

HEALTHCARE PURCHASING NEWS Daily Update

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DiFUSION technologies completes successful testing of antimicrobial spinal implant

DiFUSION Technologies Inc., a medical device company targeting the orthopaedic market, has successfully completed a series of laboratory tests of its silver ion-based antimicrobial technology designed to mitigate Surgical Site Infections (SSIs) in spinal surgery. The technology will be incorporated into DiFUSION's first spinal implant CleanFUZE. Laboratory tests validate the controlled antimicrobial release of ionic silver and antimicrobial efficacy, achieving a 5 log reduction in microbial counts which is 99.999% effective. Currently, no antibiotic can achieve this efficacy.

In response to the rising incidence of SSIs within spinal surgery, which have been reported in large studies to range from 2.5% to 13%, DiFUSION has developed CleanFUZE, an antimicrobial PEEK spinal interbody cage capable of stopping biofilm formation in the bone graft site and eliminating 650 types of bacteria including antibiotic-resistant bacteria such as MRSA for up to four weeks postoperatively.

The infection-fighting material used in DiFUSION's CleanFUZE is a 'super silicate' molecule composed of antimicrobial silver ions that is compounded into the plastic spinal interbody cage. Once the CleanFUZE interbody cage is implanted into the spinal disc space during spinal surgery, silver ions exchange with naturally occurring sodium ions in the bloodstream and diffuse antimicrobial silver ions for a period of 4 weeks.

Unlike other devices on the market, DiFUSION's CleanFUZE will be capable of releasing its dosage amount over time and the rate of diffusion can be controlled by parts-per-billion. Additionally, rather than antimicrobial coatings currently used in devices, CleanFUZE contains antimicrobial properties embedded in the device, significantly enhancing the effectiveness. More information on CleanFUZE can be found at www.difusiontech.com.