to active tissues (Woods et al., 2012).

Are there any warm-up protocols to help reduce the risk of injury? – In the current research, the Fédération Internationale de Football Association (FIFA) 11+ warm-up routine has been effective in injury prevention. Although the FIFA 11+ program was initially developed for soccer athletes, it has been effective in reducing the rates of injuries in elite male athletes (Longo et al., 2012). The FIFA 11+ program is composed sport-specific, functional exercises which include running, strengthening, balance and active stretching.



11+

PART 1 RUNNING EXERCISES - 8 MINUTES

PART 2 STRENGTH - PLYOMETRICS - BALANCE - 10 MINUTES

PART 3 RUNNING EXERCISES - 2 MINUTES

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KNEE POSITION CORRECT



KNEE POSITION INCORRECT

*Courtesy of the FIFA 11+ Manual





What is static stretching? – We usually end practice with **static** or **passive stretching**, which involves holding a muscle in a stretched position for a period of time (Riebe et al., 2018). For example, holding a "heel to bum" stretch in standing to lengthen the quadriceps muscle.

Why do we perform static stretching during end of practice? - Holding a stretch for 10-30 seconds to the point of moderate stretch or slight discomfort aims to enhance and maintain flexibility in muscle and enhance joint range of motion (Riebe et al., 2018). It is recommended for static stretching to be performed 2-3x/week to improve range of motion, but the greatest effect is seen with a daily stretching routine (Riebe et al., 2018). A total of 60 seconds of static stretching per joint is recommended (Riebe et al., 2018). Below I have included a general stretching program which targets major muscle groups. Pictures made possible through SimpleSet (exercise prescription program

Target Muscle Group	Instructions	Example
Hamstring	<p>Preparation: Sit on floor, one leg out front, other leg bent with foot tucked into upper thigh.</p> <p>Execution: Reach gently over straight leg to stretch back of thigh.</p>	
Quadriceps	<p>Preparation: Standing, grab ankle with hand.</p> <p>Execution: Pull ankle up towards glutes to stretch front of thigh.</p>	



Adductors	<p>Preparation: Standing, begin in side lunge position.</p> <p>Execution: Lunge deeper to the side to feel a stretch along the inside of your thigh.</p>	
Calf	<p>Preparation: Standing in front of a wall in lunge position.</p> <p>Execution: Keep back leg straight and heel on the ground, lean forward by bending from your front knee. Stretch should be felt on the back of your lower leg.</p>	
Triceps	<p>Preparation: Arm above your head, elbow bent.</p> <p>Execution: Pull arm down to stretch the back of your arm.</p>	

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You are what you eat!

Athletes of all ages may take for granted the importance of good nutrition. The same sentence applies for all people in general. Choosing the right type, quantity, and timing of intake of foods, fluids and supplements can help active people and competitive athletes perform at their best. Athletes need to be aware and conscious of planning for adequate energy and nutrients from food, enough fluids and electrolytes to keep the body hydrated, and the right balance of foods and supplements (Dietitians of Canada, 2016). When an athlete is preparing to exercise hard, for an hour or more, especially at a high intensity that takes a lot of endurance, it will require a diet that can help you perform at your peak and recover quickly afterward (Dietitians of Canada, 2016). The paragraphs to follow will discuss some of the common nutritional issues that athletes may have as well some tips that I have to offer as a student-athlete.

Healthy foods are one of the most ignored aspects of an athlete’s diet. Good nutrition means eating a variety of foods. Many people get stuck in a routine of eating the same five to ten foods, but it's important to mix things up a little (SportMedBC, 2019). What I like to do, is everyday eat all the possible colours of food. For example, for green, I will eat spinach, for orange, I will eat a carrot, for yellow, I will have banana, for red, I will eat a pepper, and so on. I will also follow the 80-20 rule. Eat well at least 80% of the time but leave some room for pleasure and indulgence. If the food offers no nutritional value at least get the maximum satisfaction out of it (SportMedBC, 2019).

Hydration is key. Stay well hydrated by drinking water with all meals and snacks. Drink before, during and after exercise. During my first-year of university at UBC, I used the MyWater app which helped me track the amount of water I was drinking per day. It gives off reminders to drink water and gives you rewards every time you reach your goal.

Energy management and pre-exercise eating are two ways an athlete can get the most out of their workout. Eat enough food so that you are not hungry not starving. Ensure that you are eating vegetables, fruit, lean protein, and enough carbohydrates to fuel your muscles and brain. Have snacks when you feel hungry. Do not allow more than 4 hours to pass in a day without eating (SportMedBC, 2019). Your body needs fuel to keep going at the pace you want it to. Not planning your meals can cause dip in athletic performance and will make you feel lethargic during times you need your body to perform at the highest level.



Following a workout, practice, or game, your job as an athlete does not end. You are responsible for the recovery process which is just as important as the things you do before your exercise. An emphasis should be placed on rehydration now. Drink at least another half-litre/litre of water (SportMedBC, 2019). Continue your regular eating patterns and load up on carbohydrates to give your body the best chance to recover in time for the next time you need it.

Eating on the road can be problematic for many athletes. Fast food tastes delicious, but for the most part, it is too high in fat and sodium (SportMedBC, 2019). I would recommend packing high quality snacks to take with you on the road. Do not use a road trip as an excuse to blow your healthy eating plan (SportMedBC, 2019). What you put in your body is what you will get out of it.

Another issue athletes often have is with weight management. Do not obsess with weight and the number on the scale. Pay more attention to hunger and satiety cues. Be aware of meal volume, spacing, timing, and scheduling (SportMedBC, 2019). Instead of approaching every meal like it's your last chance to eat, rate your fullness on a scale of 1-10, where 1 is starving and 10 is over full. Try to stop yourself at 5, the point where you are satisfied but not stuffed (SportMedBC, 2019).

The 5 nutritional tips that I have to offer from my experience and experience with other athletes are:

1. Remember Your Carbohydrates = Carbs are an athlete's main fuel. Your body transforms carbs to glucose (a form of sugar) and stores it in your muscles as glycogen. Your body changes glycogen into energy (Cassoobhoy, 2014). Days ahead, when I knew I was playing basketball for an extended period of time, I would load up on carbohydrates so that I could sustain a long workout. I prefer fruit as my source of carbohydrate.
2. Remember Protein = Be aware of how much protein you need. Most athletes go by the rule of 1-1.5 grams of protein per kilogram of body weight a day (Cassoobhoy, 2014). Protein does not provide a lot of fuel for energy but it is necessary to maintain your muscles (Cassoobhoy, 2014). I prefer to get my protein from lean meats and drinking milk.
3. Be Aware of Fats = For days where you have a long work, your body will turn to fat for energy when carbohydrate sources are low (Cassoobhoy, 2014). If you follow a basic athlete dietary guideline, you will get all the fat you need from unsaturated fat foods such as nuts, avocados, oils, fish.



4. Hydrate. Always. = High performance athletes can dehydrate quickly and easily. Dehydration can and will hurt your performance. Do not wait until you are thirsty. Cramps are real. You do not want to be the one that cramps during the 4th quarter of the Championship game. Make sure you are monitoring the colour of your urine. Electrolytes are important too.
5. Enjoy Your Food! = Healthy eating is not about strict dietary restrictions, stating unrealistically thin, depriving yourself of the food you love. It’s all about feeling great, having energy, improving your health, boosting your mood. Create and stick to a tasty, varied, and nutritious diet that is as good for your mind as it is for your body.

All people are responsible of being aware of their overall health, nutrient needs, performance goals, physique characteristics, and food preferences (Dietitians of Canada, 2016). Adjusting your energy intake to support optimal body function can make even the slightest difference in your exercise (Dietitians of Canada, 2016). You can give yourself an advantage by knowing what to eat, drink, both during and after exercise. Carbohydrates, protein and fat intakes are essential for improved performance and recovery time. Be accountable in hydrating yourself, rehydrating yourself, and not allowing yourself to dehydrate. These are quick tips that can change your performance greatly.

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