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- 1) The information that follows from Donnay Detoxicology LLC contains links to collections of peer-reviewed articles about carbon monoxide that open webpages of the US National Library of Medicine at www.pubmed.ncbi.nlm.nih.gov. From the PubMed site--over which Donnay Detoxicology LLC has no control--you can save or export the articles in the collections.
- 2) The articles in each collection were selected by Albert Donnay, a consulting toxicologist who has specialized in CO poisoning since 1999. He selected the articles for their relevance to the topics and not for their accuracy, integrity, clinical utility, or any other reason.
- 3) The collections are not regularly updated and so only should be considered illustrative, not exhaustive. To find more recent articles on any topic "X", you can search at www.pubmed.gov for ("carbon monoxide" and "X")
- 4) *By clicking on the links provided below to any of Donnay's collections, you acknowledge this disclosure and agree not to hold Albert Donnay or Donnay Detoxicology LLC responsible for any false, misleading, or outdated information that the selected articles may contain.*

For more information on Donnay Detoxicology's library of over 1,500 PubMed collections on CO-related topics, see www.tinyurl.com/COpapers

Donnay Detoxicology LLC

www.DonnayDetox.com

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CARBON MONOXIDE RISK FACTORS: SOME MENSTRUAL PRODUCTS

Menstrual products that block the release of menstrual blood including tampons, cups and sponges may cause internal carbon monoxide poisoning and Toxic Shock Syndrome. This is because they allow the unbound CO gas in menstrual blood that would otherwise be immediately excreted to be reabsorbed via the vaginal wall into blood. The blood carries this CO first to the lungs where some is exhaled but the rest recirculates in arterial blood from which it can diffuse into other organs. This can be avoided by using pads instead.

Bright red menstrual blood is still high in CO but dark red blood has released most of the CO it contained. The CO comes from the breakdown of heme proteins in the endometrial lining by enzymes called heme oxygenase-1 and -2. When combined with 3 oxygen molecules and an enzyme called NADPH, HO-1 and HO-2 convert heme to equal parts of CO, bilirubin, and ferritin, along with hydrogen from the NADPH.

For a collection of peer-reviewed articles on PubMed curated by Albert Donnay about the higher than normal CO level that women make during the pre-menstrual phase of their period, see:

<https://www.ncbi.nlm.nih.gov/sites/myncbi/DonnayDetoxicologyLLC/collections/61786575/public/>