Dynamic Chiropractic

NUTRITION / DETOXIFICATION

Nutritional influences on Exercise-induced Asthma, Part 2: Caffeine

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In part 1 of this series (July 1 issue), we reviewed exercise-induced asthma (EIA) and found that it affects almost all people who suffer from asthma, up to half of those with allergic rhinitis and even 5 percent to 10 percent of healthy people. EIA is usually diagnosed when exercise causes coughing, wheezing, shortness of breath, chest tightness and premature fatigue.

We found that dietary salt exuberates the degree of bronchospasm EIA patients encounter following exercise and learned that forced expiratory volume (FEV1), the amount of air that can be forcefully exhaled in one second after taking a deep breath, has greater declines in EIA patients who consume more salt. A post-exercise FEV1 reduction of more than 7 percent indicates abnormal pulmonary function. Exercise-induced asthma is defined by a 10 percent or greater reduction in FEV1 following bronchoprovocation.[1]

This month, let's focus on how caffeine can help with EIA. In a 1991 study, 11 patients with EIA received one of three treatments 90 minutes prior to a dry-gas challenge that served as an exercise surrogate.[2] The groups were: placebo, moderate caffeine (5 mg/kg of body weight) or high caffeine (10 mg/kg of body weight). The results were as follows: FEV1 declined to 16.7 percent with placebo, 10.2 percent with moderate caffeine and 7.1 percent with high caffeine.

In a 1990 study, 10 patients with EIA received one of three treatments two hours prior to exercise on three occasions.[3] The interventions were: placebo, a moderate amount of caffeine (3.5 mg/kg of body weight) or a high level of caffeine (7 mg/kg of body weight). The results were as follows: FEV1 declined 25 percent with the placebo, 14 percent with moderate caffeine and only 10 percent with high caffeine.

In conclusion, unless a person who suffers from EIA is caffeine-intolerant, it is definitely worth their while to try caffeine before they exercise. Patients can choose their preferred delivery system: a strong cup of brewed tea or coffee, a caffeine-containing energy drink or a fat-burner supplement, or a no-frills "stay awake" caffeine pill. In these tight economic times, helping a patient with asthma breathe easier during exercise - without costly supplements or additional treatments - by simply advising them to have some caffeine and lower their salt can be very rewarding when they tell their families and friends how much you helped them.

References

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3. Kivity S, Ben Aharon Y, Man A, et al. The effect of caffeine on exercise-induced bronchoconstriction. *Chest*, 1990;97(5):1083-5.