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[J Neurol Neurosurg Psychiatry](#). 1987 Feb;50(2):207-13.

Circadian secretion of cortisol and melatonin in cluster headache during active cluster periods and remission.

[Waldenlind E](#), [Gustafsson SA](#), [Ekbom K](#), [Wetterberg L](#).

Abstract

The cyclic nature of cluster headache warranted a study of the 24-hour rhythms of serum cortisol and melatonin. They were both altered during cluster periods as compared with periods of remission and healthy controls. The 24-hour mean and maximal cortisol levels were higher and the timing of the cortisol minimum was delayed as compared to the same patients in remission. Although there was no relation between the cortisol and melatonin levels and headaches, the rise of cortisol following many attacks might in part represent an adaptive response to pain. The nocturnal melatonin maximum was lower during cluster periods than in remission. This finding, and the dysautonomic signs during attacks, may reflect a change of the vegetative tone in a hyposympathetic direction.

PMID: 3572435 [PubMed - indexed for MEDLINE] PMID: PMC1031493 [Free PMC Article](#)

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[A chronobiological study of melatonin, cortisol growth hormone and prolactin secretion in cluster headache.](#) [Cephalalgia. 1984]

[Twenty-four-hour melatonin and cortisol plasma levels in relation to timing of cluster headache.](#) [Cephalalgia. 1995]

[Prolactin in cluster headache: diurnal secretion, response to thyrotropin-releasing hormone, and relation to sex steroids and gonadotropins.](#) [Cephalalgia. 1987]

[Review Cluster headache: evidence for a disorder of circadian rhythm and hypothalamic function.](#) [Can J Neurol Sci. 2002]

[Review Steroid hormones in cluster headaches.](#) [Curr Pain Headache Rep. 2006]

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[A combined effect of dextromethorphan and melatonin on neuropathic pain behavior in rats.](#) [Brain

Res. 2009]

[Exacerbated mechanical allodynia in rats with depression-like behavior.](#) [Brain Res. 2008]

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[Cephalalgia](#). 1996 Nov;16(7):494-6.

Melatonin versus placebo in the prophylaxis of cluster headache: a double-blind pilot study with parallel groups.

[Leone M](#), [D'Amico D](#), [Moschiano F](#), [Fraschini F](#), [Bussone G](#).

Source

Centro Cefalee, Istituto Neurologico Carlo Besta, Milan, Italy.

Abstract

A fall in nocturnal plasma melatonin occurs in patients with cluster headache, suggesting that melatonin may play a role in the promotion of attacks. During a cluster period, we administered melatonin to 20 cluster headache patients (2 primary chronic, 18 episodic) in a double-blind placebo-controlled study of oral melatonin 10 mg (n = 10) or placebo (n = 10) for 14 days taken in a single evening dose. Headache frequency was significantly reduced (ANOVA, $p < 0.03$) and there were strong trends towards reduced analgesic consumption (ANOVA, $p < 0.06$) in the treatment group. Five of the 10 treated patients were responders whose attack frequency declined 3-5 days after treatment, and they experienced no further attacks until melatonin was discontinued. The chronic cluster patients did not respond. No patient in the placebo group responded. There were no side effects in either group. Although the response rate is low, melatonin may be suitable for cluster headache prophylaxis in some patients, particularly those who cannot tolerate other drugs.

PMID: 8933994 [PubMed - indexed for MEDLINE]

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[Melatonin in the preventive treatment of chronic cluster headache.](#) [Cephalalgia. 2001]

[Suboccipital steroid injections for transitional treatment of patients with more than two cluster headache attacks per day: a randomised, double-blind, placebo-controlled trial.](#) [Lancet Neurol. 2011]

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[Italian guidelines for primary headaches: 2012 revised version.](#) [J Headache Pain. 2012]

[Cluster headache.](#) [Clin Evid (Online). 2010]

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