

### 3. CHRONOTYPE IN PATIENTS WITH SLEEP APNEA HEADACHES



**Author:** Candice Dreyah

**Scientific advisor:** Vovc Victor, MD, PhD, Professor, Department of Human Physiology and Biophysics, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova; Lupușor Adrian, PhD, Assistant Professor, Department of Human Physiology and Biophysics, *Nicolae Testemitanu* State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

**Introduction.** Chronotype describes the hormonal schedule of an individual that makes them naturally inclined to a specific sleep pattern or period of alertness in a day, and unlike circadian rhythm, which describes a person's 24-hour clock that regulates their day-to-day physiological processes, it is genetic. In a way, we can say Circadian Rhythms stem from Chronotypes. While the latest scientific research suggests the PER3 gene is the genetic factor responsible for chronotypes, other factors such as age, environmental factors, work schedules, social obligations, and lifestyle choices could contribute to the evolution of chronotypes. These can, in turn, influence a person's sleep quality, mood, cognitive performance, and overall well-being. Hence, a complex association between the evolution of Sleep Apnea and headaches in specific Chronotypes is generated.

**Aim of study.** To further understand the prevalence of Sleep Apnea Headaches within a specific inherent Chronotype.

**Methods and materials.** Methods and Materials: An analytical review of the latest scientific research papers was conducted using online platforms, including – Google Scholar, PubMed and Elicit.

**Results.** Out of the three principle chronotypes known to exist, i.e. Morning type, Evening type and the Intermediate type, persons inclined to eveningness have been found to be at a higher risk for sleep complaints, including Sleep Apnea Headaches. Considering their natural tendencies to peak at their energy levels during the later part of the day while the norm of a person's lifestyle demands productivity and higher activity during the daytime, it is believed that evening-type persons tend to lack the balance needed to cope due to possible irregular sleep patterns and hence a disrupted circadian rhythm.

**Conclusion.** Although, for most of the part, Chronotypes are influenced genetically, they can still be evolved even if retraining or deliberately changing them is unachievable. Furthermore, their complex relationship with sleep Apnea and headaches still offers much scope for research.

**Keywords.** Chronotype, Sleep Apnea Headaches, PER3 gene.