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**Abstract**

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## Abstract

### Introduction:

Carbon monoxide (CO) is an odorless, colorless toxic gas and exposures can occur through smoke from fires, heating systems or engine exhaust. CO binds with high affinity to hemoglobin forming carboxyhemoglobin, preventing the delivery of oxygen to tissues leading to hypoxia and ischemia. Symptoms range from headache, malaise, nausea, dizziness and neurological injuries including ischemic stroke. Current guidelines for CO toxicity suggest prompt oxygen support and with our patient hyperbaric oxygen therapy.

### Case Description:

41-year-old female with a past medical history of asthma and vitamin D deficiency, presented to the ED with right sided numbness and weakness. Of note, the patient reports using her stove to heat up her apartment with her partner and daughter. Partner and daughter were unaffected. Carboxyhemoglobin was elevated at 10.2. CT was negative for acute hemorrhage or stroke. The patient was transferred for hyperbaric oxygen therapy. Five days later the patient reported continued right sided weakness with headaches and blurred vision. She was sent back to ED for evaluation. MRI was negative for plaques or ischemic changes. As her symptoms improved, she left AMA and started on aspirin.

### Discussion:

Carbon monoxide in excess affects cellular respiration, free radical generation and inflammation, causing downstream effects on both the brain and cardiovascular system. Patients who present with CO poisoning display neurological deficits that are supported by special imaging. This case, however, demonstrates the nuance in managing patients with an "atypical" presentation and supporting evidence, making the "real-life" application of treatment modalities and appropriate follow-up challenging for both patients and physicians.