

Advanced Wound Care Focuses on Oxygen, Compression, and Humidity

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Chronic, difficult-to-heal wounds can involve factors beyond the visible wound itself. Oxygenation, fluid movement, and moisture balance can all play a role in the surrounding wound environment. Topical Wound Oxygen (TWO2) is one approach that brings these considerations together through high-pressure oxygen, non-contact cyclical compression, and humidification.

TWO2 is designed to deliver high-pressure oxygen to the wound area. According to Advanced Oxygen Therapy, Inc., the increased pressure is intended to support greater tissue diffusion and help restore normal wound metabolism. Oxygen availability is an important consideration in tissue repair because normal cellular activity requires an adequate oxygen supply. In the TWO2 approach, oxygen delivery is combined with compression and controlled humidity rather than used as a standalone component.

The compression component uses non-contact cyclical compression. This process is intended to help reduce edema and support the movement of blood and lymphatic fluids around the affected area. Advanced Oxygen Therapy, Inc. describes these effects as contributing to oxygen diffusion and neovascularization. Because the compression does not require direct contact with the wound, it differs from approaches that apply physical pressure directly to the wound surface.

Humidity represents the third component of the TWO2 system. The therapy supplies a fine particulate mist intended to maintain a suitable level of humidity around the wound. Moisture balance is a longstanding consideration in wound management because the condition of the tissue surrounding a wound can be affected by the local environment. Combining humidification with oxygen and cyclical compression creates a treatment approach that addresses several environmental factors at the same time.

Another consideration in chronic wound management is where treatment takes place. Advanced Oxygen Therapy, Inc. states that TWO2 therapy can be administered at home when prescribed and managed appropriately by healthcare professionals. Home-based treatment can be relevant for patients whose care plans require ongoing therapy outside of a traditional clinical setting. The practicality of treatment, however,

depends on individual circumstances and the recommendations of the treating healthcare team.

Clinical evidence and professional perspectives also form part of the discussion surrounding topical oxygen therapy. Advanced Oxygen Therapy, Inc. provides clinical materials related to TWO2 and references guidance from the American Diabetes Association concerning topical oxygen therapy as an adjunctive treatment for diabetic foot ulcers. As with other wound-care interventions, treatment decisions are based on the individual patient, the characteristics of the wound, and clinical judgment.

The broader field of advanced wound care increasingly considers multiple aspects of the wound environment rather than focusing exclusively on the wound surface. Oxygenation, edema, circulation, moisture, and access to treatment can all factor into how advanced wound care is planned. A multi-component approach such as TWO2 reflects this broader perspective by combining oxygen, compression, and humidification within a single therapy.

For healthcare professionals and patients researching topical wound oxygen, understanding how the individual components work together can provide useful context when considering available treatment approaches. TWO2 is structured around three primary functions: delivering oxygen under pressure, applying non-contact cyclical compression, and maintaining humidity around the treatment area. Whether the therapy is appropriate depends on the patient's condition and the assessment of the treating clinician.

Advanced Oxygen Therapy, Inc. develops medical technology for wound care and chronic conditions. Its products include the TWO2 Extremity Chamber, TWO2 Multi-Patch, and NEXA NPWT System, along with educational and clinical resources related to wound management. Additional information about topical wound oxygen therapy, the company's products, and available clinical resources can be found at <https://aotinc.net/>.

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