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Dietitian Case Study: Crucial Carbs

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Once upon a time, there was a young prince who wanted to have bigger muscles. The prince ...

OK, maybe I've been reading too many bedtime stories...let's try this again.

This is a case about a client named K. His goal was to increase his muscle size. In order to do this, he had been diligently dieting and weight training. He unfortunately found himself in a plateau. He became a client of mine and one of the Adelaide Club's personal trainers to see if we could help him move towards his goal. The detailed diet history that he provided revealed that he has been following a strict low carbohydrate diet. To do this he was avoiding starchy foods like breads, potatoes and pasta and limiting his intake of fruits and juices and of course avoiding sweets.

Before starting his training program he completed a fitness assessment. Unfortunately during the session, he was unable to complete the cardio component as his blood sugar dropped too low. There was no question that he was adhering to his low carbohydrate diet regime.

What was happening with this client was that, due to his very low intake of carbohydrate, he had very low levels of carbohydrate stored in his muscles. The stored form of carbohydrate is called glycogen. During the cardio portion of the fitness assessment, he experienced the low blood sugar because of his low glycogen

stores. He didn't notice this during his own workouts however, as he didn't do any cardio, as his goal was to focus on increasing size.

The lack of good muscle glycogen stores would also explain why he had hit a plateau in his weight training. While he was diligent with his workouts, the muscle was lacking its preferred fuel, namely carbohydrate. Because of this his muscles were turning to protein and self-catabolizing to provide the needed fuel to complete the workout. So, while he was working his muscle to failure and getting muscle breakdown from the weight training, his body was also using the muscle for fuel and the result was, he was not able to effectively build new muscle to increase in size.

My plan for him including increasing his carbohydrate intake. This then provided his muscles with the fuel that it preferred. The results in the first week were dramatic. He had more stamina during the workouts and his weight went up. He was fine with the added weight, as it did not come on as body fat, but rather as bulk to the muscles - as the glycogen stores filled up.

As he continued with the program, he was able to increase the amount of weight he was lifting - something that he had not been able to do for a while. The resource that I used to help in planning my program for this client was Power Eating by Susan Kleiner.

If you find yourself stuck in a plateau, then consider having a professional take a look at your current nutrition and work-out plan. A little (or a lot) of tweaking may be just what you need to achieve your goals.

