SLEEP APNEA

**Antioxidant Status**
It is well documented that sleep apnea patients have both reduced antioxidant capacity and higher levels of oxidative stress than controls. 5,6,7,8

**Vitamin C**
Improves endothelial function (blood vessel health) in sleep apnea patients to levels seen in people without sleep apnea. 9,10,11

**Vitamin E**
Mitigates the oxidative stress seen in sleep apnea patients; Works synergistically with vitamin C. 5,11,12

**Vitamin A**
Sleep apnea patients have low retinol (vitamin A); Retinol suppresses the growth of vascular smooth muscle, a process that causes blood vessels to clog, linking low vitamin A levels to the cardiovascular complications seen in sleep apnea patients. 13,14

**Vitamin D**
Mitigates the oxidative stress seen in sleep apnea patients; Also known to have a positive impact on immune function. 15,16,17

**Copper**
Considered a strong predictor of oxidative stress in sleep apnea patients; Copper's role as a key cofactor in the powerful antioxidant superoxide dismutase (SOD) explains this; SOD is very low in apnea patients. 21,22

**Selenium**
In one case report, selenium supplementation completely stopped snoring caused by non-obesity sleep apnea; Selenium's role as a potent antioxidant may reduce the oxidative stress seen in sleep apnea patients. 18,19,20

**Glutathione**
Low levels linked to sleep apnea; This powerful antioxidant helps repair liver damage caused by sleep apnea. 25,26,27

**Minerals**
The trace minerals zinc, copper, magnesium, manganese and selenium are critical cofactors for the major antioxidant enzymes, which are important in repairing cellular damage caused by hypoxia (lack of oxygen) in sleep apnea. 23,24

**Cysteine**
Oral supplementation with cysteine, the precursor to glutathione, has therapeutic potential for sleep apnea. Snore time and duration were significantly reduced for patients treated with N-acetyl cysteine compared to untreated sleep apnea patients. 1,2,3,4

**Vitamin D**
People with sleep apnea have a high prevalence of vitamin D deficiency; The worse the apnea, the more severe the deficiency; Evidence suggests low vitamin D worsens sleep apnea's negative effect on heart disease risk. 15,16,17

Additional nutrients affect sleep apnea. This list is non-exhaustive.
REFERENCES


