Bony infections of the tibia pose a serious threat to all patients treated for tibial injuries.

These infections may lead to prolonged hospitalization, revision procedures, amputation or even death. Due to the low level of vascular perfusion in the tibia, infections are difficult to treat and may compromise the immune system where it is most needed, therefore making those patients more vulnerable to prolonged hospitalization, revision procedures, and even death.

These infections may lead to serious threat to all patients treated for tibial injuries.

Also, when factor compromised soft tissue conditions (due to trauma and other comorbidities) in the tibia into the equation, the supply of systemically administrated antibiotics in the medullary canal is reduced.

PROtect Coating can therefore be an important support tool in infection prevention.

**Product Catalog**

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**Intended use**

The Expert Tibial Nail PROtect is intended to be used for the surgical treatment and stabilization of fractures of the tibia.

**Enhance your first line of defense**

*Please see instruction for use for complete indications, contraindications, precautions and warnings.*

**References**


**Table of Contents**

- Enhance your first line of defense
- Expert Tibial Nail PROtect
- Product Catalog
- REFERENCES

** Around 70% of open fractures are contaminated with environmental bacteria. **

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In general, bony infections are promoted by incorporated implants. While the bacterial colonization of an implant surface does not necessarily lead to an infection, it is the first step in a series of events that can ultimately lead to an implant-related infection. The presence of a foreign surface such as an implant gives bacteria the possibility to form a protective biofilm and become immune to systemic antibiotic delivery. Bacteria adhering to the implant surface require up to 1000 times higher antibiotic concentrations, which is difficult to reach by systemic application.  

The Role of the Implant Surface

In 75% of all infections the causative bacteria grow in biofilms. Infections remain a feared complication in fracture care.

The Expert Tibial Nail PR0tect is designed to enhance safety in high-risk patients.  

The Expert Tibial Nail PR0tect nail features:

- High antibiotic concentrations without high systemic doses and associated side effects.  
- Very low levels of antibiotic in the blood serum.  
- Helps to prevent bacterial colonization on the implant surface.  
- Antibiotic coating releases antibiotic into the area surrounding the implant.  
- Potentially effective in cases with more resistant organisms.  
- Antibiotic agent shows a concentration-dependent bactericidal activity.  

The Expert Tibial Nail PR0tect, including its cannulation, is coated with a thin layer (approximately 10 μm) of Gentamicin-loaded polymer. The coating is abrasion resistant and will withstand most of the forces occurring during nail insertion.

It releases high concentrations of antibiotics where systemically administered antibiotic finds difficult to reach. It is highly local thereby may mitigate the risk of systemic side effects associated with antibiotics.  

- It releases the antibiotic immediately after implantation for the duration of approximately 2 weeks. It is completely resorbed after approximately 6 months.  
- The initial release creates high concentrations of the antibiotic agent.  
- It is released at the right time, in sufficient amounts and in a way that reduces the risk of antibiotic resistance.  
- It is released with no observed systemic toxicity.  

The PROtect Coating impedes bacteria from adhering to the implant surface and producing biofilms.

The PROtect Coating:

- PROtect Coating  
- Coated medical device  
- Bacteria  
- Dead bacteria  

In 75% of all infections the causative bacteria grow in biofilms. The PROtect Coating impedes bacteria from adhering to the implant surface and producing biofilms.