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A Workout Before Your Workout

Athletes always try to get the most out of their workouts and exercise at a peak performance level. For runners and walkers, this could include cross training with weights, yoga and other cardio exercises as well as monitoring your diet and vitamin/mineral supplements. Pre-workout is one supplement popular among athletes. While some of you may use it, others may not have ever heard of it. It is important to understand what is in pre-workout and the associated benefits and risks.

Athletes use pre-workout to enhance, boost and provide energy. It can come in multiple forms, including a pill, gel, powder or can. Pre-workout is typically a combination of caffeine, amino acids, carbohydrates, vitamins and creatinine. Taking it 30-60 minutes before exercise can boost energy levels and increase performance. One of the issues with pre-workout is that it is not regulated by the FDA so a company can put anything that it wants into the formula. In addition, manufacturers may label their formula “proprietary,” so you may not know exactly what is in it. Their claims and advertising can be misleading, so if you are going to use a pre-workout find one that is manufactured by a reputable company that labels all ingredients and the amounts.

Here are a few of the major ingredients in pre-workout and information on their benefits:

- **Caffeine** is the main ingredient in most pre-workout. It can provide energy, focus and improve exercise performance. There can be 150 mg to more than 300 mg of caffeine in one dose of preworkout, which can equate to three cups of coffee. This is an excessive amount of caffeine ingested quickly and can be especially dangerous to those who don't generally ingest much caffeine.
 - **Amino acids** can help with muscle growth and decrease post-exercise muscle soreness.
 - **Creatinine** can aid in muscle growth and energy for exercise.
 - **Carbohydrates** provide energy for workouts.
- Vitamins** can help in energy production. One of the most common vitamins in pre-workout is a combination of multiple B vitamins.

There is some question as to whether pre-workout provides the touted benefits. Research shows that it can boost performance and enhance a workout by providing energy, which is likely due to the caffeine and carbohydrates. But research also shows that pre-workout isn't likely to directly improve muscle mass or strength.

Before you use a pre-workout, you should discuss it with your doctor. There can be systemic effects on the body, such as elevated blood pressure or heart rate, based on the individual formulas. The high dosages of caffeine can be dangerous in people with a history of heart problems or high blood pressure. Users may also experience jitters, numbness in their lips and fingers/toes, headaches, lightheadedness, and blurry vision. There have even been reports of people in their twenties who have experienced a heart attack after using a pre-workout due to the combination of caffeine and the stress put on their heart while exercising. The combination of ingredients can also cause nausea, digestive problems and diarrhea.

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The amount of carbohydrates in the supplement can also elevate blood sugars very quickly, so people with diabetes should proceed with caution.

If you are looking to enhance your workout and but aren't sure about pre-workout you can get similar benefits by simply adjusting your diet. Drink a cup of coffee or other caffeinated product about 30 minutes before your exercise. You can also get many of the other ingredients (carbohydrates, vitamins/minerals, and amino acids) in foods such as eggs, meats, fruits, nuts and whole-grain breads. Any of these can be taken in small quantities 30-60 minutes before exercise and can provide you with similar benefits.

If you have any questions or concerns regarding an injury or pain, please reach out to one of our experienced sports medicine physicians at Corewell Health Medical Group Orthopedics at (616)267- 8860. You can also find more information about our orthopedic program and providers on our [website](#).
