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THE EFFECTS OF BIORHYTHM CYCLES ON STUDENTS' CAPACITY

Biorhythm is one of the latest topics in the field of identifying mind's ergonomics. It can be quite effective on reducing incidents and mistakes without any visible reason and on reducing students' sudden performance by identifying the physical, intellectual, and emotional aspects of the individual. The purpose of present research is to study the effects of biorhythm cycles on students' capacity, their emotional and physical state.

Materials and methods: To determine biorhythms 30 2nd year students of Zhytomyr Nursing Institute were studied. It was used a questionnaire consisting of 7 questions, determined by the parameters of biorhythms; a biorhythm calculator to find out the critical days and on the basis of the calculations was plotted individual biorhythms. The tools used in this research include online Biorhythm calculator and questionnaire relating to designated factors of physical, emotional and intellectual activity of the students.

Results: of the 30(100 %) students taking a test, only 8 (26.6%) had favorable biorhythms (both emotional, intellectual, physical positive), of the remaining 22, 16 (53,3%) had unfavorable biorhythm (either emotional, intellectual positive or physical negative, or emotional and physical positive but intellectual negative) and 6 (20,1%) had very unfavorable biorhythms (either an intellectual or physical critical day) .

The purpose of this article is to find reasons of negative emotional and physical cycles of biorhythm and ways to change critical days into positive.

In modern life students often interfere with their own body clocks, either deliberately and directly or indirectly and by accident. On the one hand, a student may drink coffee to stay awake at night, but he also may experience a sleep disorder as a result of some other situation, which may or may not be the result of purposeful action.

The causes for interference with a person's body clock may be outside that person's control to one degree or another. The most common disorder of biological clock is studying or preparing for classes at night, for instance, a condition that almost never suits a human being, no matter how much a person may insist that he is a "night person." Nevertheless, student may be required by circumstances, such as schedule, economic necessity, or part-time job availability. Another example of interference with the body clock would be narcolepsy (a condition characterized by brief attacks of deep sleep) or some other condition that is either congenital (something with which a person is born) or symptomatic (a symptom of some other condition rather than a condition in and of itself).

There are numerous classes of sleep disorders, among them circadian rhythm disorders—those related to jet lag or work-study schedules. As we have seen, the pineal gland can adjust easily from a natural 25-hour cycle to a 24-hour one, but it can do so only gradually, and it cannot readily adapt to sudden changes of schedule, such

as those brought about by air travel. Jet lag is a physiological and psychological condition in humans that typically includes fatigue and irritability; it usually follows a long flight through several time zones and probably results from disruption of circadian rhythms.

What can be done about these common problems related to light and our internal clock, how to change critical days for positive? Melatonin is a hormone released from the brain's pineal gland. It is involved in our internal clock and its secretion is influenced by light-dark cycles. However, taking it by mouth does not appear to be a good solution. Dosages found in over the counter melatonin preparations result in body concentrations that are many times higher than normal levels. It has not been established that such large amounts are safe.

If students follow body's natural cues regarding when to go to sleep and wake up, circadian rhythm should stay balanced, The first thing that should mentioned is to stick to a **consistent sleep schedule**. A regular bedtime is one part of the equation, but waking up at the same time daily will also help keep circadian rhythm in check. It may be tempting to grab some extra shut-eye on weekends, but doing so can throw off body clock during the week.

Next important fact is to spend some time outdoors. In the morning, exposure to the sun, won't just give an energy boost—it can also reset circadian rhythm. A quick outdoor stroll in the morning will give enough sun exposure to signal to brain that it's time to start the day. [7]

Bright lights in the evening hours can throw off body clock by confusing brain into thinking it is still daytime. Artificial blue light (the type that laptops, tablets and cell phones emit) is the worst culprit, students have to try to power-down tech devices at least two to three hours before bed.

Conclusion: Biorhythms, our internal regulatory clocks, have been shown to be an important variable in controlling the day to day functioning of our bodies. The value of biorhythms is large enough in everyday life. Knowing the individual biorhythms can build their plans for the month so that their implementation would have been the most productive. Biorhythms play a big role in the overall well-being and health. It is important to keep a regular sleep schedule and allow plenty of time for quality sleep, rest and physical activities. Keeping a certain mode that supports biorhythms, a person can stay healthy and young longer.

REFERENCES

1. Chobar DW. Biorhythms and the prediction of educational performance of industrial education students at Wichita State University: Kansas State University; 2000.
2. Levitan RD; The chronobiology and neurobiology of winter seasonal affective disorder. *DialoguesClinNeurosci*. 2007;9(3):315-24.
3. McConnell JV. Biorhythms: A report and analysis. *Journal of Biological Psychology*. 1978;20(1):13-24.
4. Pandi-Perumal SR, Srinivasan V, Maestroni GJ, et al; Melatonin: Nature's most versatile biological signal? *FEBS J*. 2006 Jul;273(13):2813-38.

5. Parikh RH, Askhedkar RD, Singh MP. Biorhythms for accident prevention. *International JofMultidispl Research &Advcs in Engg.* 2010;2(1):217-32.
6. Reilly T. The body clock and athletic performance. *Biological Rhythm Research.* 2008;40(1):37-44
7. Srinivasan V, De Berardis D, Shillcutt SD, et al; Role of melatonin in mood disorders and the antidepressant effects of agomelatine. *Expert OpinInvestigDrugs.* 2012 Oct;21(10):1503-22. Epub 2012 Aug 9.