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Letter to the Editor

Can physical exercise be a coping strategy for psychological stress for patients with psychogenic seizures?

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Dear editor,

Coping is described as cognitive and behavioral efforts to deal with situations of harm and problem-solving techniques that are utilized to reduce the people psycho-emotional burden.¹ Strategies of coping may incorporate emotional support, meditative techniques, and spirituality.^{2,3} In this context, complementary therapies, as physical exercise, can be used together with conventional treatment. Cairney et al⁴ have already demonstrated that the practice of physical exercise for stress coping is common in the general population.

Traditionally, physical exercise is an important tool that can be used in prevention and treatment programs of sedentary lifestyle/behavior related diseases.⁵ Studies have proposed that physical exercise exerts a potential role in mood disorders of patients with epilepsy and in this regard it can be considered a coping strategy for these patients.^{6,7} An investigation which assessed the physical activity habits of adult Brazilian patients with posttraumatic stress disorder demonstrated low levels of participation in sports or physical activities, suggesting that regular exercise could reduce psychiatric symptoms such as depression, anxiety, and social isolation.⁸ Unfortunately, people with epilepsy do not usually include physical exercise programs as complementary therapy.⁹

Although, physical exercise is not frequently indicated as complementary treatment modality in epilepsy, it seems reasonable to include it as alternative medicine and stress coping strategy for people with epilepsy as well as for patients with psychogenic non-epileptic seizures (PNES). PNES are events that resemble epileptic seizures but occur without epileptiform activity.¹⁰ The seizure-like behaviors have been conceived of as resulting from a maladaptive coping approach

to life stressful situations that are perceived as unbearable.¹¹ For example, Myers et al¹⁰ studied stress coping strategies employed by patients with PNES and demonstrated that the identification of psychological factors that play a role in seizure triggering and maintaining PNES has the potential to determine more effective treatments.

Considering that regular physical exercise can decrease seizure frequency and improve psychological health,⁹ we encourage physical exercise routines for people with PNES to reduce stress and to improve quality of life.

REFERENCES

1. Folkman S, Lazarus RS. An analysis of coping in a middle-aged community sample. *J Health Soc Behav.* 1980;21:219–239.
2. Livneh H, Wilson LM, Duchesneau A, Antonak RF. Psychosocial adaptation to epilepsy: the role of coping strategies. *Epilepsy Behav.* 2001;2:533–544.
3. Vancini RL, de Lira CA, Arida RM. Alternative medicine as a coping strategy for people with epilepsy: can exercise of religion and spirituality be part of this context? *Epilepsy Behav.* 2014;31: 194–195.
4. Cairney J, Kwan M, Veldhuizen S, Faulkner GEJ. Who uses exercise as a coping strategy for stress? Results from a National Survey of Canadians. *J Phys Act Health.* 2013 Mar 14 (Epub ahead of print).
5. Garber CE, Blissmer B, Deschenes MR, et al. Quantity and quality of exercise for developing and maintaining cardiorespiratory, musculoskeletal, and neuromotor fitness in apparently healthy adults: guidance for prescribing exercise. *Med Sci Sports Exerc.* 2011;43: 1334–1359.

6. de Lima C, de Lira CA, Arida RM, et al. Association between leisure time, physical activity, and mood disorder levels in individuals with epilepsy. *Epilepsy Behav.* 2013;28:47–51.
7. Vancini RL, de Lira CA, Arida RM. Physical exercise as a coping strategy for people with epilepsy and depression. *Epilepsy Behav.* 2013;29:431.
8. de Assis MA, de Mello MF, Scorza FA, et al. Evaluation of physical activity habits in patients with posttraumatic stress disorder. *Clin (Sao Paulo)*. 2008;63:473–478.
9. Arida RM, Scorza FA, Gomes da Silva S, Schachter SC, Cavalheiro EA. The potential role of physical exercise in the treatment of epilepsy. *Epilepsy Behav.* 2010;17:432–435.
10. Myers L, Fleming M, Lancman M, Perrine K, Lancman M. Stress coping strategies in patients with psychogenic non-epileptic seizures and how they relate to trauma symptoms, alexithymia, anger and mood. *Seizure: Eur J Epilepsy.* 2013;22: 634–639.
11. LaFrance Jr WC, Bjørnæs H. *Designing Treatment Plans Based on Etiology of PNES*. Gates and Rowan's Nonepileptic Seizures. New York: Cambridge University Press; 2010:266–280.

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