

**Reliability of New Pulse CO-Oximeter in Victims of Carbon Monoxide Poisoning.**  
Coulange M., Barthelemy A., Hug F., Thierry A.L., De Haro L. *Undersea Hyperb Med.*  
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### **Study Objective**

The purpose of this study was to evaluate the reliability of noninvasive real-time measurement of carboxyhemoglobin (COHb) using a Pulse CO-Oximeter in victims of carbon monoxide poisoning (COP).

### **Methods**

During the 7-month study period, Pulse CO-Oximetry was measured on patients admitted to the emergency department (ED) for suspected COP. Each patient included in the study underwent concomitant assessment of COHb by blood sampling and noninvasive Pulse CO-Oximetry (SpCO).

### **Results**

Twelve non-smoker patients were included. Mean age was 40 +/- 17 years. No difference was found between the two COHb assessment techniques ( $p > 0.05$ ). Analysis using the Bland and Altman procedure suggested good alignment of the two techniques with a slight bias (i.e. -1.5%) indicating slight overestimation by the Pulse CO-Oximeter. Analysis using the Passing and Bablok statistical protocol further documented the reliability of the two methods.

### **Conclusion**

This study documents the precision of the correlation between readings obtained with the noninvasive Pulse CO-Oximeter and COHb measurements from blood samples. This preliminary result demonstrates that this simple rapid noninvasive technology could be useful before and after arrival at the ED.