

# **Australian Arthroplasty Society Position Statement on the use of prophylactic antibiotics for dental procedures in patients with prosthetic joints.**

**October 2016**

The use of prophylactic antibiotics in patients with joint replacements undergoing dental procedures is controversial.

Several schools of thought exist:

- Some surgeons recommend the routine use of prophylactic antibiotics as there are rare cases where a patient presents with a septic prosthesis and an oral organism is identified. They point to the evidence that brushing teeth and dental instrumentation can cause a bacteraemia. It is felt that the risk posed by a dose of oral antibiotics is low and therefore they should always be given when a patient with a prosthesis has a dental procedure.
- An alternate viewpoint is that antibiotics should not be given at all as the risk of developing sepsis from a dental procedure is extremely low and that the evidence supporting the use of prophylactic antibiotics is lacking. Furthermore such antibiotic administration may contribute to bacterial antibiotic resistance and the risk of anaphylaxis from the antibiotic administration is higher than the risk of prosthetic infection.
- The middle ground is to give antibiotics when dental procedures are performed in the period immediately after prosthesis implantation. This is based on the theory that there is a high-risk period in a freshly implanted prosthesis when the prosthetic bone interface is maturing. This period is variously defined as between 3 and 12 months post surgery.
- It has been suggested that antibiotics might only be needed in “higher risk” situations such as major dental procedures (an extraction or a root canal), in the immunocompromised host or in those with poor oral hygiene.

The American Academy of Orthopaedic Surgeons (AAOS) and the American Dental Association (ADA) released a combined Clinical Practice Guideline in 2013 following an extensive review of the available literature. They concluded that there is a lack of evidence that a bacteraemia produced from dental treatment is linked to deep prosthetic infection and there is a lack of evidence that the use of antibiotics prevents the development of deep prosthetic infection.

The AAOS-ADA produced three recommendations and the level of supporting evidence was stated.

1. The practitioner considers changing the longstanding practice of prescribing prophylactic antibiotics for patients who undergo dental procedures. (*There is Limited evidence to support this practice*)
2. No conclusion can be drawn for or against the use of topical antibiotics for patients who undergo dental procedures. (*Inconclusive evidence*)
3. Patients should maintain good oral health (*Consensus*)

## **RECOMMENDATION**

**The Australian Arthroplasty Society agrees with this analysis and now recommends no routine antibiotic prophylaxis be give to patients with joint prostheses undergoing dental procedures.**

**In the immunocompromised patient or those with poor oral hygiene the surgeon is recommended to discuss the risk and benefits with his or her individual patient.**

This is general advice and consideration should be given to individual patient circumstances.

## **References**

1. The American Academy of Orthopaedic Surgeons and the American Dental Association clinical practice guideline on the prevention of orthopaedic implant infection in patients undergoing dental procedures. Rethman MP et al. J Bone Joint Surg Am. 2013 Apr 17;95(8):745-7
2. Prevention of Orthopaedic Implant Infection in Patients Undergoing Dental Procedures. Watters W et al. J Am Acad Orthop Surg. 2013 Mar;21(3):180-9