A Complete Solution for Diabetic Foot Ulcers

This booklet focuses on the recommended treatment of diabetic foot ulcers. Diabetes is regarded as the health crisis of the 21st century.

Did you know that:

- 285 million people worldwide are affected by diabetes
- Each year a further 7 million develop diabetes
- More than 9 million Canadians live with diabetes or prediabetes
- 15% of persons with diabetes will develop a foot ulcer
- Every 30 seconds a lower limb is lost due to diabetes somewhere in the world
- The total costs for treating a diabetic foot ulcer can range from $10,000 to $60,000

The diabetic foot ulcer is one of the most severe effects of diabetes. BSN Medical offers a full package of primary dressings, fixation products and casting products for pressure offloading to help you help your patients.

Today, diabetes is extremely widespread. The disease is increasingly a result of lifestyle choices, in particular lack of exercise, excessive blood pressure and excess weight. Early recognition and taking a proactive stance help to keep the late effects in check.

1 Canadian Diabetes Association
Assessment and Treatment of the Diabetic Foot Ulcer

The Canadian Association of Wound Care has developed Best Practice Recommendations for the Prevention, Diagnosis and Treatment of Diabetic Foot Ulcers and recommends the following treatment algorithm, in which pressure redistribution is a key component in treating the cause.

The importance of offloading

Pressure is a factor in 90 percent of diabetic plantar ulcers, and the pressure must be modified or removed. Pressure-induced ischemia occurs in tissues over bony areas of weight-bearing during ambulations and standing. Neuropathy prevents the perception of protective pain, resulting in an increased potential for tissue breakdown. Diabetic plantar ulcerations require aggressive and effective downloading in order to achieve wound healing.

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1 Heather L. Orsted, RN, BN, ET, MSc; Gordon Searles, OD, MD, FRCP, FACP; Heather Trowell, BSC, OT (c); Leah Shapera, RN, MSN; Pat Miller, RN, ET; and John Rahman, Certified Orthotist.
3 Nursing Best Practice Guideline: Assessment and Management of Foot Ulcers for People with Diabetes. Toronto: RNAO, 2004
Treating the Cause
with Pressure Redistribution

Most diabetic foot specialists consider **total contact casting as the pressure offloading Gold Standard** in the treatment of non-infected DFU, neuropathic foot wounds and Charcot foot.¹

**What is a total contact cast?**
A composite, anatomically conforming, below knee cast that is applied with minimal padding, enclosing the toes.

**How does total contact casting work?**
It effectively reduces plantar pressure and redistributes pressure to the cast:

- Up to 30% of load is distributed to the cast wall²
- Average forefoot offloading is 65%³
- Pressure is reduced up to 84% at metatarsal heads⁴

**Why is TCC Gold Standard?**
- It allows for healing while ambulating
- It forces compliance*¹
- It provides an intimate “total contact” with forefoot, arch, heel, Achilles tendon, and lower leg
- It eliminates the propulsive phase of gait
- It shortens the stride length
- It protects the affected limb from trauma
- It minimizes vertical (ground reactive pressures) and shear stresses

*Total contact casting forces compliance

Armstrong et al.⁵ demonstrated that patients using removable cast walker for off-loading wore their device on average during only 28% of their total daily activity, and even the subset most adherent to their off-loading regimen still only wore the device for a total of 60% of their total daily activity. This highlights a key advantage of the total contact cast: it is a non-removable device, which the patient must wear 100% of the time, therefore increasing treatment efficacy.

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Total Contact Casting is the most effective offloading device in healing neuropathic foot wounds, as overwhelmingly validated by clinical results.

A study by Armstrong et al.\textsuperscript{1}, involved 63 patients with non-infected neuropathic plantar foot ulcers and compared the TCC with a removable cast walker and a half shoe. All patients were followed for 12 weeks and had weekly visits for wound care and debridement.

Mueller et al.\textsuperscript{2} also compared the TCC with another treatment modality. Patients were randomized to receive TCC treatment or to avoid weight bearing and use sterile saline wet-to-dry dressings. The group treated with TCC showed 90.4% healed in an average of 33.5 days, as the non-TCC group showed 31.5% healed in an average of 65.0 days.

Myerson et al.\textsuperscript{3} used TCCs on 71 plantar ulcers. 90% of the ulcers healed at a mean duration of 5.5 weeks.

Those are just a few examples of the clinical evidence available supporting the use of total contact casting as pressure offloading device. In short:

- **18 studies** (4 randomized) show total contact casting results in consistent healing of active diabetic foot wounds from 36-52 days for 85-95% of patients.

- **A meta-analysis** of 526 ulcers in 493 patients presented by Peter Cavanagh at the 2000 American Diabetes Association 60th Scientific Sessions, showed TCC use resulted in 88% healing in mean time of 43 days.


Introducing the Cutimed® Total Contact Cast Kit

BSN Medical is simplifying the pressure offloading Gold Standard solution!

The Cutimed® Total Contact Cast Kit has been developed in partnership with healthcare professionals dealing with diabetic foot ulcers every day. The result is a recipe that offers the most effective and comfortable TCC through an easy standardized technique. It combines specifically chosen and proven casting materials to provide an intimate comfortable close fit and proper pressure redistribution for an optimized healing environment.

The kit provides several advantages such as:

- Standardized technique
- Optimal effectiveness
- Time savings
- Convenient all-in-one kit
- Increased compliance

BSN Medical also provides hands-on educational sessions, training material and on-site support.

One example of success with Cutimed® Total Contact Cast Kit

Day 1

Day 4

Day 7

Day 14

Day 33

Day 47
Discover Cutimed® advanced wound care products from BSN Medical, an innovative wound management range which reliably covers all wound healing phases.

Once the diabetic foot ulcer is being addressed with pressure offloading, adequate local wound care is required for optimal healing conditions. Especially designed to aid in the treatment of chronic wounds such as diabetic foot ulcers, our new Cutimed® range offers a complete selection of effective and patient-friendly products.

The Cutimed® Sorbact range has proved effective in infected diabetic ulcers and in preventing an infection. By a unique mode of action the microbial load is effectively reduced without using a chemically active agent, such as silver. Cutimed® Sorbact is not linked to undesirable side effects or bacterial resistance and supports the natural wound healing process.
### Ordering Information

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<thead>
<tr>
<th>Product Description</th>
<th>Code</th>
<th>Dimensions</th>
<th>Box Contents</th>
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<td>1 kit</td>
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<tr>
<td>Everything you need for one total contact cast</td>
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<tr>
<td><strong>Cutimed® Sorbact® dressing</strong></td>
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<td>Impregnated acetate fabric primary wound dressing for deep or superficial wounds</td>
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The Cutimed® range of products offers high flexibility in the therapy of chronic wounds. Choose your dressing with the easy-to-use pictograms according to exudate level, wound depth and wound phase:

### Wound Phase
- Necrotic
- Infected
- Sloughy
- Granulation
- Epithelization

### Wound Depth
- Shallow
- Deep
- Shallow + deep

### Exudate
- Dry to low
- Low to medium
- Medium to high
- High to excessive