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The PAC-Tamer: The Ultimate K-Supplement?

By Hans R. Larsen MSc ChE

I have for quite a while been following the most interesting discussion in the Conference Room on the importance of a constant potassium intake throughout the day and night and first of all, want to acknowledge the pioneering work of Peggy, PC and George among others – as a prelude to what follows.

It is of course fairly easy to take potassium supplements with the main meals, but the periods between meals, particularly before bedtime and in the early morning pose a bit of a problem.

It seemed to me that a potassium-rich drink, henceforth known as the PAC-Tamer might be the answer. I set myself the following criteria for the drink:

- Each 8-oz glass should provide about 700-800 mg of elemental potassium in easily digestible form.
- The Drink (carrier) should be a complete meal in itself containing about 30% (of energy) as protein, 30% as fat and 40% as carbohydrate. In other words, a perfect Zone Diet meal.
- The ingredients required for the drink should be readily available in pure form and should, preferably cost less than $0.50 per 8-oz glass.
- The drink should contain no potential allergens or known triggers such as MSG, aspartame, caffeine, etc.

After much experimentation, I have pretty well settled on the following formulation:

- ½ cup blueberries or mixed berries (50 g)
- ½ medium-sized banana (60 g)
- 800 ml pure drinking water
- 100 ml pure apple juice (preferably organic)
- 2 heaping tablespoons rice protein (30 g)
- 2 heaping teaspoons lecithin granules (5 g)
- 5 level teaspoons potassium gluconate (17 g)
- 2 pouches Coromega fish oil or equivalent (4 g)

The lecithin serves as a source of fat and to help emulsify the mixture while the fish oil, of course, adds good fats and helps optimize the omega-6:omega-3 ratio.

Mix all of the above in a 1.5 liter blender, pour it in a glass bottle and store in refrigerator. I sip one 8-oz glass of the PAC-Tamer at around 5-6 AM, 10-11 AM, 2-3 PM and 9-10 PM taking as long as possible to finish it.

Each glass of the drink provides 775 mg of elemental potassium in instantly absorbable form and because of the formulation also provides excellent protection against hypoglycemia and excessive blood sugar variations throughout the day and night.

The nutritional analysis of the drink (24-hour intake, about one liter) is as follows (numbers in brackets are per 8-oz glass):

Energy – 325 kcal (81 kcal)
Protein (gram) – 24.9 (6.2)
Protein (% of energy) – 30.6
Fat (gram) – 11.1 (2.8)
Fat (% of energy) – 30.7
Carbohydrates (gram) – 35.4 (8.9)
Carbohydrates (% of energy) – 43.5
Glycemic Load – 16.6
Calcium (milligram) – 15 (3.7)
Magnesium (milligram) – 23 (5.7)
Potassium (milligram) – 3019 (755)
Sodium (milligram) – 24 (6)
Vitamin C (milligram) – 58 (14)
Vitamin E (milligram) – 7 (1.7)
EPA – 700 mg (175 mg)
DHA – 460 mg (115 mg)
Ca:Mg Ratio – 0.6:1
K/Na Ratio – 125:1
Omega-6 to omega-3 ratio – 1.4

The rice protein I use contains 80% protein (Nutribiotic brown rice), so it is a very concentrated protein source. If you prefer soy or whey protein you will have to adjust the formulation to ensure that you still end up with a proper balance between protein, fat and carbohydrates.

It is of course, also possible to use potassium chloride (KCl) instead of potassium gluconate, but I have personally found potassium gluconate far easier on the stomach (I have irritable bowel syndrome IBS). If you wish to use KCl one heaping teaspoon should substitute nicely for the 5 level teaspoons of potassium gluconate.

You can also change the fat source if fish oil does not agree with you. You can eliminate the fish oil and double the lecithin content to 4 teaspoons, replace the fish oil with one tablespoon (12 gram) of ground flaxseed or use a teaspoon of olive oil instead of the fish oil. These substitutions will do equally well in providing the fat portion of the drink, but do of course, not provide the same amount of the highly beneficial long-chain omega-3 fatty acids.

I did try to incorporate magnesium into the drink as well in the form of 200 ml of Waller water concentrate, but found that it irritated my stomach and was less effective than the PAC-Tamer in eliminating PACs. Perhaps the presence of so much MG prevented K from being properly absorbed.

I have now been using the PAC-Tamer for about two weeks and have found it highly effective in preventing PACs – I am not sure yet whether it also prevents afib episodes, but it would seem likely that it should. My next step is to cut back on the drink's content of potassium gluconate to see just how little I can get away with. As all my PACs occur just when I lie down to go to sleep I am also going to try and see if just taking the drink before bedtime will be sufficient to keep things under control. Stay tuned!

The cost of an 8-oz glass of the drink is about 40 cents which probably compares fairly favourably with that of low-sodium V8 juice and of course, the PAC-Tamer is a far better balanced drink nutritionwise than is V8 juice. However, it should certainly be possible to replace the fruits in the PAC-Tamer with vegetables if that was deemed desirable.

Now all I need is to find someone with access to a freezedryer pilot plant so we could see if the drink could be freeze-dried, packaged in pouches and used for convenience when traveling.

Please let me know if you try the PAC-Tamer and if you find it effective. BUT PLEASE !!!! Make sure your physician agree with your experiment and that your kidneys are able to handle the excess K excretion (have a BUN and creatinine test before you start).

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