AQUACEL Ag Advantage

NEW

YOU HAVE THE **POWER TO TARGET THE BARRIERS TO HEALING** WITH MORE THAN SILVER™ TECHNOLOGY

Hydrofiber® TECHNOLOGY

MORE THAN SILVER™

ConvaTec

Chronic wounds are a battle worth fighting

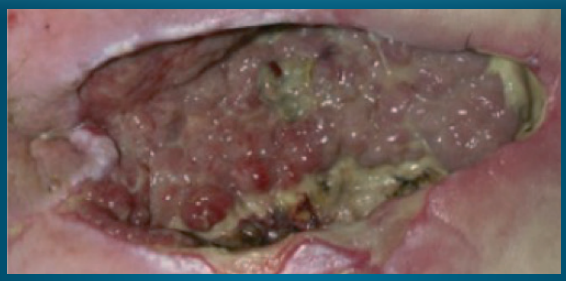
There are an estimated 6.5 million chronic wounds in the USA[1], a number expected to increase due to aging population and obesity.[2,3]

15% of all Medicare beneficiaries
are affected by chronic non-healing wounds in the USA[4]

Annual average cost per wound:[5]
- Leg ulcer: $11k
- Pressure ulcer: $15k
- Diabetic foot ulcer: $44k

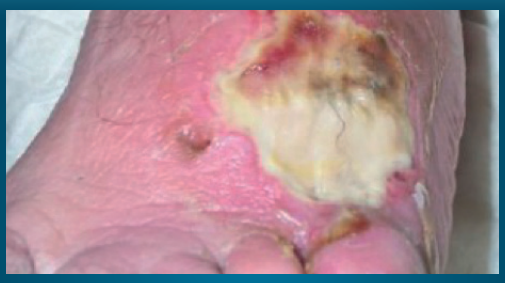
Antibiotic overuse
CDC estimates that 30% of all antibiotics prescribed in outpatient clinics and hospitals are unnecessary[6]

Wound chronicity is most commonly associated with pressure ulcers/injuries, diabetic foot ulcers, and arterial or venous leg ulcers.[7]



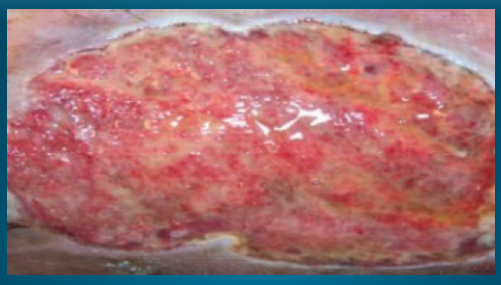
BIOBURDEN

Pressure ulcers/injuries with a heavily colonised, sloughy wound bed.



INFECTION

Diabetic foot ulcer showing slough and devitalized tissue on wound bed and presence of localized infection.



EXUDATE

Leg ulcer with high levels of exudate causing maceration to the surrounding skin. Dull red wound bed with areas of slough.

Images reproduced with kind permission of R Mathison, Stockport NHS Trust, UK (fig. Infection), D Copson, Nottingham University Hospitals NHS Trust, UK (fig. Bioburden), D Nelson, Derby Hospital NHS Foundation Trust (fig. Exudate)

Know your enemies

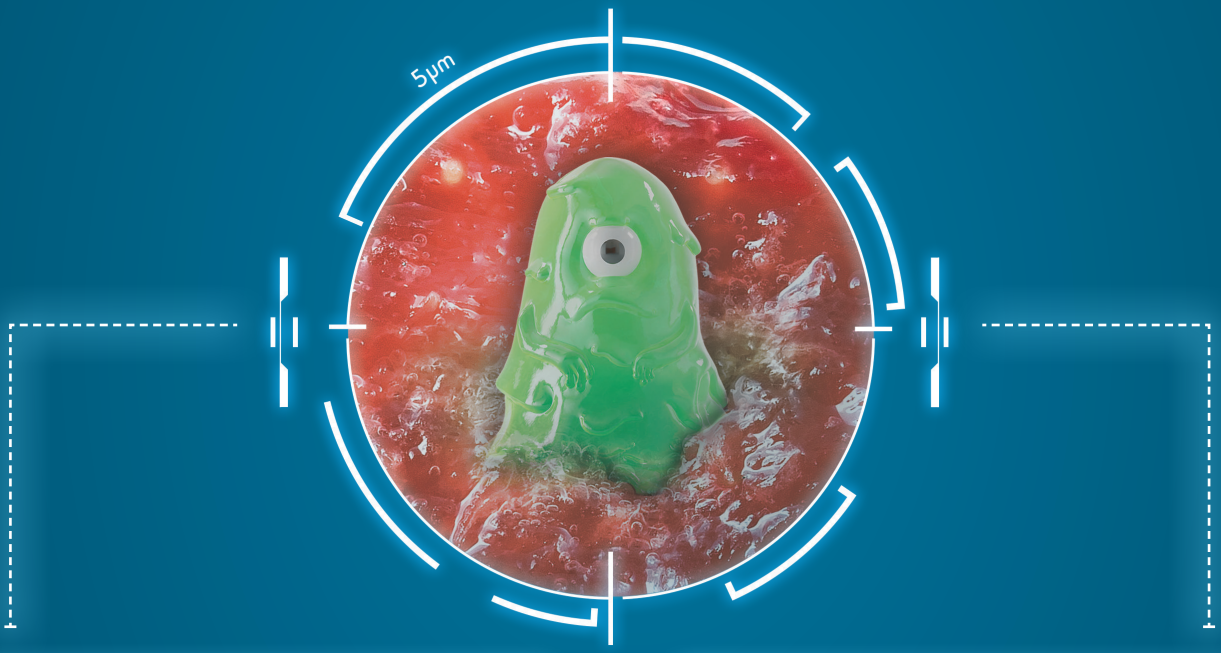
Knowing the enemies you are facing is key to efficiently selecting the appropriate antimicrobial technology to beat them.

BIOBURDEN

Persistent forms of bioburden are difficult to completely remove, even with debridement, and can regrow quickly[8,9]

Signs can include:

- Tolerance to antibiotic and antimicrobial treatments[10]
- Persistent inflammation[11]



INFECTION

Infection delays healing:[12]

Acute infections:

- Show classic signs of infection such as redness, pain, and swelling
- Can be managed by antibiotic and topical antiseptics[13]

Chronic infections:

- May not show the typical signs of infections [14]
- Are tolerant to antibiotic treatment[15]
- Associated with the presence of persistent bioburden[14]

EXUDATE

Too much exudate may create problems:[16]

- Maceration of the surrounding skin[17]
- Damage to the wound bed[17]
- Development of persistent bioburden[18, 19]
- Result in more frequent dressing changes

MORE THAN SILVER™ technology

Specifically developed to win the battle against bioburden, MORE THAN SILVER™ technology is a unique formulation that contains three components.[20] They synergistically work together to enhance the antimicrobial efficacy of ionic silver within the dressing resulting in:

- Faster reduction of bacteria[20]
- Broad spectrum efficacy[21-23]
- Sustained antimicrobial activity[21-23]

1. BEC: A SURFACTANT

Surfactants help to dissolve and remove contamination from surfaces by lowering the surface tension and can be found in products such as skin wipes. MORE THAN SILVER™ technology incorporates BEC (Benzethonium chloride).

BEC reduces the surface tension and enhances the action of EDTA. BEC and EDTA synergistically work together aiding the absorption and removal of wound bioburden by the dressing.[24-28]

2. EDTA: METAL CHELATING AGENT

Chelating agents are compounds that strongly attract and bind certain metal ions, boosting the action of surfactants. MORE THAN SILVER™ technology incorporates EDTA (ethylenediaminetetraacetic acid disodium salt).

Metal ions hold together the protective layers within the bioburden.[29, 30] By binding to these metals, EDTA weakens the bioburden' structures allowing for a more efficient delivery of ionic silver.[21, 25, 26, 28]

3. IONIC SILVER

Silver is a safe, broad-spectrum antimicrobial that is only effective in its ionic form. Attracted to sites on bacterial cell walls, it accumulates and then enters the cell, where it damages the DNA, denatures proteins and enzymes, and interferes with protein synthesis.[31, 32]

Hydrofiber® technology

Absorbs wound fluid and creates a soft gel to:

Maintain a moist wound environment that promotes autolytic debridement.[33-35]

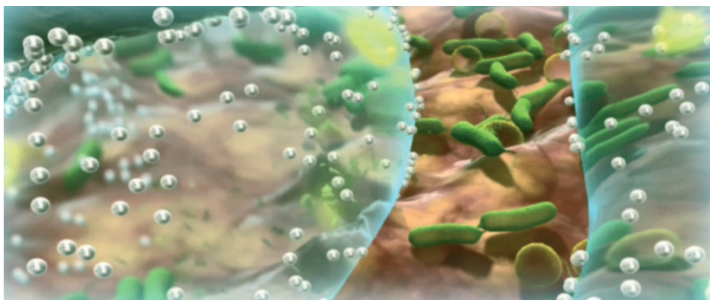
Lock in exudate and bacteria to help minimize the harmful effects of maceration and cross infection.[36-41]

Micro-contour to the wound bed, eliminating dead space where bacteria can grow.[42-44]

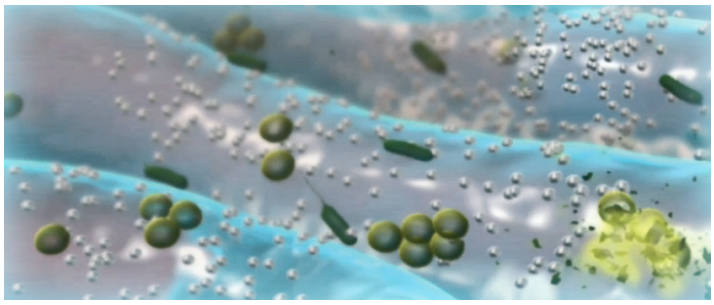
Allies in the battle against chronicity and delayed healing:

The **Advantage** of two technologies in one dressing to target the barriers to healing.

Hydrofiber® TECHNOLOGY + MORE THAN SILVER™ = AQUACEL Ag® Advantage



1. Hydrofiber® technology forms a cohesive gel that maintains moisture balance and locks in bacteria and exudate.[33-41]



2. MORE THAN SILVER™ technology kills the bacteria locked inside the dressing.[20]

AQUACEL® Ag Advantage kills antibiotic-resistant organisms within the dressing in < 7 days when tested *in-vitro*, i.e >4 log10 reduction of:

Gram Positive Microorganisms

- *Community-associated Methicillin Resistant Staphyloccocus aureus***
- *Vancomycin Resistant Enterococcus faecalis***
- *Staphylococcus epidermidis*
- *Streptococcus pyogenes*

Gram Negative Microorganisms

- *Pseudomanas aeruginosa*** (streptomycin and cephalosporin resistant)
- *Klebsiella pneumoniae***
- *Acinetobacter baumannii***
- *Escherichia coli*

Fungi

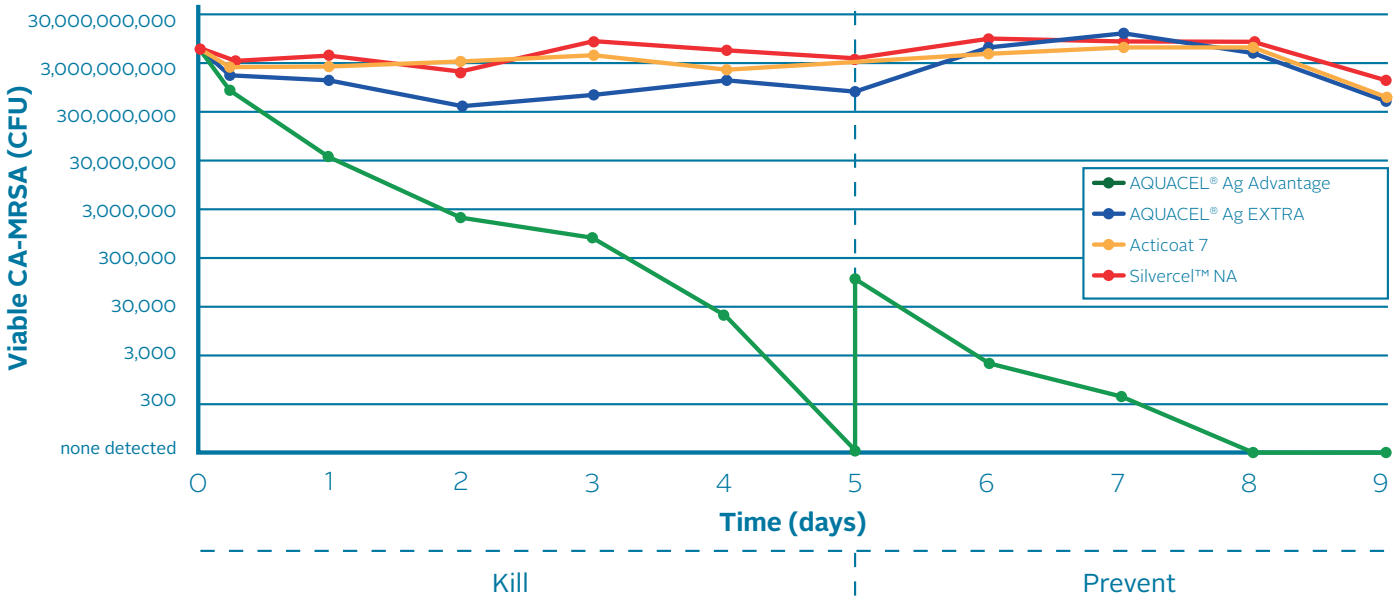
- *Candida krusei***
- *Aspergillus brasiliensis*

** Microorganisms that are antibiotic resistant

Winning the battle against chronicity

Superior and sustained antimicrobial activity against antibiotic-resistant bacteria[45]

In-vitro* model against CA-MRSA

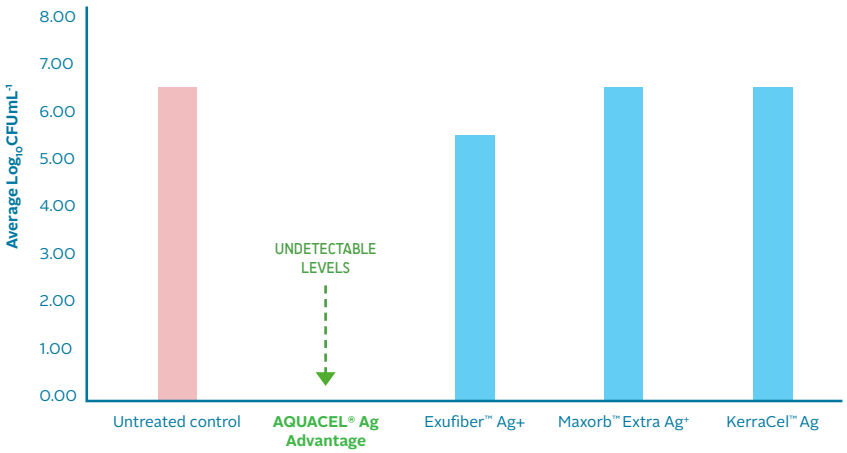


AQUACEL® Ag Advantage demonstrated:
- Faster kill-rate against CA-MRSA
- Reduced bioburden levels within 6 hours of dressing application
- Sustained activity after re-inoculation at day 5 to prevent bioburden regrowth

Superior antimicrobial activity compared to other silver dressings[46]

In-vitro* drip flow against mixed species bacterial communities*

Only AQUACEL® Ag Advantage dressing reduced viable microorganisms to undetectable levels following 72 hours of exposure.



Community-acquired Methicillin-Resistant Staphylococcus aureus
**Staphylococcus aureus, Pseudomonas aeruginosa, Candida albicans*

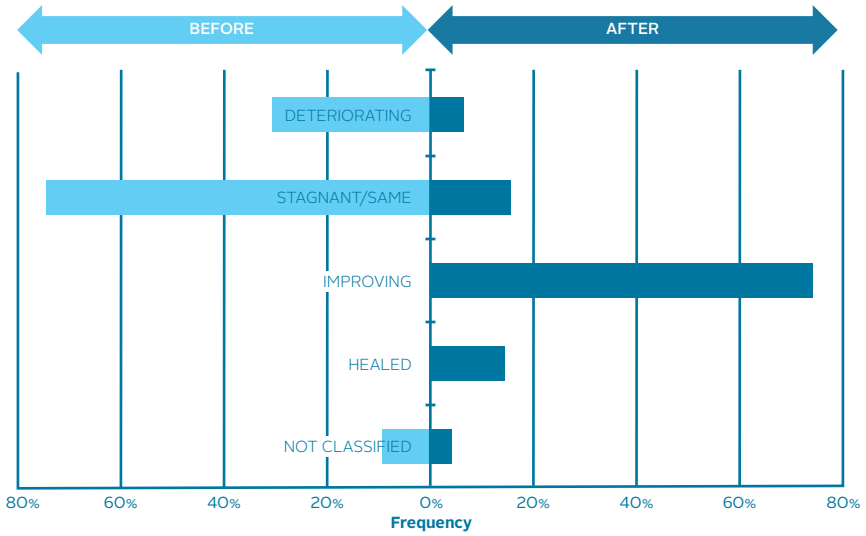
to advance healing.

AQUACEL Ag Advantage

AQUACEL® Ag Advantage dressings advance healing in stalled, deteriorating chronic wounds[47]

Multicenter clinical study following use of AQUACEL® Ag Advantage on 111 patients, with challenging and stalled wounds

- **78%** progressed towards healing
- **13%** healed
- **3.9** weeks average healing time
- **83%** progressed in key healing parameters

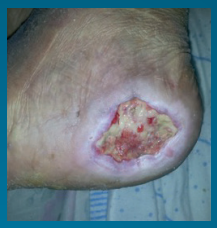


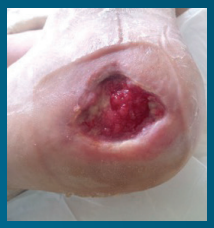
Wound status at baseline (light blue) and after evaluation (dark blue) after introduction of Aquacel® Ag Advantage

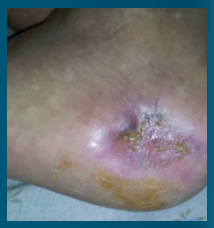
Case studies: advancing healing in chronic wounds with AQUACEL® Ag Advantage

Case 1
Diabetic foot ulcer (6+ months) with the following clinical signs: odor, exudate, slough, persistent bioburden.

Results
- Peri-wound skin improved
- Wound bed improved
- Healed in 5 weeks

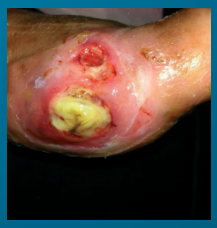

On presentation


10 days


37 days

Case 2
Stalled foot ulcer (3 months) with the following clinical signs: antibiotics, and standard silver dressing had failed.

Results
- Change from sloughy to granulating tissue
- Ulcer healed in less than 7 weeks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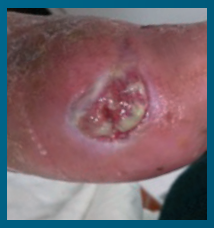
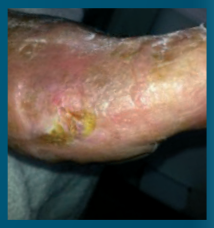

15 days


45 days

Images kindly provided by Vitor Santos, Centro de Tratamento de Feridas São Peregrino – Med Caldas

Target the barriers to wound healing with **MORE THAN SILVER™** technology

PerfectPartners

Why wait for a wound to get worse?

With AQUACEL® Ag Advantage dressing you have the power to target bioburden, infection and exudate and win the battle to advance healing.

AQUACEL Ag® Advantage

Product Code	Size in.	Size cm	Dressing per box
AQUACEL® Ag Advantage			
422297	2" x 2"	5cm x 5cm	10
422299	4" x 5"	10cm x 12cm	10
422298	6" x 6"	15cm x 15cm	5
422302	8" x 12"	20cm x 30cm	5
AQUACEL® Ag Advantage Ribbon			
422301	.39" x 18"	1cm x 45cm	5
422300	.75" x 18"	2cm x 45cm	5

Perfect Partners

AQUACEL® Foam dressing is suitable for a wide range of acute and chronic wounds. It is the only foam dressing designed to work with AQUACEL® Ag Advantage dressing to achieve optimal performance.

AQUACEL® Foam

Product Code	Size in.	Size cm	Dressing per box
AQUACEL® Foam Adhesive			
420804	3.2" x 3.2"	8cm x 8cm	10
421149	3" x 5"	8cm x 13cm	10
420680	4" x 4"	10cm x 10cm	10
421151	4" x 8"	10cm x 20cm	10
421153	4" x 10"	10cm x 25cm	10
421155	4" x 12"	10cm x 30cm	10
420619	5" x 5"	12.5cm x 12.5cm	10
422350	6" x 6"	15cm x 15cm	10
420621	7" x7"	17.5cm x 17.5cm	10
420625	8" x 5.5"	19.8cm x 14cm Heel	5
420626	8" x 7"	20cm x 16.9cm Sacral	5
420828	9.4" x 8.4"	24cm x 21.5cm Sacral	5
AQUACEL® Foam Non-adhesive			
420633	4" x 4"	10cm x 10cm	10
420635	6" x 6"	15cm x 15cm	5
420637	6" x 8"	15cm x 20cm	5

ConvaTec

To find out more, visit **convatec.com** or call **1-800-422-8811**

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