
CHANGING WOUND CARE FOREVER



YOUR EXPECTATIONS SHOULD BE CHANGING, TOO.

The problem is Biofilm...

Biofilm is present in ALL chronic wounds. Biofilm creates a disruption in the healing process and until biofilm is addressed, a chronic wound cannot heal. Clinicians are faced with a major dilemma, forced to choose between clearing the wound of harmful biofilm and microorganisms OR protecting newly granulating tissue.

NeutroPhase is the answer.

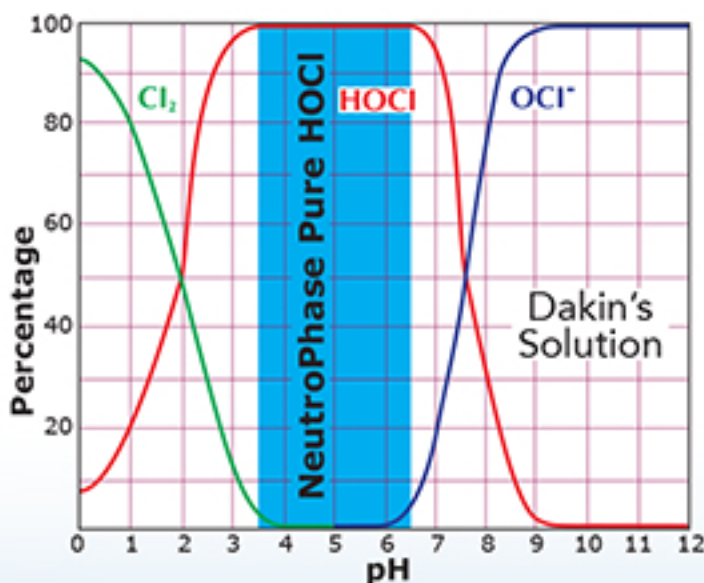
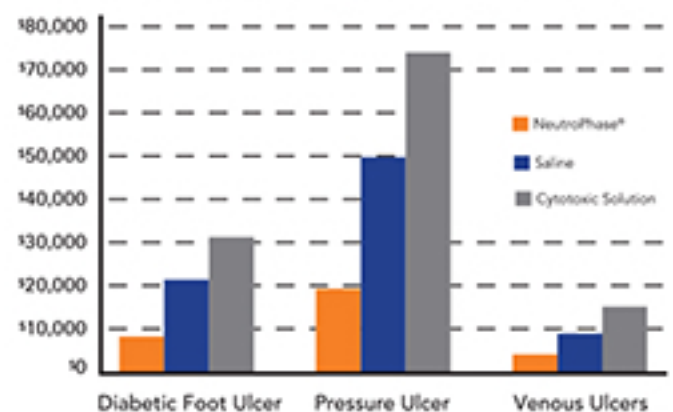
NeutroPhase® Skin and Wound Cleanser contains pure HOCl in solution.

A total game changer in wound care, NeutroPhase significantly reduces treatment costs per day resulting in dramatic overall cost savings to the facility or payor. (Based on third party market-cost analysis.)

In-vitro studies show NeutroPhase in solution disrupts bacterial biofilm and eliminates 99.99% of tested pathogens.

In laboratory studies, HOCl is 80-100 times more potent as a germicide than the current bleach and water solution (Dakin's). In-vitro studies confirm the rapid activity of NeutroPhase and that the solution does not generate bacterial resistance. Healthy human cells remain unharmed with NO known side effects or sensitivities reported with clinical use.

Cost per Episode by Wound Solution*



NeutroPhase®

Skin and Wound Cleanser

- Patented and shelf stable
- Pure HOCl in solution
- Disrupts biofilms
- Leaves healthy cells unharmed

CASE STUDIES AND REFERENCES

NeutroPhase®
For Wound Care

Find links to these case studies and more at:
www.neutrophaseus.com/resources/library

Flow Through Instillation of Hypochlorous Acid in the Treatment of Necrotizing Fasciitis

Dr. John Crew, MD, Kerry Thibodeaux, MD, FACS, Marcus Speyrer, RN, CWS, Anibal R. Gauto, MD, Timothy Shiau, PhD, Liliana Pang, Keith Bley, PhD, and Dmitri Debabov, PhD

“Abstract: Necrotizing Fasciitis (NF) is a rare and rapidly progressing bacterial infection of soft tissues. Bacterial toxins cause local tissue damage and necrosis, as well as blunt immune system responses. A self-propagating cycle of bacterial invasion, toxin release and tissue destruction can continue until substantial amounts of tissue become necrotic. Neutralization of bacterial toxins should improve the results.”

Hypochlorous Acid: An Ideal Wound Care Agent With Powerful Microbicidal, Antibiofilm, and Wound Healing Potency

Serban Sakarya, MD; Necati Gunay, MS; Meltem Karakulak, MS; Barcin Ozturk, MD; Bulent Ertugrul, MD

“Abstract: Chronic wounds and the infections associated with them are responsible for a considerable escalation in morbidity and the cost of health care. Infection and cellular activation and the relation between cells are 2 critical factors in wound healing. Since chronic wounds offer ideal conditions for infection and biofilm production, good wound care strategies are critical for wound healing. Objective: The aim of this study was to investigate the effect of stabilized hypochlorous acid (HOCl) on killing rate, biofilm formation, antimicrobial activity within biofilm against frequently isolated microorganisms and migration rate of wounded fibroblasts and keratinocytes.”

Treatment of Acute Necrotizing Fasciitis Using Negative Pressure Wound Therapy and Adjunctive NeutroPhase Irrigation Under the Foam

John R. Crew, MD, Randell Varilla, RN, MSN, Thomas Allandale Rocas III, RN, BSN, CWCN, Suriani Abdul Rani, MS; Dmitri Debabov, PhD

Necrotizing fasciitis is a complication of a bacterial infection that activates the immune system in perifascial planes. This case report highlights initial diagnostic failures that delay early treatment, which causes profoundly negative consequences. Antimicrobial control with abolition of the inciting bacteria does not neutralize the subsequent endopathologic ravages. A new therapeutic technique, which combines negative pressure wound therapy (NPWT) and a pure hypochlorous acid solution along with debridement and antibiotics is described in this study. It is believed that the combination of neutralization of the toxins produced by bacteria with NeutroPhase along with the NPWT action of removing exudates is effective in saving the patient.

Email clinical questions to
jborcherdt@pbenet.com

www.neutrophaseus.com
1-888-980-9702

Emerging Option for Necrotizing Infections

Necrotizing Fasciitis, Necrotizing Cellulitis, Necrotizing Fungal Infections, Fournier's and Gas Gangrenes

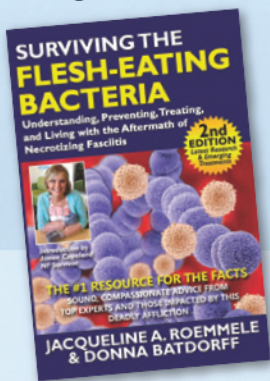
NeutroPhase® For Wound Care

New option for victims of "flesh-eating" disease

The National Necrotizing Fasciitis Foundation (NNFF) is directing patients and their physicians to a new approach for necrotizing infections that dramatically improves outcomes. **For physicians who have utilized NeutroPhase Skin and Wound Cleanser in conjunction with Negative Pressure Wound Therapy (NPWT), not one of their patients required amputation or suffered loss of life.** NeutroPhase (FDA cleared as a 510(k) medical device) is the only skin and wound cleanser with a patented and pure form of hypochlorous acid (HOCl) that doesn't contain bleach impurities. HOCl is produced by white blood cells as a first defense against microbial invaders. Lab tests show that, in solution, HOCl not only kills bacteria, it also neutralizes the toxins that kill tissue.

Book details Necrotizing Fasciitis and the roles of NeutroPhase & NPWT

NNFF is a 501c3 non-profit organization founded in 1997 by two survivors of Necrotizing Fasciitis, Jacqueline A. Roemmele, of Watchburg, New Jersey, and Donna Batdorff of Grand Rapids, Michigan.



NNFF has evolved to become the world's leading resource for information regarding necrotizing fasciitis. Its mission is to educate for public awareness regarding recognition of symptoms and preventative measures; to advocate research; to offer resources; and to offer support for those affected by necrotizing fasciitis, so that it may help save lives.



INDICATIONS FOR USE:

NeutroPhase® Skin and Wound Cleanser is intended for use under the supervision of healthcare professionals for cleansing and removal of foreign material, including: microorganisms and debris from wounds; cleaning minor cuts, minor burns, superficial abrasions, and minor irritations of the skin; as well as moistening absorbent wound dressings. It is also intended for moistening and debriding acute and chronic dermal lesions, such as: Stage I-IV pressure ulcers, stasis ulcers, leg ulcers, diabetic foot ulcers, post surgical wounds, first and second degree burns, as well as grafted and donor sites.

NeutroPhase meets the antimicrobial preservative acceptance criteria (USP) for *P. aeruginosa*, *E. coli*, *S. aureus*, *C. albicans*, and *A. brasiliensis*.

Neutrox® is the proprietary, patented manufacturing process used by NovaBay for producing pure hypochlorous acid (HOCl).

NeutroPhase is distributed in the U.S. by Principle Business Enterprises, Inc. (PBE), and is manufactured by NovaBay Pharmaceuticals, Inc.

Email clinical questions to
jborcherdt@pbenet.com

www.neutrophaseus.com
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Patient's Life and Eyes Saved from Gruesome Flesh-Eating Infection Consuming Her Face

Fast work by a Vanderbilt doctor and the NNFF team—and a new breakthrough treatment approach using NeutroPhase Skin and Wound Cleanser—averts tragedy

August 26, 2015 -- The National Necrotizing Fasciitis Foundation (NNFF) today announced that a patient's eyes—and life—were saved by doctors at Vanderbilt University, working with NNFF, NovaBay Pharmaceuticals and Dr. John Crew, director of the Advanced Wound Care Center at Seton Medical Center in Daly City, CA.

The successful treatment used a breakthrough approach, pioneered by Dr. Crew, that had previously saved the lives and limbs of all the prior patients—more than three dozen—who have been treated using the method.

This patient came into Vanderbilt University Hospital with serious necrotizing fasciitis, or flesh-eating disease, around both her eyes. Her infection was spreading fast, rapidly destroying the skin and soft tissue on her face.

For photos, visit the NNFF website: <http://www.nnff.com/>

The physician who treated the patient, Dr. Louise Mawn of Vanderbilt University, immediately realized that the patient was in grave danger. For years, doctors have treated flesh-eating disease with an aggressive use of antibiotics, combined with cutting away dead tissue. The problem is that toxins from the infection continue to eat away flesh even after antibiotics control the bacteria. That's why up to 20 percent of patients die even with the most aggressive standard treatment—and why most lose arms, legs or other body parts.

With the dead tissue rapidly spreading on the patient's face, Dr. Mawn knew that the patient would probably lose both eyes—and maybe her life—if doctors relied only on the standard treatment. So Mawn quickly searched the Internet for new developments. She found NNFF and its efforts to alert doctors and patients to the new treatment approach. The key advance, Dr. Mawn learned, is irrigating infected wounds with NeutroPhase[®] Skin and Wound Cleanser in combination with negative pressure wound therapy. NeutroPhase contains Neutrox[™], a pure, stable version of hypochlorous acid (HOCl) with no sodium hypochlorite impurities made by NovaBay[®] Pharmaceuticals, Inc. (NYSE MKT: NBY), an Emeryville, CA-based biopharmaceutical company developing and commercializing topical non-antibiotic antimicrobial products. Lab tests show that in solution Neutrox not only kills bacteria, it also neutralizes the toxins that eat away tissue.

Dr. Mawn contacted NNFF co-founder and executive director Jacqueline Roemmele, who put her in touch with Dr. Crew and NovaBay. The team sprang into action. NovaBay and its U.S. distributor, PBE, Inc. rushed bottles of NeutroPhase to Vanderbilt free of charge, and Dr. Crew

**The key advance,
Dr. Mawn learned,
is irrigating
infected wounds
with NeutroPhase[®]
Skin and Wound
Cleanser in
combination with
negative pressure
wound therapy.**

Continued...

guided Dr. Mawn on how to administer the wound cleanser.

It was just in the nick of time. The destruction of tissue on the patient's face slowed and stopped before she lost her eyes. Within 36 hours, she began a full recovery.

"This case shows the potential of NeutroPhase to help in the fight against this devastating disease," said Dr. Mawn. "It should be part of every doctor's armamentarium."

The Vanderbilt patient is the latest in a long list of success stories using the new treatment approach that Jacqueline Roemmele and co-author, Donna Batdorff, describe in the just-released second edition of their top-selling book, *Surviving the Flesh-Eating Bacteria: Understanding, Preventing, Treating and Living With the Aftermath of Necrotizing Fasciitis*.

"This new case shows yet again how crucially important it is that we get the word out about this life- and limb-sparing new approach," said Roemmele. "All patients and doctors need to know that, for the first time, we now have an excellent chance of witnessing an end to the nightmare that is necrotizing fasciitis."

ABOUT THE NATIONAL NECROTIZING FASCIITIS FOUNDATION

The National Necrotizing Fasciitis Foundation (NNFF) is a 501c3 non-profit organization established in 1997 by two survivors of the disease. Since that time, NNFF has evolved to become the world's leading resource for information regarding necrotizing fasciitis, as well as repository of cases reported worldwide. Its mission is to educate for public awareness regarding recognition of symptoms and preventative measures; to advocate research; to offer resources; and to offer support for those affected by necrotizing fasciitis, so that it may help save lives.

Contact:

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Samples

Complimentary samples are available for medical professionals to evaluate NeutroPhase. During the evaluation, we will partner with you by providing samples and supporting materials of NeutroPhase for one or more patients until the conclusion of the evaluation (trial). Simply call, email or visit our website today.

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