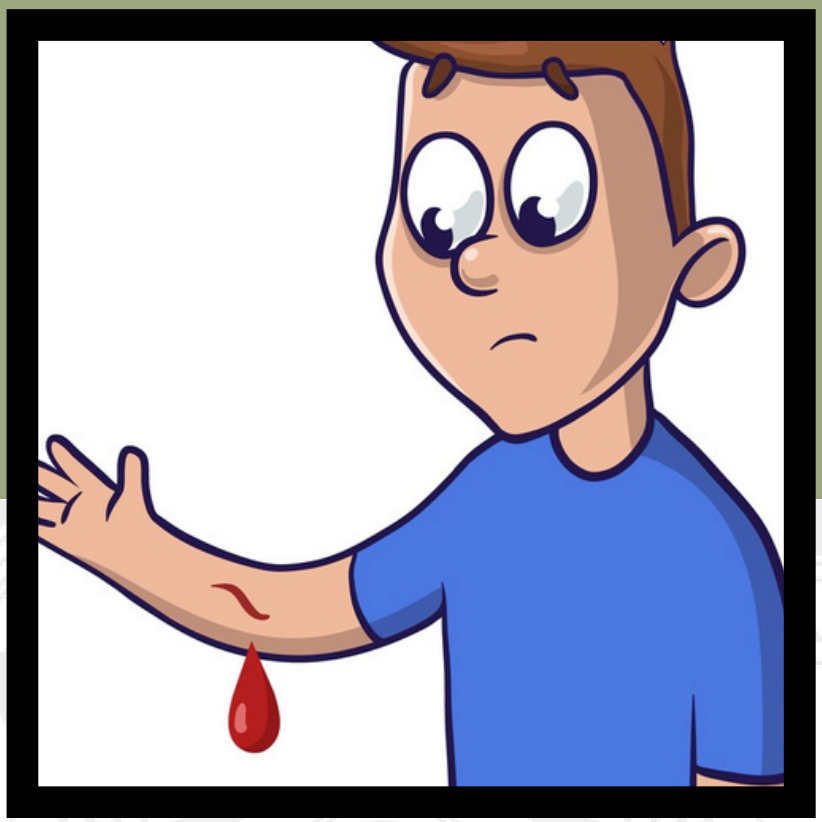
THE NORTHWEST WELLBEING HUB



HYPERBARIC OXYGEN THERAPY

WOUND HEALING

KEY POINTS

- Increased oxygen supply
- Enhanced tissue regeneration
- Reduced risk of infection
- Decreased inflammation
- Improved treatment for specific wound types

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WOUND HEALING

1. Increased oxygen supply: HBOT involves breathing pure oxygen in a pressurised chamber, leading to increased oxygen levels in the bloodstream. Oxygen is essential for wound healing, as it supports various cellular processes involved in tissue repair. By delivering a high concentration of oxygen to the wound site, HBOT helps improve oxygen supply to the damaged tissues, promoting healing.

2. Enhanced tissue regeneration: HBOT has been shown to promote tissue regeneration by stimulating the growth of new blood vessels (angiogenesis) and supporting the formation of granulation tissue. Increased oxygen levels through HBOT can improve cellular metabolism, increase collagen production, and accelerate the regeneration of damaged tissues. This effect contributes to faster and more efficient wound healing.

3. Reduced risk of infection: HBOT creates an environment that is inhospitable to certain bacteria and can help reduce the risk of wound infection. Oxygen is toxic to some bacteria, including anaerobic species that thrive in low oxygen environments. By increasing oxygen levels, HBOT helps create an oxygen-rich environment that inhibits the growth of bacteria, promotes bacterial clearance, and supports the body's immune response against infection.

4. Decreased inflammation: Chronic inflammation can impede the wound healing process. HBOT has anti-inflammatory effects and can help modulate the inflammatory response. By reducing excessive or chronic inflammation, HBOT promotes a favorable environment for wound healing, allowing for the proper progression through the different phases of healing, including inflammation, proliferation, and remodelling.

5. Improved treatment for specific wound types: HBOT has demonstrated efficacy in treating specific types of wounds, such as diabetic foot ulcers, non-healing surgical wounds, and radiation-induced wounds. HBOT can address the underlying factors that hinder healing in these conditions, such as poor blood flow, tissue hypoxia, and impaired immune responses. By targeting these specific mechanisms, HBOT can improve wound healing outcomes.

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