

# SLEEP and COVID-19

*Sleep evaluation is more important now than ever before*

## Sleep disorders increase susceptibility to infection

- Insomnia, sleep deprivation and sleep fragmentation from untreated disorders, such as OSA, adversely affect the immune system<sup>1</sup> leading to degraded response to vaccinations<sup>2</sup> and worse outcomes in infections<sup>3-4</sup>.

## Obstructive Sleep Apnea (OSA) is highly prevalent in those at greatest risk for severe illness

- High risk individuals, according to the CDC, and (prevalence of OSA): Age > 65 years (18.1%)<sup>5</sup>, moderate/severe pulmonary conditions: COPD (65.9%)<sup>6</sup>, asthma (50%)<sup>7</sup>, immunocompromised, such as HIV (71%)<sup>8</sup>, obesity with BMI > 40 (74%)<sup>9</sup>, Type 2 diabetes (18%-86%)<sup>10</sup>, End Stage Renal disease on dialysis (50-83%)<sup>11</sup>, and liver disease, such as non-alcoholic fatty liver disease (61.5%)<sup>12</sup>.

## Sleep testing continues during pandemic

- Although many hospitals have suspended sleep testing, we continue to evaluate patients during the COVID-19 pandemic using telemedicine visits and home sleep testing equipment. This allows us to minimize patient exposure to potential infection and deliver quality care in a cost-effective manner. Home testing is far less expensive than traditional sleep studies. For those patients who need sleep center testing, we have options for both hospital-based and office-based sleep labs throughout East Tennessee.

## CPAP/BIPAP can contribute to disease spread

- CPAP/BIPAP were shown to aerosolize virus in SARS-CoV and MERS-CoV and its use in SARS-CoV2 (COVID-19) increasing the possibility of disease transmission. This type of treatment was recommended for use only in negative pressure ventilation rooms<sup>13</sup>.

The type of mask changes the amount of viral spread (oronasal masks were better than nasal pillows). Alternative treatments for infected patients are available.

## Treatment options

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- If a diagnosis of COVID-19 is suspected, patients can use an FDA-approved mandibular advancement device (ONIRIS), a position-restriction device, such as the Philips Night Balance, a tongue stabilizing device (AveoTSD) or EPAP therapy (ProVent).

## References

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