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screen use relates to the children’s sleep, regardless of whether they are morning-, intermediate- or evening-types.

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**EVOLUTION OF A MOUTH BREATHER WITHOUT TREATMENT**

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**Introduction:** The purpose of this study is to cooperate with the whole medical community engaged in the detection and prevention of OSA in infants, by showing how we can help our patients by mere clinical observation —mainly when the patient is a child, for whom we are the architects of his/her health and facial structure.

**Materials and Methods:** Based on pictures taken at different ages, mandibular angle and lower facial height were measured. In the same pictures, the appearance of adenoid facies was found, coincident with symptoms of infant OSA. Considering these images, the aim is to determine the opportunity of having a functional-orthopedic treatment which —as in this case— could have prevented the irreversible facial transformation.

**Timeline:** 60 years.

**Results:** After analyzing the pictures which will be shown in the poster, we have the following results:

**WHEN SHOULD WE HAVE INTERVENTED?**

Undoubtedly, as soon as symptoms and signs of respiratory obstruction appear, it is time to act. Let us bear in mind that the sooner we restructure the position of the tongue, we will recover the trophic stimulus that it exerts on the palate and on the floor of the nostrils. Let us remember that the Nitric Oxide secreted in the body by the paranasal sinuses will be essential for the sweep of microorganisms in the upper airway, and if these sinuses are obstructed, we will not have their help during growth.

Let’s understand that surgery empties the airway, but does not increase its volume. That is only achieved with the help of an orthopedic treatment.

**WHAT KIND OF APPLIANCES CAN YOU USE TO INTERCEPT MOUTH BREATHING?**

Any type of equipment that stimulates muscle and bone activity will be useful. There are increasingly more comfortable, more aesthetic appliances for children. If we keep a mandibular forward force for continuous hours or more, the blood vessels of the propellant muscles become smaller, prev enting adequate blood flow. By decreasing its gas exchange, Lactic Acid will accumulate. When the device is removed from the mouth, the propellant muscles will become hyper contractible (repeated involuntary contractions) whereby the jaw will move forward, even when the chosen device is not in the mouth all day. To sweep away the lactic acid, muscles increase their blood vessels, reaching them unidentified cells that turn into myoblasts, which will form new muscle fibers. This process will maintain stability during growth.

**Conclusions:** It is suggested that a respiratory sleep alteration during childhood impacts on the facial biotype, even after a tonsillectomy, if not treated orthopedically in order to revert and/or modify in due time the muscle and respiratory functions, which would lead to a factor that may cause OSA in adults.

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**GENDER- SPECIFIC ESTIMATES OF SLEEP PROBLEMS DURING THE COVID-19 PANDEMIC: SYSTEMATIC REVIEW AND META- ANALYSIS**

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**Introduction:** The outbreak of the novel corona virus disease 2019 (COVID-19) changed life styles world wide and subsequently induced individuals’ sleep problems. Sleep problems have been demonstrated by scattered evidence among the current literature on COVID-19; however, little is known regarding the synthesised prevalence of sleep problems (i.e. insomnia symptoms and poor sleep quality) formales and females sepa rate ly.

**Materials and Methods:** The present systematic review and meta-analysis aimed to answer the import-tantquestion regarding prevalence of sleep problems during the COVID-19 outbreak period between genders. Using the Preferred Reporting Items for Systematic Review and Meta-Analyses guideline and Newcastle–Ottawa Scalecheck list, relevantstudies with satisfactory methodological quality searched for in five academic databases (Scopus, PubMed Central, ProQuest, Web of Science, and EMBASE) were included and analysed.

**Results:** The protocol of the project was registered in the International Prospective Register of Systematic Reviews (PROSPERO; identification code CRD42020181644). A total of 54 papers (N=45,718) in the female subgroup were pooled in the meta-analysis. The corrected pooled estimated prevalence of sleep problems was 24%/95% confidence interval [CI] 19%—29% for fe male participants and 27%/95% CI 24%—30%) for male participants.

**Conclusions:** Although in both gendersubgroups, patients with COVID-19, health professionals and general popu-lations how ed the highest prevalence of sleep problems, it did not reach statistical significance. Based on multivariablemeta-regression, both gendersubgroups had higher prevalence of sleep problems during the lockdown period. Therefore, healthcarepro-viders should pay attention to the sleep problems and take appropriate preventive action.

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**HOW DOES AUSTRIA SLEEP? SLEEPING HABITS AND SLEEP PROBLEMS BEFORE AND DURING CORONA**

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In the talk I discuss the sleeping habits and sleep problems before and during the Corona pandemic. An alarming increase in sleep problems from 6-year-old primary school children to adolescents and older adults is shown. Half of the interviewed adult Austrians (N=968) sleep less than 7 hours and only 31% classify themselves as “good sleepers”. Changes due to the Corona pandemic and lockdown measures are also found across different cultural groups (Austria/Germany, Brazil, Greece, Cuba, Ukraine) and show, on the one hand, a high level of anxiety due to the pandemic (78% of respondents). In addition, in non-system-relevant jobs we see a consistent later going to bed and an extension of sleep times on working days (13 min daily), which in total lead to a reduced “social jetlag”. People in system-relevant jobs also go to bed later and get up later, but show no increase in sleep time on weekdays and even a reduction in sleep time on days off (cf. Florea et al., 2021); overall, they also show a reduction in social jetlag, albeit to a lesser extent. We find cultural differences only of a general nature in the sense that people in Greece and Ukraine go to bed and get up later than the other cultural groups studied. Among children and adolescents (N=2,232), we find 74.8% less physical activity during the Corona pandemic, 44.2% less exposure to daylight and 85% a strong increase in smartphone/tablet use during the pandemic or lock-downs. In addition, a shift of the sleep-wake rhythm to later times (for 94%) & more bedtime, and yet a subjective deterioration in sleep quality is also evident in that data. An alarming number of 33.3-45.3% depending on the age group now even subjectively report sleep problems during the pandemic (cf. Bothe et al., in preparation).

**IMPACT OF COVID-19 PANDEMIC ON SLEEP OF UNDERGRADUATE STUDENTS: A SYSTEMATIC LITERATURE REVIEW**

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