



ADVANCED WOUND CARE

SERENAGROUP MONTHLY EDUCATION

OCTOBER 2020

- **Referring Physicians** send patients to an advanced wound center to receive specialized care that is not available in other settings
- **Patients** choose to come to an advanced wound center for the most up to date and clinically proven treatment methods

Simply put... Wound Centers are expected to provide advanced therapies



ADVANCED THERAPIES

- Serial Debridement
- Diabetic Offloading
- Venous Compression
- Negative Pressure Wound Therapy
- Cellular/Cultured Tissue Products
- Hyperbaric Oxygen Therapy



DEBRIDEMENT

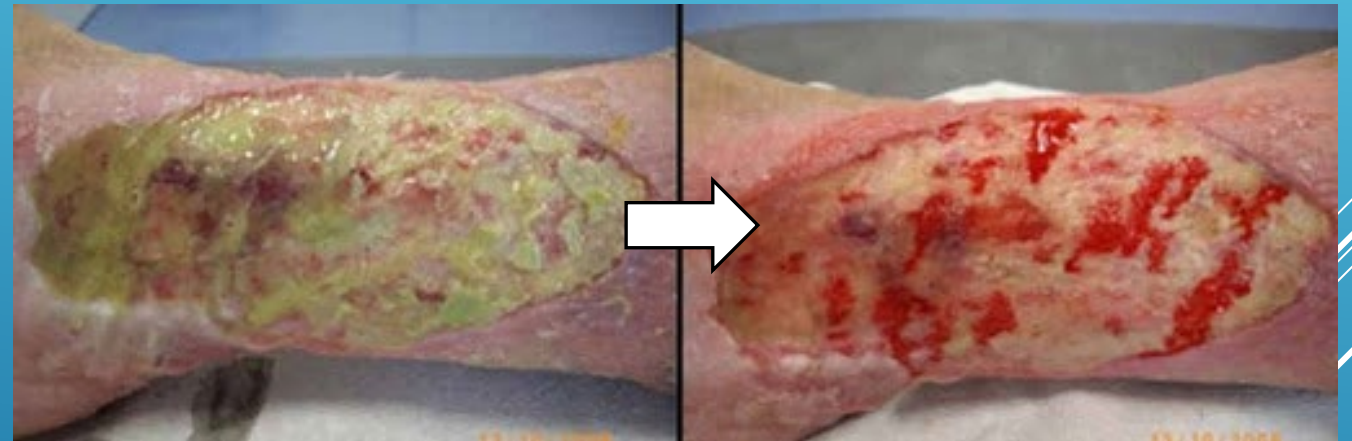
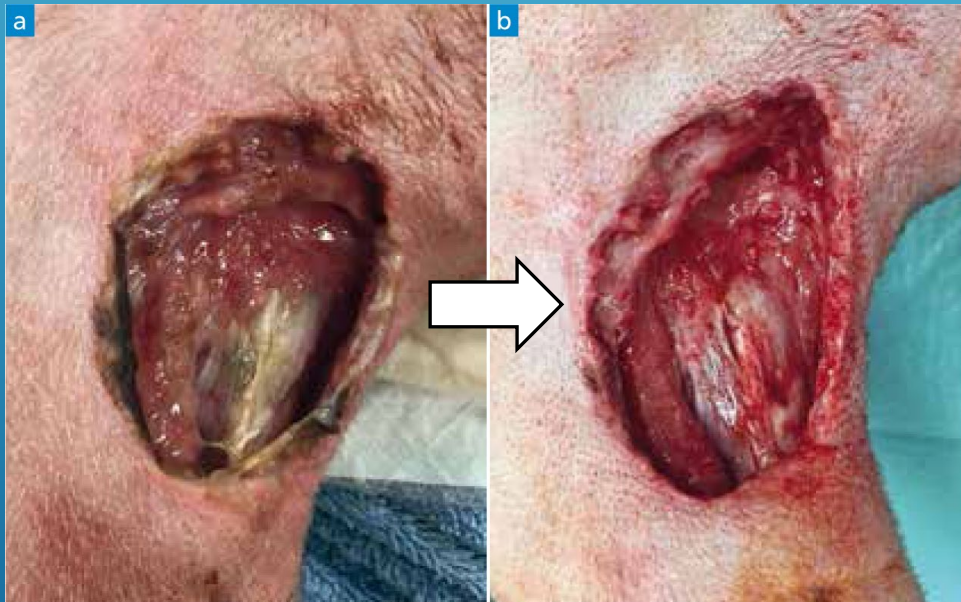


SERIAL DEBRIDEMENT

- ▶ The removal of damaged tissue or foreign objects from a wound
- ▶ Patients who receive weekly debridements heal at a faster rate than those who do not

BENEFITS

- Removes damaged and nonviable tissue
- Removes debris, bacteria and bioburden
- Reduces infection risk
- Encourages healthy granulation tissue formation



| Type | Description | Billing Codes |
|------------------------|---|---------------|
| Sharp Debridement | Uses surgical tools such as curettes, scalpels, or scissors to cut away devitalized tissue | |
| Excisional | the sharp removal of tissue at the wound margin or at the wound base until viable tissue is removed. | 11042-11047 |
| Selective | the removal of nonviable tissue. Unlike excisional debridement, the physician removes no living tissue | 97597-97598 |
| Autolytic debridement | uses occlusive dressings to provide a moist wound environment that promotes cleaning using a patient's own phagocytic cells and proteolytic enzymes | |
| Chemical debridement | uses enzymatic agents to degrade and chemically digest necrotic tissue | |
| Mechanical debridement | uses methods such as wet-to-dry dressings, hydrotherapy and irrigation to remove debris from the wound bed | |
| Biologic debridement | uses fly maggots to ingest necrotic tissue | |

OFFLOADING



OFFLOADING DIABETIC ULCERS

There is strong clinical evidence that offloading DFUs is a necessary component in wound healing. Of the different offloading methods, **TCC and irremovable cast walkers are regarded as the most effective in achieving healing of DFUs.** Using TCCs as an offloading method improved wound healing when compared with Removable Cast Walkers (RCW), therapeutic shoes, and conventional wound care.



CHOOSING A DEVICE

- Diabetic foot ulcerations are a major cause of morbidity and hospitalization. They are a significant predictive factor of infection, amputation, and mortality.
- The primary method of treating diabetic foot ulcers is offloading. Of the offloading methods currently in use, knee-high casts that are irremovable, such as TCCs and iRCWs, have been associated with improved wound healing.
- Total contact casts are of benefit in patients with lower extremity deformities which require custom molded casts.
- Before applying casts, it is necessary to consider certain contraindications such as depth of ulcers, presence of infection, and peripheral artery disease.



Considerations:

1. Wound Location
2. Infection
3. Drainage
4. Patient gait/stability

| | A | B | C | D | E | F | G | H | I | J | K | L |
|--|---|---|---|---|---|---|---|---|---|---|---|---|
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| Wound State | Ulcer Healing Stage | Appropriate Offloading Device |
|--------------|--|--|
| Open Wound | Inflammatory and Proliferative Phases | TCC, iTCC, RCW |
| Closed Wound | Maturation Phase: <4 weeks | Modified surgical shoe; commercial offloading shoe |
| | Maturation Phase: >4 weeks or when epithelium can withstand shear forces | Depth or custom-molded shoe with protective orthosis and rocker sole |

IMPROVING PATIENT EXPERIENCE AND ADHERENCE TO OFFLOADING

Comfort and Gait

Better offloading adherence is predictive of greater DFU healing at 6-week follow-up visits. A significant predictive factor of patient offloading adherence and delayed DFU healing is self-reported level of postural instability. As such, overcoming the challenge of adherence is inseparably linked to improving the gait and comfort of the patient wearing the offloading device. For example: when a contralateral limb lift is used in ankle-high removable cast walkers, there is an increase in patient comfort and gait.

Patient Education

Another key component in addressing patient adherence is education about the efficacy of the device being used. Educating the patient on the importance and expected efficacy of the offloading device, especially in the case of removable cast walkers, may be important predictors of adherence. Studies have shown that patients are more likely to wear diabetic footwear to prevent secondary diabetic foot ulcers when there is a perceived value of the footwear itself. It is not unreasonable to predict that educating the patient more completely on the value of their offloading device when treating a present diabetic foot ulceration will have similar benefits of increased adherence.

Monitoring Patient Adherence

There is no widespread objective measure of daily adherence utilized in foot clinics. Much of the determination of adherence has been subjective evaluation. There is a well-established positive association between adherence and ulcer healing. Therefore, it is important to monitor and document patient adherence at each visit

COMPRESSION



VENOUS COMPRESSION

- There are a myriad of compression alternatives available on the market
- there is not a one-size-fits-all answer when choosing the type of product to use.
- The wrong compression product can lead to complications from skin necrosis to severe ischemia.
- Inappropriate application and lack of consideration for the individual needs of the patient can lead to ineffective therapy and diminished quality of life.
- A good working knowledge of compression therapy options is essential to achieve the best outcomes.

MULTI-LAYER COMPRESSION WRAP

- Considered to be the Gold Standard of venous compression
- Provides desired pressure for up to 7 days
- Significantly reduces days to heal



*follow manufacturer's guidelines to prevent patient harm

An Overview Of Compression Products For Venous Ulcers

| Type | Trade Name | Company | Disposable | Reusable |
|------------------------------|-------------------------|-----------------|------------|----------|
| Short stretch (inelastic) | Comprilan | Jobst | X | X |
| | Rosidal K | Sammons Preston | | X |
| | LoPress | Hartmann Conco | | X |
| | Unna boot | multiple | | |
| Long stretch (elastic) | SurePress | Convatec | | X |
| | Setopress | Sammons Preston | | X |
| Multilayer | Dufore 4 layer | Derma Sciences | X | |
| | DeWrap System 3 Layer | DeRoyal | X | |
| | FourFlex 4-Layer | Medline | X | |
| | Profore 4 layer | Smith & Nephew | X | |
| Multilayer light | Profore Light (3 layer) | Smith & Nephew | X | |
| | Coban 2 Layer Lite | 3M | X | |
| High elastic | ACE | ACE | X | X |
| | Elastic bandages | Multiple | X | |
| | Coban self adhesive | 3M | | |
| | Self adhesive | Multiple | | |

NEGATIVE PRESSURE WOUND THERAPY



Negative Pressure Wound Therapy (NPWT) or Vacuum Assisted Closure (VAC)

a therapeutic technique using a suction pump, tubing and a dressing to remove excess exudate and promote healing in acute or chronic wounds and second- and third-degree burns

Indications:

- Surgical wounds
- Dehisced surgical wounds
- Burns
- Skin flaps and preparation for skin graft sites
- Traumatic wounds
- Chronic wounds, such as venous insufficiency ulcers, diabetic foot ulcers, and pressure ulcers
- Wounds at high risk for infection
- Wounds with copious drainage
- Meshed grafts

Contraindications:

- Malignancy of the wound.
- Untreated osteomyelitis.
- Nonenteric or unexplored fistulas.
- Known allergies or sensitivity to acrylic adhesives.
- Placement of negative-pressure dressings directly in contact with exposed blood vessels, organs, or nerves.

BENEFITS

- ▶ Accelerates wound healing times
- ▶ Reduces the risk of pathogenic infection
- ▶ Reduces the number of dressing changes
- ▶ Increases blood flow to the wound area while simultaneously drawing out excess fluids

Disposable

VS

Standard



- Portable
- Discrete
- Low/Moderate drainage
- Not always covered by Insurance



- Less portable
- Moderate/High drainage
- Commonly covered by Insurance

TISSUE PRODUCTS





CELLULAR AND/OR TISSUE-BASED PRODUCTS:

- Non-Viable Cells, Tissue-Based: Animal
- Non-Viable Cells, Tissue-Based: Human
- Viable Human Cells, Cultured in vitro: Animal Substrate
- Viable Human Cells, Cultured in vitro: Synthetic Substrate
- Viable Human Cells, Non-Cultured: Intact Tissue

BENEFITS

skin substitutes facilitate healing and regeneration for chronic wounds. These products work by applying the product over the entire wound surface area providing extracellular matrices to encourage immune function and tissue regeneration. Skin substitutes can be used on patients with lower limb diabetic ulcers, venous ulcers, burn wounds, surgical and traumatic wounds*

*Check Local Coverage Determination (LCD) and manufacturer's guidelines for approved indications. Not all product types are approved for every diagnosis and reimbursement varies



HYPERBARIC OXYGEN THERAPY



HYPERBARIC OXYGEN THERAPY

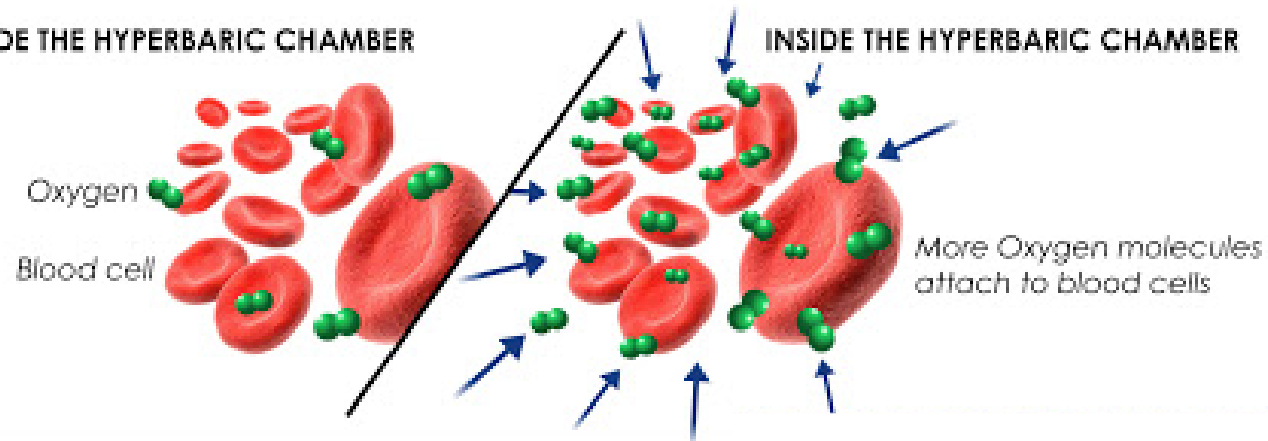
- Hyperbaric Oxygen Therapy (HBO) is a medical treatment which places a patient in an 100% oxygenated environment that has been pressurized to at least 1.4 atmospheres absolute (ATA)
- Treatments last for an average of 90min
- Patients receive treatment daily (M-F) for between 20-60tx
- Treatments can be administered using multi-place or mono-place chamber
- Patients can achieve up to 20x the normal amount of oxygen saturation in their body



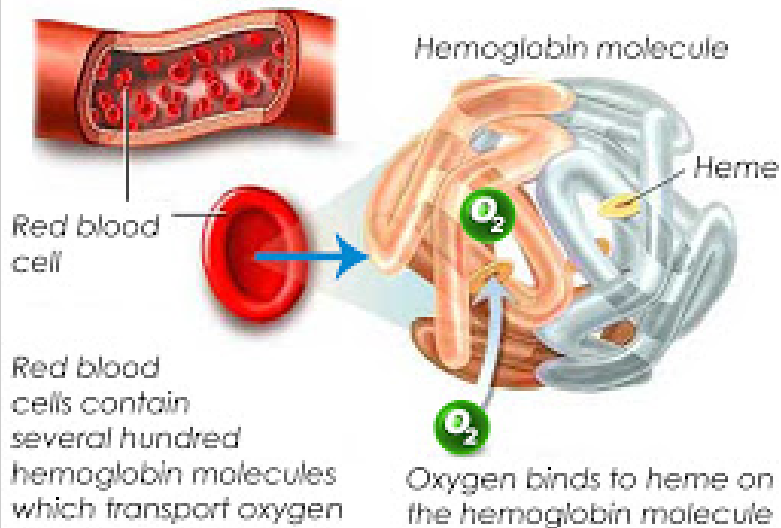
EFFECTS OF HYPERBARIC OXYGEN ON THE BLOOD CELLS: Under hyperbaric conditions the combination of increased pressure and high oxygen levels increases the amount of oxygen carried in a person's blood.

OUTSIDE THE HYPERBARIC CHAMBER

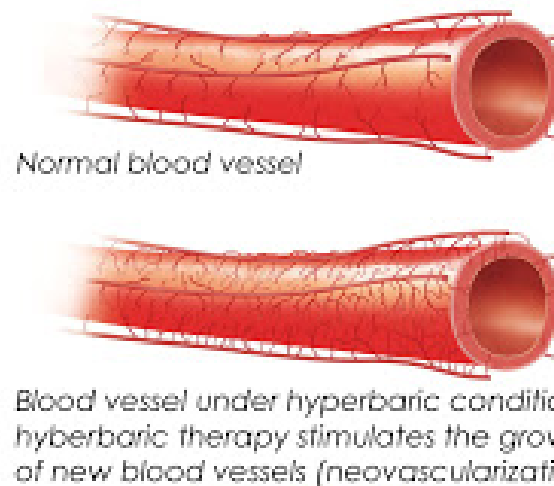
INSIDE THE HYPERBARIC CHAMBER



EFFECT OF HYPERBARIC ON HEMOGLOBIN

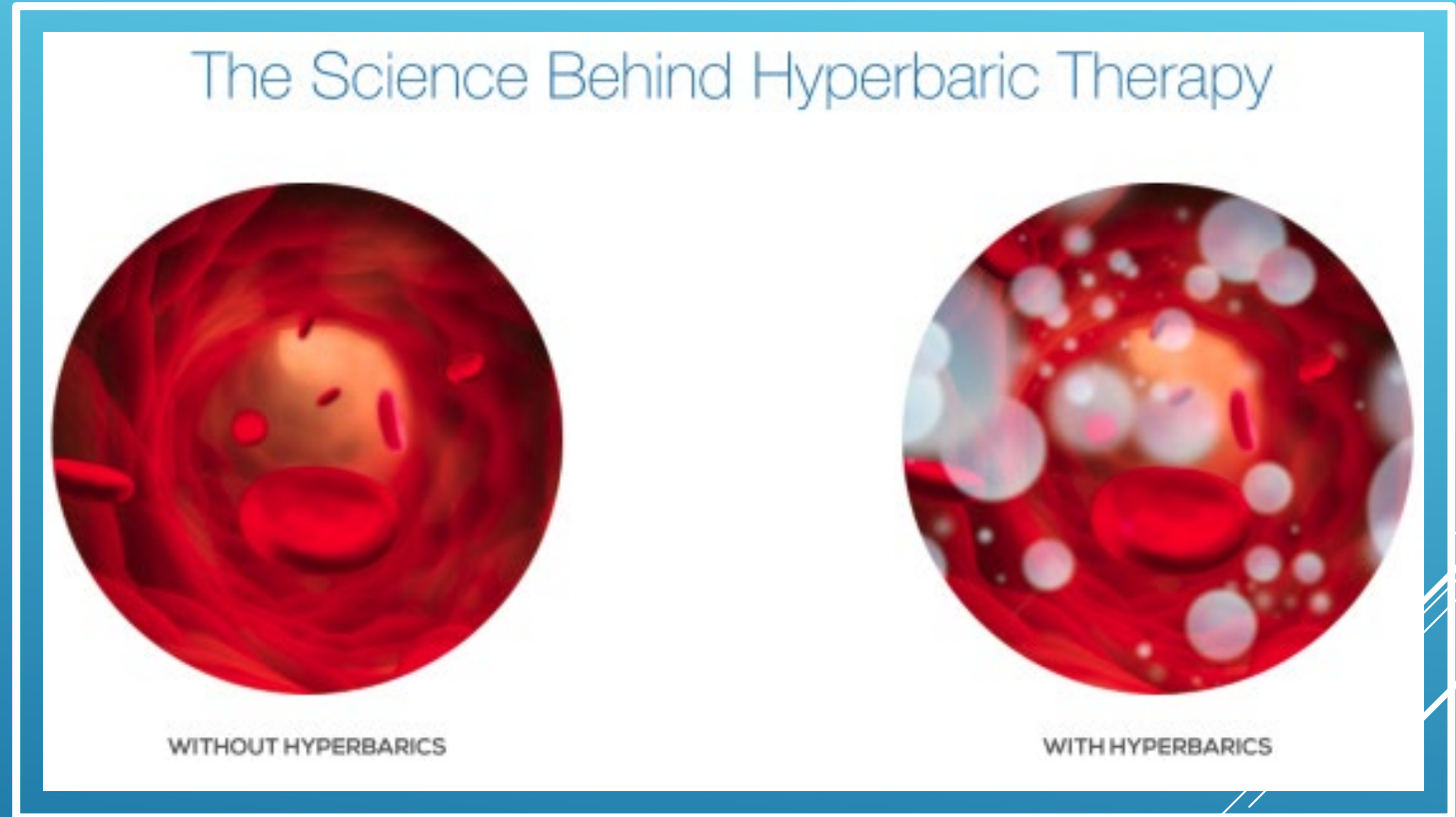


EFFECT OF HYPERBARIC ON REBUILDING OF NEW SMALL BLOOD VESSELS



BENEFITS Of Increased Oxygen

- ✓ Promotes angiogenesis
- ✓ Reduces inflammation
- ✓ Improves white blood cell function
- ✓ Improves effectiveness of certain antibiotics
- ✓ Promotes healing from within



KEY TAKEAWAYS



When should advanced therapies be considered for a patient?

Answer: **IMMEDIATELY**

- It has been shown to be more difficult to obtain approval for advanced therapies if they are not considered early in the treatment course
- Patients who are not considered for advanced therapies early in treatment are less likely to receive them later on
- Considering advanced therapies early in the treatment course leads to faster healing times and better quality outcomes

RESOURCES

- Serena Group Member's Portal
 - Monthly clinical education, patient education materials, policy and procedures, journal articles and more
- Executive Support
 - Dr. Serena- available for Physician support
 - Tim Mayhugh- available for HBO support
 - Matt Schweyer- available for documentation, billing, compliance and medical necessity
- Training Opportunities
 - Introduction to Hyperbaric Oxygen 40hr CME course
 - Wound Care Challenges 16hr CME course
 - Includes classroom and hands on training for all aspects of chronic wound care
- Clinical Guidelines
 - Disease specific guidelines for clinicians





- A patient should receive advanced therapies or be considered for advanced therapies when?
 - Immediately upon admission
 - Only when the ulcer fails to heal
 - Only if requested by the referring Provider
 - Only when a product rep shares a new product
- Advanced Wound Centers are able to provide specialized care that is unavailable in other settings?
 - True
 - False

- Advanced therapies can only be used one at a time and not combined.
 - True
 - False
- Tissue products should be used:
 - Never, because they are expensive
 - When indicated by the LCD and manufacturer's guidelines
 - On every patient regardless of diagnosis or condition

- Negative Pressure Wound Therapy (NPWT);
 - Assists with removing wound drainage
 - Can decrease the risk of infection
 - Can improve blood flow to the wound area
 - All of the above
- Weekly/Serial debridements are essential to timely wound healing
 - True
 - False

- Waiting until a patient needs Hyperbaric Oxygen Therapy is the best time to begin the work up process
 - True
 - False

- Hyperbaric Oxygen Therapy is an effective treatment for a variety of conditions seen in the wound center
 - True
 - False

- Physicians, Nurses, Technicians and Administrative staff have a support team available to them for assistance with providing advanced wound care
 - True
 - False

- Both clinical evidence and CMS support the utilization of aggressive advanced wound care techniques to decrease healing times and to prevent amputation
 - True
 - False

Thank
you!

