

National Research Tomsk Polytechnic  
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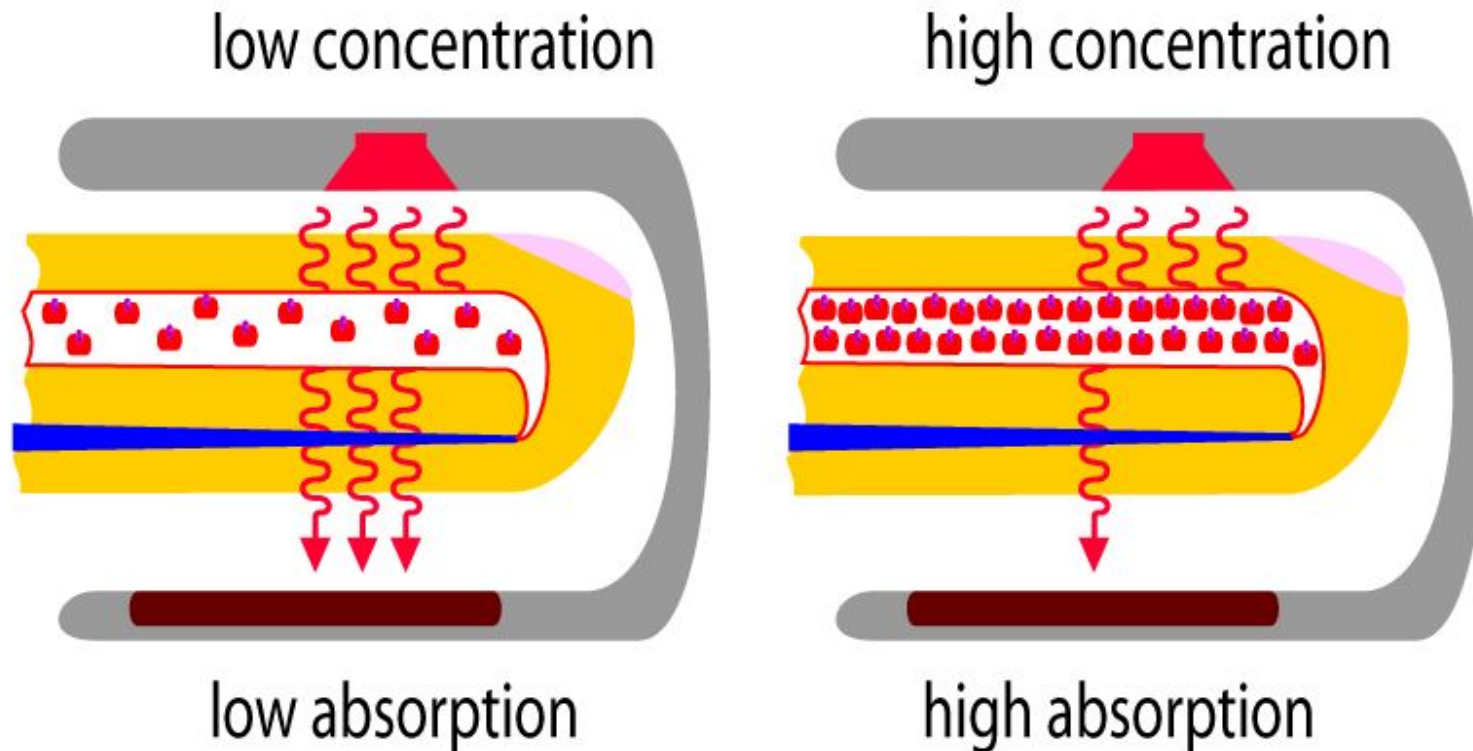
# PULSE OXIMETRY



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# THE SPURIOUS MEASUREMENTS CAME FROM TWO PULSE OXIMETERS IN WARM WATER, BUT FROM ALL SIX IN COLD WATER



**THE SYNDROME OF  
OBSTRUCTIVE SLEEP APNEA  
(OSA) IS A COMMON DISEASE IN  
WHICH THE RESPIRATORY TRACT  
IS FALLING IN A DREAM,  
STOPPING OR SUDDEN  
WEAKENING OF BREATHING -  
AND AS A RESULT, VARIOUS  
METABOLIC AND VASCULAR  
DISORDERS CAN DEVELOP.**



**OXIMETRY RESULTS CLASSIFIED  
16 PATIENTS AS POSITIVE, 43 AS  
NEGATIVE, AND 71 AS  
INCONCLUSIVE.**



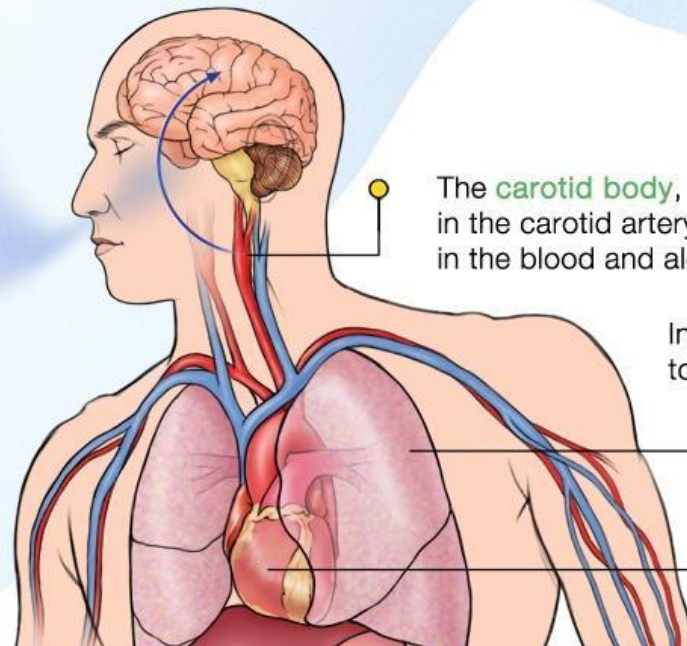
# PULSE OXIMETERS ARE ROUTINELY USED IN SEVERELY ILL PATIENTS TO DETECT HYPOXEMIA EARLY

## Effects of Hypoxia

(hi-pok'se-ah)

: a condition in which the body as a whole or a region of the body is deprived of adequate oxygen supply.  
/hy-pox-ia/ - noun

Low oxygen pressure at high altitude



The **carotid body**, a cluster of specialized cells in the carotid artery, detects low oxygen levels in the blood and alerts the brain.

In response, the **brain** sends signals to the rest of the body to...

- increase breathing rate and constrict vessels in the **lung**
- increase **heart** rate



**Thank you for  
attention!**

