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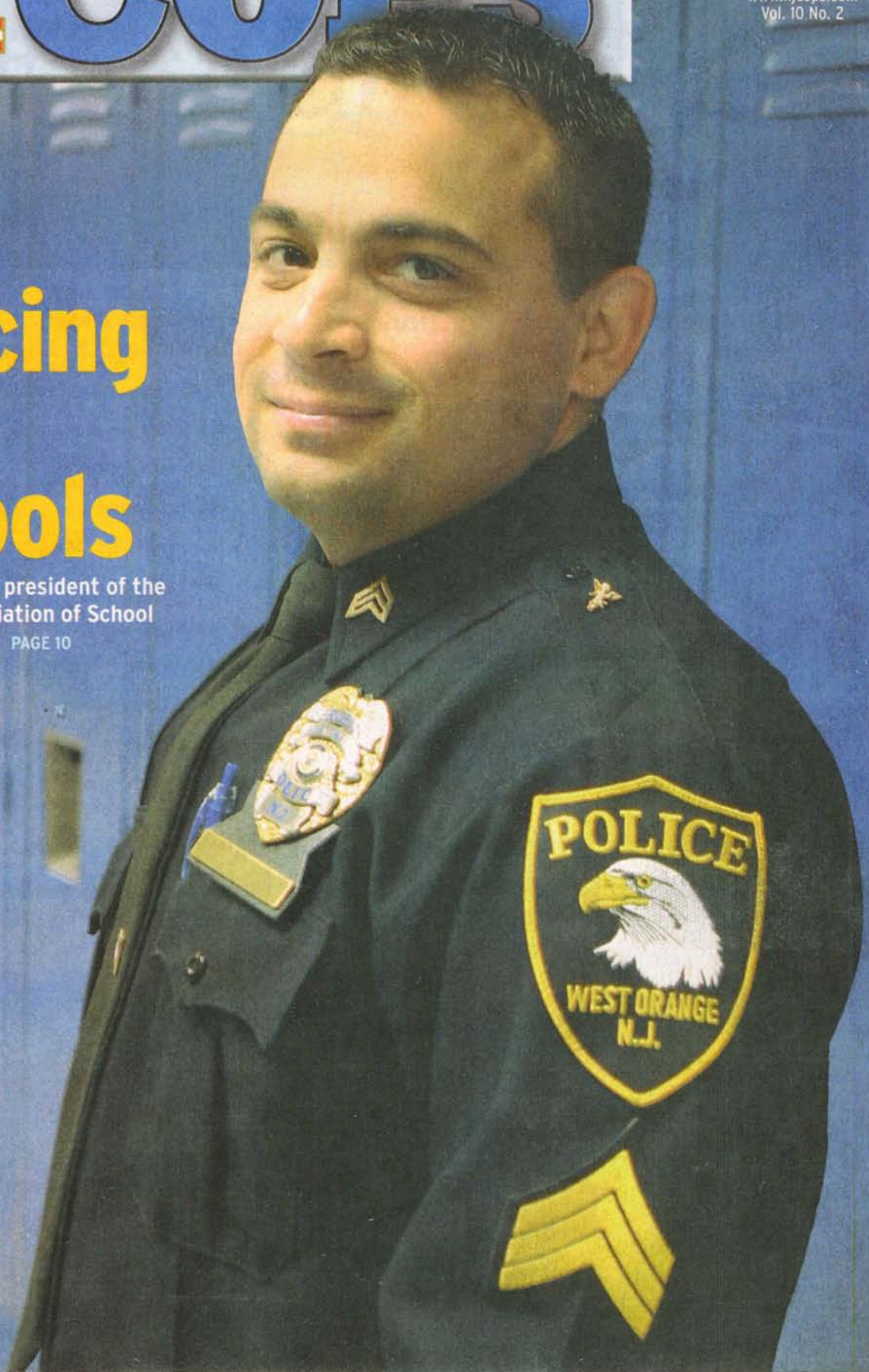

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Policing our schools

Sgt. John Morella, president of the
New Jersey Association of School
Resource Officers **PAGE 10**



Clarifying the carb debate

■ BY MATT BRZYCKI

In recent years, much ado has been made about carbohydrates. Among other things, carbohydrates have been cast as the root of the obesity epidemic. But are carbohydrates really that bad?

What are Carbohydrates?

Carbohydrates—or “carbs”—are a macronutrient, meaning that they’re a nutrient that’s needed in relatively large quantities. In brief, carbohydrates can be classified as either “simple” (which are sugars such as table sugar and honey) or “complex” (which are starches such as bread).

The primary function of carbohydrates is to furnish you with energy, particularly during intense activity. Your body breaks down carbohydrates into glucose (or “blood sugar”). Glucose can be used as an immediate form of energy during physical activity or stored as glycogen in your liver and muscles for future use. If your glycogen stores are depleted, you’ll feel exhausted. For this reason, having greater glycogen stores can give you a significant physiological advantage.

The Glycemic Index

A system of quantifying the carbohydrates in foods based upon how they affect blood glucose is referred to as the “Glycemic Index” (GI). A value is assigned to a food that correlates to the magnitude of the increase in blood glucose. For instance, a food with a GI of 25 means that it elevates blood glucose to a level that’s 25% as great as consuming the same amount of pure glucose (which has a GI of 100).

The GI is sometimes used to help choose foods. This is especially true when deciding upon what foods to consume before and after an activity.

Carbs: Pre-Activity

Before an activity, any foods that you consume should satisfy your hunger and ready your body with fuel for your upcoming efforts. Because your body prefers to

use carbohydrates for energy during intense activity, it makes sense that any foods consumed prior to an activity should be high in that macronutrient.

That being said, you should avoid eating carbohydrates that cause a sharp increase in your level of blood glucose. Here’s why: In response to a high level of blood glucose, your body increases its level of blood insulin. As a result, your blood glucose is sharply reduced. This leads to hypoglycemia (or “low blood sugar”) which decreases the availability of blood glucose as a fuel and causes you to feel severely fatigued. Although this condition is usually temporary, it remains an important consideration. The idea, then, is to consume foods that elevate or maintain your blood glucose without triggering a dramatic response by blood insulin.

Preceding an activity, it’s best to consume foods that are high in carbohydrates with a low GI. These foods help to keep your levels of blood glucose within a desirable range. Don’t simply assume that a sugary food raises blood glucose more than a starchy food. Honey, for example, has a lower GI than a bagel. Foods with a relatively low GI include milk, apple juice, orange juice, tomato juice, apples, cherries, grapefruit, grapes, oranges, pears, plums, yogurt, macaroni, plain pizza, spaghetti, beans, nuts and oatmeal. (It’s well beyond the scope of this article to provide you with an extensive overview of foods and their GIs. For more detailed information, you’re encouraged to pursue other sources.)

Carbs: Post-Activity

After an activity—especially one that was intense—proper nutrition accelerates your recovery and better prepares you for your next physical challenge. The idea is to replenish your depleted glycogen stores and to expedite the recovery process as soon as possible.

Following an activity, it’s best to consume foods that are high in carbohydrates with a high GI. These foods will

help to restore your muscle glycogen in the quickest fashion. Foods with a relatively high GI include sports drinks, bananas, watermelons, raisins, rice cakes, cereals, pretzels, table sugar, white rice, baked potatoes, white bread, rye bread, bagels, pancakes and waffles.

Carbs = Weight Gain?

It has been thought that eating a food with a high GI—such as a baked potato—increases your appetite and makes you gain weight. However, there’s no scientific evidence to support this belief. And seriously, when was the last time that you sat down at the table and ate a plateful of baked potatoes? In other words, you had nothing but baked potatoes. Probably never, right? The fact of the matter is that when you sit down for a meal, there are a variety of foods on your plate. Besides a baked potato at dinner, for example, you most likely have other vegetables accompanied by some form of meat, poultry or fish. In addition, you might have a salad and something to drink such as a glass of milk. These foods would balance out—or dilute—any glycemic effect that might result from the baked potato. So even if high-glycemic foods make you hungrier, most meals contain a variety of foods that would soften the effect.

Low-Carb Options

A number of restaurants—particularly those that sell “fast food”—have devised a simple and, frankly, ridiculous way to capitalize on a consumer’s fear of carbohydrates: The restaurants eliminate the bread or bun of a sandwich and offer this as a “low-carb option” or “low-carb alternative.”

Can low-carb options help with weight loss? Absolutely. It’s important to understand why, however. Consider a “fast food” from a major fast-food chain. According to the company’s website, an “original” hamburger with cheese has 793 calories of which 441 (55.6%) are from fat, 212 (26.7%) from carbohydrates and 140 (17.7%) from protein. The low-carb version—the same thing without the sesame

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seed bun – has 545 calories of which 405 (74.3%) are from fat, 32 (5.9%) from carbohydrates and 108 (19.8%) from protein. So, the low-carb alternative has 248 less calories – an important consideration for those who are trying to lose weight. But look what happens to the percentage of calories from fat – it skyrockets from 55.6% to 74.3%. A better choice would be to keep the bun, hold the mayo and – pardon the pun – cut the cheese. This version gives you 544 calories of which 216 (39.7%) are from fat, 208 (38.2%) from carbohydrates and 120 (22.1%) from protein. Choosing to get the burger this way gives you virtually the identical number of calories but roughly half the fat – which is a healthier option.

Low-Carb Diets

The most recent rage in weight loss has been low-carb diets. Think about this: If you decrease the amount of carbohydrates that you consume then, by default, you must increase the amount of protein and fat that you consume. Doing so restricts the intake of foods that contain highly valuable nutrients – such as fruits, vegetables and whole-grain products – which may lead to vitamin and mineral deficiencies. Since fewer carbohydrates are available as a source of energy, you'll also fatigue more quickly during physical activities. There's no doubt that eliminating carbohydrates from your diet will inhibit your stamina and endurance. Needless to say, that's not a good thing for a police officer.

Most importantly, diets that are low in carbohydrates and high in protein and fat pose significant health problems such as a greater risk of heart disease. And does it really make sense that in order to lose fat you should eat more of it?

Any weight loss that's produced by low-carb diets is due to a reduction in the amount of calories, not a reduction in the amount of carbohydrates. You can lose weight with any diet as long as the number of calories that you consume is less than the number of calories that you need. You could lose weight by only eating potato chips provided that the calories from the potato chips are less than your caloric needs. Obviously, this isn't the healthiest thing to do but the reality is that you could lose weight this way.

Good Carb, Bad Carb

One positive thing did come from the recent paranoia over carbohydrates: It brought a greater awareness of the fact that all carbohydrates aren't created equal. A source of high carbohydrates is a banana . . . but so is a soda. Carbohydrates that are more nutritious include fruits, vegetables and whole-grain products; they're full of vitamins and fiber. Carbohydrates that are less nutritious include processed foods such as cakes, cookies and muffins along with soft drinks and candy; they're full of "empty" calories.

The message is clear: Eat carbohydrates but choose them wisely.

The Bottom Line

Contrary to popular opinion, carbohydrates aren't the bad guys. If anything, active individuals should emphasize this macronutrient. Specifically, carbohydrates should be at least 65% of your daily calories.

Matt Brzycki is the coordinator of Recreational Fitness and Wellness at Princeton University. A former Marine Drill Instructor, he has authored, co-authored or edited 15 books on strength and fitness, including SWAT Fitness (available at www.operationaltactics.com).

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