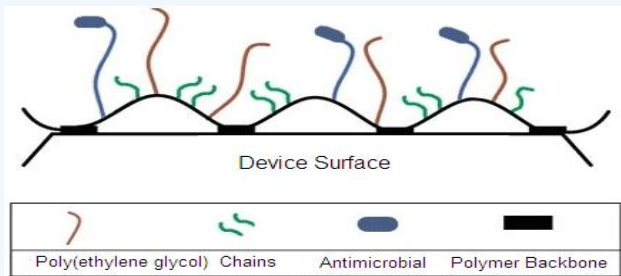


Avert™ Surface Active Antimicrobial Coating

BioInteractions has developed the dual functional **Avert™ Surface Active Antimicrobial Coating**, specifically designed to reduce the incidence of device related infections.

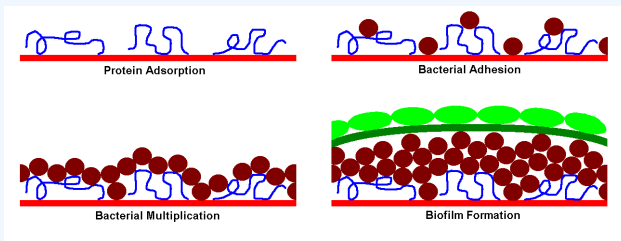
Avert™ is the only anti-microbial coating to combine a non-thrombogenic component with an anti-microbial component and offers the best in technical achievement and technological advancement. The unique polymer formulation of **Avert™** is **biocompatible, lubricious and anti-microbial**.



Schematic representation of **Avert™** Surface Active Antimicrobial Coating.

The Clinical Problem

The adhesion of bacteria onto an implantable medical device (or to proteins already deposited on the device) provides a suitable breeding ground for bacterial colonisation and biofilm formation.



The route to biofilm formation.

The bacteria, contained by the biofilm, rapidly divide and extend along the device surface. These bacteria can release into the blood stream, thereby spreading infection.

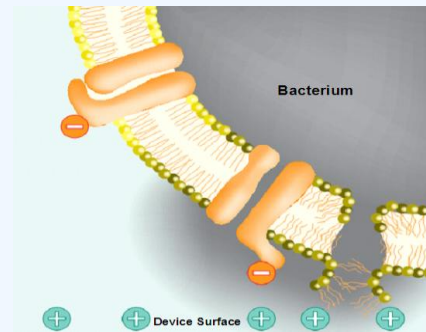
Over 80,000 central venous catheter related infections occur each year in the intensive care unit (ICU)

Avert™ Surface Active Antimicrobial Coating

Avert™ inhibits protein deposition and bacterial adhesion, thereby **preventing biofilm formation**. The active antimicrobial component, poly(hexanide), is co-polymerised with non-thrombogenic poly(ethylene glycol) (PEG) and a stabilising

monomer to provide a stable, **non-leaching** coating assembly, which displays a **contact-kill** mechanism for anti-microbial activity and has demonstrated **long term protection** against infection:

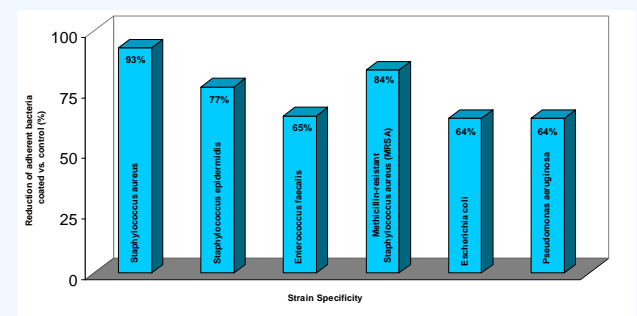
- Polarised antimicrobial agent binds bacterium,
- Binding induces separation of bacterial membrane,
- Cell disruption exposes contents of the cell,
- Bacterial cell death occurs.



Schematic representation of **Avert™** mechanism of action.

Spectrum of Activity

It is imperative that the antimicrobial agent employed displays a **broad spectrum of activity** against a variety of bacterial strains and a **prolonged antimicrobial effect**. This is becoming increasingly important as bacterial strains become increasingly resistant to antibiotic treatment.



Spectrum of activity for **Avert™**.

Avert™ is currently licensed to B.Braun for their central venous catheters. BioInteractions is committed to the advancement of healthcare and welcomes interest in the **Avert™ Surface Active Antimicrobial Coating**.

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FS 531243