



## Energy Gels: Are They All Good?

by Eve Pearson, RD, CSSD, LD, CPT

After getting so many questions and feedback from last summer's article on electrolyte replacement drinks, it's just as important for athletes to know how to choose their gels. After all, it is these that keep you going on those long runs, right?

First things first, you've got to understand why you're taking the energy gels during your workout. And no, it's not because your training partner is or because the running magazine said so. Energy gels were designed to give an athlete carbohydrate, the preferred energy source during long bouts of exercise. Research shows that an athlete can improve performance with exogenous carbohydrate source(s) when exercise lasts longer than one hour. Gels = carbohydrate (with some additions to be noted from the chart.) Carbohydrate = energy and improved performance. So, deductive reasoning says gels = improved performance. This statement does have some truth, but there's a lot more to the equation than that. I'll leave that discussion for another time, but know that when you partake in exercise lasting longer than one hour, you've got to begin thinking about where to get energy, electrolytes, and hydration from. Energy gels provide the first two of these, but are lacking in the hydration department. Therefore, you need to hydrate when only using energy gels. Take a look at the chart below at the differences in the energy gels, specifically noting where the carbohydrate (energy) source comes from and the amount of electrolytes they contain.

I'm not going to actually come out and tell you which one these gels may or may not be good. However, here are the things to keep in mind when choosing one:

- 1) Athletes can consume between 30-60 grams of carbohydrate during intense exercise
- 2) When exercise is planned to exceed 3-4 hours, athletes should replace sodium losses at 300-700 mg/hour of exercise
- 3) Fructose as the first energy source can cause severe stomach cramping, but when mixed with other energy sources (i.e. maltodextrin) in lesser amounts, it can improve energy levels

As you can see, the ranges on recommendations vary and this is dependent upon body composition, type of training, and the level of the athlete. Be sure to keep these differences in mind when formulating your nutrition plan.



PRODUCT	Na	K	Servings	Primary Energy Source	Carb (g)	Calories	OTHER
Gu <i>Vanilla</i>	40 g	35 g	1 pkg	Maltodextrin, Filtered Water, Fructose	25	100	
Gu <i>Chocolate</i>	55 g	40 g	1 pkg	Maltodextrin, Filtered Water, Fructose	20	100	has caffeine
Clif Shot <i>Apple Pie</i>	40 mg	30 mg	1 pkg	Organic Brown Rice Syrup	25	100	
Clif Shot <i>Double Espresso</i>	40 mg	30 mg	1 pkg	Organic Brown Rice Syrup	26	100	100 mg of caffeine
Clif Shot <i>Mocha</i>	40 mg	30 mg	1 pkg	Organic Brown Rice Syrup, Coco Powder	27	100	50 mg of caffeine
Clif Shot <i>Strawberry</i>	40 mg	30 mg	1 pkg	Organic Brown Rice Syrup, Strawberry Puree	28	100	25 mg of caffeine
Clif Shot Bloks <i>Margarita</i>	210 mg	20 mg	2	Organic Brown Rice Syrup, Organic Evaporated Cane Juice	29	100	3x extra sodium
Clif Shot Bloks <i>Others</i>	70 mg	20 mg	2	Organic Brown Rice Syrup, Organic Evaporated Cane Juice	30	100	50 mg of caffeine
Carb-Boom <i>Chocolate Cherry</i>	50 mg	75 mg	1 pkg	Maltodextrin	31	110	50 mg of caffeine
Carb-Boom <i>Plain Vanilla</i>	50 mg	50 mg	1 pkg	Maltodextrin, Water, Fructose	32	110	
Carb-Boom <i>Vanilla Orange</i>	50 mg	50 mg	1 pkg	Maltodextrin	33	110	50 mg of caffeine
Cytomax Energy Gel	35 mg	65 mg			34	110	
Hammer Gel	18-40 mg		2 Tbsp	Long-chain Maltodextrin	35	86-93	
Accel Gel	95 mg	40 mg	1 pkg	Water, Maltodextrin, High Fructose Corn Syrup	36	90	
Enervit R2			1 pkg (25 mL)			71.2	
PowerBar Gel <i>Chocolate</i>	200 mg	40 mg	1 pkg	Maltodextrin, Fructose	28	120	25 mg of caffeine
PowerBar Gel <i>All Others</i>	200 mg	20 mg	1 pkg	Maltodextrin	27	110	25-50 mg of caffeine

\*\*Thank you to Kristen Glidden, TCU dietetic intern, for compiling information