





# EZ FUEL

Many teens have a busy schedule. The juggling act that goes into balancing their school, sports and social lives is no joke and so in many cases, optimization is the key. Whether it's thinking of delicious smoothies that can be pre-chopped and stored in the freezer or sorting out carpooling with a friend's mom, two in one solutions are literally a lifesaver.

The same goes for the types of nutritional supplements that you choose to prime their bodies for training and sports events. To save you time and energy, we've formulated safe, easy to prepare supplements that help teen's reach their nutritional goals without all the hassle. One of the most common times that a teen may need a great two-in-one solution is before training or a match, especially if they are coming straight from school or are feeling a little stressed or rushed.

The macronutrient components that make up EZ Fuel include a perfect blend of maltodextrin, Palatinose<sup>™</sup>, native whey protein concentrate with the micronutrient blend consisting of our unique Teen Vitamin and Albion® mineral premix, making this a complete solution to the after-school rush that is not only functional but easy on the stomach too.

Let's see how all these ingredients work together to help your teen reach their full potential:

#### Carbohydrates provide energy

Exercising uses up energy and the easiest way for the body to get this energy is by burning up carbohydrates. Ideally, you want to have some immediately available carbs paired with ones that are slowly released over a period of time. This combination is perfect for a steady supply of energy without the crash. Bioteen's EZ Fuel contains a mix of Maltodextrin and Palatinose®. Maltodextrin is a glucose polymer which releases energy first, aiming to boost blood sugar level and ensure that there is energy at the start of exercise (1). Following that, we have Palatinose® which is a smart carbohydrate that is made through the enzymatic rearrangement of linking bonds in beet sugar (2). This unique arrangement means that Palatinose® has a lower GI than traditional sucrose, essentially it provides a slow and sustainable source of energy.

Having energy available in the bloodstream is important for consistent performance. The energy provided by carbohydrates before and during exercise (known as exogenous carbohydrates) are an immediate and short term energy source and muscle glycogen is the way that the body stores carbohydrates for use when the blood sugar levels run low (glycogen is known as an endogenous carbohydrate). If you can provide sufficient exogenous carbohydrates before and during exercise, you can potentially exercise for longer without running out of fuel, essentially delaying fatigue and as a result improving performance ( $\underline{3}$ ).

Having a slow release (or low GI) carbohydrate before exercise may be especially important if your teen wasn't able to refuel after a previous session because it may enhance glycogen synthesis ( $\underline{4}$ ) or if they aren't able to refuel during their exercise session because it gives a sustained energy release ( $\underline{5}$ ). This is especially true if their session is prolonged at which point their glycogen stores will be depleted and they will start to really feel the effects of fatigue (which some describe as 'hitting a wall').



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## Carbohydrates + protein wards off hunger and increases glycogen storage

Aside from energy release, our mix of carbohydrates together with native whey protein concentrate are the ideal pair to ward off hunger (<u>6</u>) but as it is a nutritional drink with fast absorbing protein, it doesn't leave your teen feeling too full. Exercising on a full stomach isn't only uncomfortable, but can also cause indigestion, nausea and vomiting. These gastrointestinal side effects can be made worse if your teen is feeling nervous about their upcoming session or event or if they're feeling rushed. Having the right mix of macronutrients in your pre-sports meal can lead to increased comfort which leads to improved performance (<u>7</u>) when compared to a fasted state and at the end of the day, that's what every competitive teen is striving for.

## Sufficient high quality protein promotes muscle growth and repair

Amino acids, which are the simplest forms of protein, are the building blocks for all the cells in the body. That's why eating enough protein is essential for proper growth and development and also why it helps to grow and repair muscle cells. We have included native whey protein concentrate in EZ Fuel to provide additional protein to support muscle growth and repair. Native whey protein concentrate is produced by filtering unprocessed milk, versus common whey protein which is a byproduct of cheese production. The filtration method yields a higher quality product because it leaves the whey proteins intact. In addition to this, it also produces whey with a higher leucine content. Leucine is an essential amino acid that is both a signal and substrate for muscle protein synthesis, which is why it is very important for active teens with growing muscles (<u>8</u>).

#### Our entire sports range is safe and third party tested

When you think of a traditional pre-workout drink, we don't blame you for not wanting to give that to an impressionable, growing teen. Not only are they usually very high in stimulants like caffeine, but because sporting supplements are not generally very well regulated and because pre-workout supplements are so closely tied to increased muscle mass, the risk that illegal additives have been added to the supplement is always a concern. Bioteen takes safety very seriously! Not only have we invested in state of the art manufacturing and source all the raw materials ourselves (meaning we have total control over what goes into our products) but we also carefully select third party certified contract manufacturers to produce our products. This means that you can be guaranteed that all the ingredients in the Bioteen range are safe to consume.



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## The bottom line

The right combination of nutrients is essential for optimizing sporting performance because the body just can't reach its peak without the right building blocks. Bioteen's EZ fuel has specially been formulated for teen's and is a functional, easy to digest and above all, safe product that you can use to fill the gap between rushing from school and starting their exercise session or event.



YOU'RE ALL CAUGHT UP

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