

# A NATURAL ANTIMICROBIAL WITH FOUR-FOLD BENEFITS

27 MAY 2021 HEIDI TICKNER SHARON GARDNER 13:00 - 13:45

# Zorflex®: a natural antimicrobial with. four-fold benefits





#### **Sharon Gardner**

BSc (Hons) PGCE Dip RN QN Clinical Support Nurse Specialist, H&R Healthcare

#### Heidi Tickner

BSc (Hons) Dip RN Business Manager, H&R Healthcare



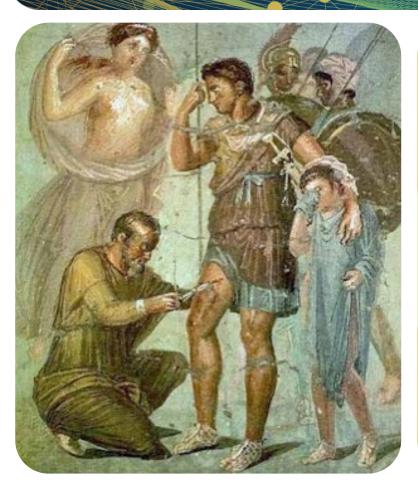
## Learning objectives

- The most commonly used antimicrobials
- Understand Zorflex:
  - Four-fold benefits
  - Mode of action
  - How to use Zorflex
  - How Zorflex can help improve patient quality of life (QOL)





# History of antimicrobial dressings<sup>1</sup>





- Antimicrobial usage dates back as far as records go
- In wound care to 2100 BC



## Survey results



What wounds do you manage the most?

VLU, PU & DFU



What % have been managed with antimicrobials?

Over **50%** of wounds

What is your first choice of an antimicrobial dressing?

93% — three types



Do you understand how your antimicrobial dressing works?

**54%** said yes



# How do the most commonly used antimicrobials work?<sup>2,3</sup>

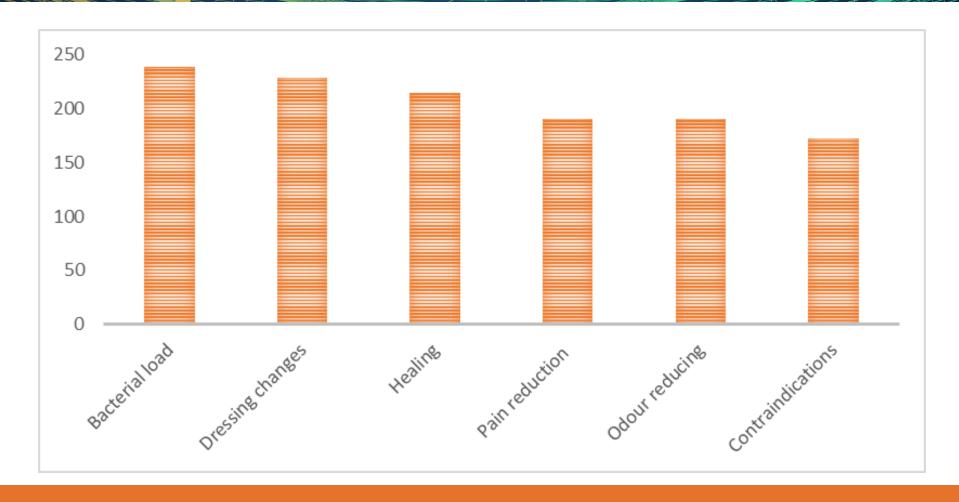








# What do you look for most in an antimicrobial?





#### What is Zorflex?

- Activated carbon
- Unique wound contact layer
- Naturally effective antimicrobial barrier<sup>4</sup>





## Four-fold benefits of Zorflex



Antimicrobial<sup>4</sup>



Protease modulation<sup>5</sup>



Conductive<sup>6</sup>



Odour management<sup>7</sup>

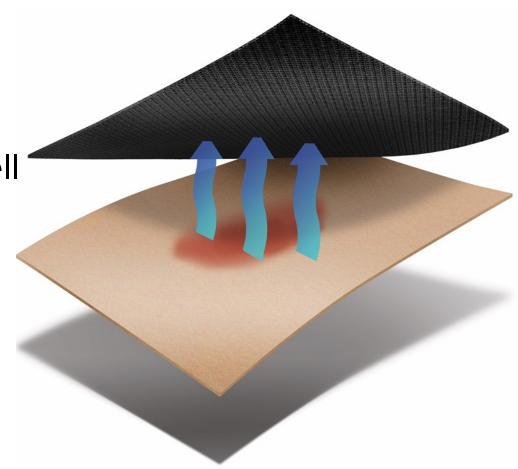


#### How does Zorflex work?7\*

 Bacterial cells get trapped on the surface

Electrostatic tension builds up in the cell

- It overcomes the tensile strength of the cell wall and ruptures
- The endotoxins in the cell are drawn into the micropores, not dropped back into the wound bed





# Adsorption vs. absorption



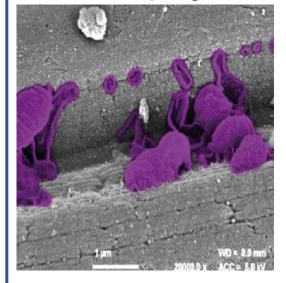


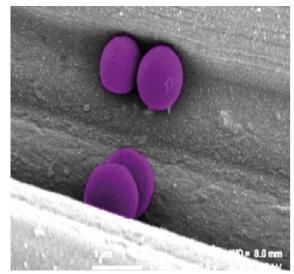


#### Antimicrobial<sup>4</sup>

Zorflex attracts bacteria and other pathogens onto the dressing surface by electrostatic forces within the activated carbon cloth, where it entraps and kills microbes.

#### Staphylococcus aureus





**Z**orflex

VS

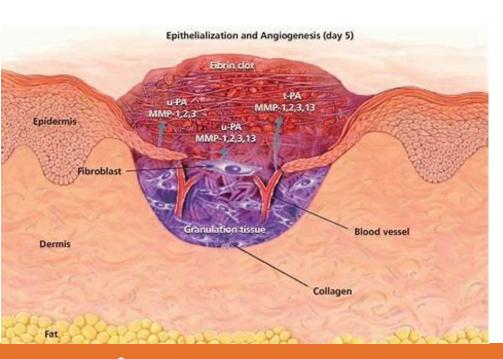
**Control** 

Bacteria bound, trapped and burst open on surface of Zorflex (24 hours)



#### Protease modulation<sup>5</sup>

 Matrix metalloproteinases (MMPs) are vital for wound healing and managing the protease levels is essential for healing



Elevated levels of MMP and bacterial infection can delay chronic wound healing



Reducing excess protease activity in a nonhealing wound may improve the wound healing trajectory





#### Conductive

Natural electricity runs through the human body, should the current leak from the skin as a loss of integrity (wounding) a short circuit occurs<sup>8</sup>.

Activated carbon is conductive. When applied to a break in the skin, the conductive properties reconnect the currents (transepithelial potential) naturally inherent in tissue.





## Odour management<sup>7</sup>

Zorflex reduces odour by attracting and binding the volatile molecules that cause the odour to the dressing.

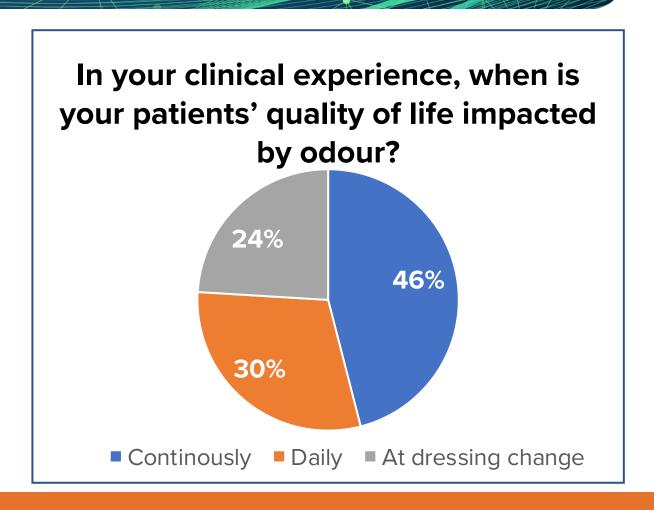
Zorflex binds and deactivates bacteria naturally.





## Survey: odour impacts on QOL

- 85% state pain and odour impact patient QOL the most
- Over 40% of your caseload has odour-related issues
- 46% of these patients are impacted continuously





## Let's look at the product





## Introducing Zorflex LA

All the benefits of standard Zorflex with low adherent antimicrobial wound contact layer.

Suitable if you have concerns of dressings sticking to wound.





#### Indications



Diabetic foot ulcers

Fungating wounds

Pressure ulcers

Traumatic wounds

Surgical sites

Donor and recipient grafts

- Exuding full or partial-thickness wounds
- May be used prophylactically
- May be used through to healing
- No contraindications
- Seven-day wear time



## Case study one<sup>4</sup>



Week 1



First dressing change After three days



Week 11



# Case study two<sup>4</sup>







Week 7



#### **.** Use of Zorflex

#### **Patient benefits**

- ✓ Improved wound healing<sup>9</sup>
- ✓ Reduced pain<sup>10</sup>
- ✓ Reduced odour<sup>10</sup>
- ✓ Improved QOL<sup>7</sup>



#### **Clinical benefits**

- ✓ Effective antimicrobial<sup>4</sup>
- ✓ Stimulates wound healing<sup>4</sup>
- ✓ Cost-effective
- ✓ Seven-day wear time
  - ✓ Reduced appointments<sup>7</sup>
  - ✓ Reduced treatment costs



#### Summary

- Zorflex is a unique, conformable, natural antimicrobial wound contact layer composed of 100% activated carbon
- The dressing binds and deactivates bacteria and proteases<sup>5</sup>
- Reduces pain and odour<sup>10</sup>
- Aids wound healing<sup>9</sup>
- Is suitable for all ages with no contraindications or risk of antimicrobial resistance
- May be used through to healing
- Available in a range of sizes



#### Call to action!

Are you interested in conducting a **Zorflex evaluation?** 

Would you like further information on the **Zorflex** dressings?

Please contact us:

Email: marketing@hrhealthcare.co.uk

Visit: www.hrhealthcare.co.uk





#### References

- 1. Wound management and its history (futurelearn.com) accessed on 10/5/21
- 2. Wound Care Handbook (2020) Journal of Wound Care.
- 3. Simões D, Miguel S, Ribeiro MP, Coutinho P, Mendonça A (2101) Recent advances on antimicrobial wound dressing: A review. Eur J Pharm Biopharm 127: 130–41
- 4. Hampton S, Young S, Gray S (2016) *A retrospective study to evaluate the effect of an activated carbon dressing on chronic wounds.* Poster presentation, Wounds UK
- 5. Carney J, Thomas H, Westgate SJ (2017) *In vitro modulation of MMP-1, MMP-2, MMP-9 and elastase by a range of wound dressings.* Poster presentation, SAWC
- 6. Y. Huang (2017) 7 Electrical and thermal properties of activated carbon fibers, Editor(s): Jonathan Y. Chen, In Woodhead Publishing Series in Textiles, Activated Carbon Fiber and Textiles, Woodhead Publishing, 2017, Pages 181–19
- 7. Murphy N (2016) Reducing infection in chronic leg ulcers with an activated carbon cloth dressing. Br J Nurs 25(12): S38–44
- 8. Cutting KF (2006) Electrical stimulation in the treatment of chronic wounds. Wounds UK 2(1): 62–71
- 9. Miller M, Markey L, Yoder R (2016) *Use of a unique carbon based textile dressing Zorflex to promote healing and prevent amputation a case series.*Poster presentation, Wounds UK
- 10. Tadej M, et al (2013) *An evaluation of the Zorflex® carbon fibre dressing in managing bacterial load and aiding healing of chronic wounds*. Poster presentation, EWMA





