



OXYGEN AND LIGHT UPDATED CHEMOTHERAPY AND HBOT DETAIL:

Based on the 2023 update: “Chemo and HBOT?? <https://www.ncbi.nlm.nih.gov/books/NBK560873/>
Hyperbaric Contraindicated Chemotherapeutic Agents August 2023 Update”

There are many drugs with a side effect profile that could be exacerbated by hyperbaric oxygen. Hyperbaric oxygen therapy is frequently used in the treatment of post-radiation injuries, and many of these patients have also undergone chemotherapy as a part of their treatment regimen, raising the concern for potential side effects with hyperbaric oxygen. Three important drugs to evaluate:

Bleomycin:

Pulmonary toxicity is the reason concurrent use of bleomycin and hyperbaric oxygen therapy is contraindicated. It is considered safe to proceed with hyperbaric oxygen treatment if it has been at least three to four months post bleomycin administration.

But in the text above they say: “However, despite this theoretical risk, there have been no documented cases of pulmonary bleomycin toxicity from hyperbaric oxygen therapy. Alternatively, many patients who have had previous treatment with bleomycin have successfully received treatment with hyperbaric oxygen without sequelae.”

Doxorubicin:

Cardiac toxicity is the reason concurrent use of doxorubicin and hyperbaric oxygen therapy is contraindicated. It is considered safe to proceed with hyperbaric oxygen treatment if it has been at least three days post doxorubicin administration.

In the text above they state: “However, there are additional experimental animal studies that did not find any increased rate of mortality but instead produced data showing increased wound healing and less cardiac cellular damage in rats that received IM injections of doxorubicin with subsequent hyperbaric oxygen therapy than with doxorubicin alone.[6]

There is an additional study, a long-term follow-up study, looking at patients with locally advanced breast cancer undergoing hyperbaric oxygen therapy before neoadjuvant chemotherapy. Clinical and pathological responses were the same in both groups (hyperbaric oxygen plus doxorubicin versus doxorubicin alone).”

Cisplatin:

Impaired wound healing is the reason concurrent use of bleomycin and hyperbaric oxygen therapy is contraindicated. Proceed with treatment in emergent situations and when it has been an extended period from cisplatin administration.

In the text above they qualify this: “Therefore, patients with poor wound healing should not be treated with hyperbaric oxygen and cis-platinum simultaneously. However, when wound healing is not a goal of treatment and time to treatment is crucial, such as in carbon monoxide poisoning, arterial gas embolism, central retinal artery occlusion, and others. Hyperbaric oxygen is indicated in these emergencies.”