



Dental Implants

# A Comprehensive Explanation

## Overview

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Since the 1980s, dental implants have become more popular among dentists and patients.<sup>1</sup> In some clinical situations, implants may be the best treatment option to replace missing teeth.<sup>2</sup> Understandably, employers have been hesitant to add dental implants because of the cost—approximately 1% to 2%.<sup>3</sup>

The information in this paper includes a comprehensive explanation of what implants are, treatment protocols and examples of how they can be benefited. This information is based on a review of dental literature that has been published on this topic. It is intended only for guidance in structuring a dental benefits plan, and does not constitute dental advice, which can only be given by a licensed dentist.

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**MetLife believes that implants should be included as a standard covered service in all dental plans.**

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<sup>1</sup> Bavitz DMD, J. Bruce, *Implant Placement by the General Dentist*, MetLife Quality Resource Guide, July 2010.

<sup>2</sup> *Dental Implants*, American Association of Oral and Maxillofacial Surgeons, Rosemont, Ill., 2005.  
[http://www.aaoms.org/dental\\_implants.php](http://www.aaoms.org/dental_implants.php). Accessed January 12, 2012.

<sup>3</sup> Additional costs are estimated ranges based on MetLife's book of business claim experience for 2009.

## What Are Dental Implants?

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A dental implant is a small, man-made titanium fixture that serves as the replacement for the root portion of a missing natural tooth. Implants are biocompatible substitutes for lost natural teeth placed either into or on top of the jawbone. They are devices for attaching artificial replacement teeth firmly to the bone. Implants can be used to support a single crown, as anchors for fixed bridges, or as support for removable partial or complete dentures.

### There are basically two types of implants:

1. Endosteal implants are placed into the jawbone. They may be shaped like cylinders, screws or hollow baskets, and can vary by length or thickness.<sup>4</sup>
2. Subperiosteal implants fit on top of the bone underneath the gums. They are custom designed (molded) to fit the patient's jawbone.<sup>4</sup>

The choice of which implant is used depends on the quality and amount of available bone and the type of prosthesis or denture that will be supported by the implants. **Endosteal implants are more commonly utilized than subperiosteal implants.**<sup>4</sup> In some patients one or more implants might be used depending on whether a single tooth is being replaced, multiple teeth are being replaced or full denture support is needed because there is not enough bone present to support a conventional complete or partial denture.

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<sup>4</sup> *Dental Implants: Replacement Teeth That Look and Feel Like Your Own*, American Academy of Periodontology, Chicago, April 2008. <http://www.perio.org/consumer/2m.htm>. Accessed January 12, 2012.

## What Are The Risks of Dental Implants?

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Infection is the main concern with dental implants, but good oral hygiene can greatly reduce this risk. **Implants need to be kept clean just like natural teeth or the surrounding gum tissue and bone that support the implant may become infected and the implant will be at risk for failure.**<sup>5</sup> Some implants can cause additional stress on the bones in the jaw, which can lead to loosening, failure, and subsequent removal of the implant. If the implant fails due to bone deterioration and must be replaced with a conventional appliance, the patient may experience problems with retention because of associated bone loss.

Additional possible complications include discomfort, cosmetic problems, implant breakdown and damage to adjacent teeth. Fortunately, these problems are rare, especially with regular exams. It must be remembered that the body does not reject a dental implant as it might a heart, lung or kidney. Although implants are more stable than removable denture appliances, bone and gum tissues do not attach to the implant as they normally do to a natural tooth root. There is some bone growth that occurs around the body of the implant, called osteointegration, which anchors the implant in place mechanically.

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<sup>5</sup> Gordon, Dr. Jerry, *The Pros and Cons of Dental Implants*, Dentistry.com, Futuredontics, Inc., Los Angeles, 2008. [http://www.dentistry.com/articles/The\\_Pros\\_and\\_Cons\\_of\\_Dental\\_Implants.aspx](http://www.dentistry.com/articles/The_Pros_and_Cons_of_Dental_Implants.aspx). Accessed January 12, 2012.

# What Causes Failure of Dental Implants?

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## Local Problems

Implants can fail for the same reasons that natural teeth are lost. Poor oral hygiene is the greatest cause of implant failure.<sup>6</sup> Bacteria can accumulate around a dental implant just as it can around a tooth, causing inflammation and infection of the gum and bone tissue. This can lead to bone loss and subsequent loss of the implant. For long-term success, implants must be kept meticulously clean. Other local damage can result from grinding of the teeth, smoking and excessive use of alcohol.

## Systemic Problems

Diabetes, high blood pressure and other chronic diseases are a few of the medical problems that may influence the success of implants.<sup>6</sup> Any condition that prevents the body from repairing bone or other supporting tissue can result in the eventual loss of bone and gum support for the implant.<sup>5</sup> Conditions like osteoporosis, collagen diseases and any debilitating disease can prevent the body from repairing itself.<sup>5</sup> This does not necessarily indicate that implants should not be used.

## Structural Overload

When an implant-supported dental appliance, such as a single crown, bridge or denture, is overloaded by chewing forces something may give.<sup>5</sup> Most chewing forces are within the physiological and/or mechanical tolerances of bone tissue that support teeth and implants. When the chewing force exceeds physiological tolerances, bone tissue can be lost from around the implant.

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<sup>6</sup> *Dental Implant Problems, Dental Implants Guide, Corp., 2008. <http://www.dental-implants-guide.com/dental-implant-problems.html>. Accessed January 12, 2012.*

# How To Cover Dental Implants in a Benefits Plan

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The use of dental implants to replace missing teeth is increasing and, in some clinical situations, implants may be the only treatment option to replace missing teeth. MetLife believes implants should be included as a standard covered service in all dental plans. When implants are a covered service, it is MetLife's position that the following should apply for the benefit determination:

- Standard policy/certificate (for insured) and benefit plan terms (self-insured), including but not limited to plan limitations and exclusions such as “Pre-Existing Space” and standard “Annual Maximums,” apply.
- Customers may consider raising the annual maximum if it is below \$1,000.
- Consultant claim review is an integral part of the administrative process to benefit implants; therefore “alternate benefits” and “dental necessity” will help control the inappropriate payments for implants, thereby controlling costs in the plan.

Examples of when an implant or implants may be benefited—if eligible for coverage—and may be considered the treatment of choice:

1. When they are used for the replacement of one or two missing posterior (back) teeth and there are no other missing teeth.
2. When they are used to replace any or all missing anterior (front) teeth.
3. When the design and fabrication of a removable partial denture is not possible due to the number and distribution of missing teeth because the design would not meet generally accepted dental standards.
4. When there is inadequate bone left to support a conventional complete denture or removable partial denture.

Individuals in good dental health who are missing only one tooth may be given consideration for implants, provided all other teeth are sound (without large fillings and not periodontally involved). In this situation, an implant would provide a better and almost cost-neutral benefit when compared to a three-unit bridge.

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**An implant may provide a better and almost cost-neutral benefit when compared to a three-unit bridge**

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An additional advantage of implants is that it is not necessary to prepare the teeth adjacent to the missing tooth space by cutting away tooth structure (which is necessary when placing a conventional fixed bridge), thus preserving these adjacent teeth and increasing their survivability.<sup>2</sup>

Implants are generally completed in two stages.<sup>6</sup> First, the implant body is placed in the bone. This surgical site is usually allowed to heal for 3–6 months. This is called the implant stage, or phase one. The second phase, or prosthetic stage, is completed by placing an abutment, which is screwed into the implant body, and then placing a permanent crown over the metal abutment.

It is important to understand that the implant phase is either covered or not covered by the dental plan and is either necessary (as noted in the examples above) or not necessary based upon the number and distribution of missing teeth. Only the second phase of treatment, which is called the prosthetic phase (the placing of the implant crown, bridge, denture or partial denture), may be subjected to the alternate benefit provision of the plan, dependent on plan design.

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Like most group benefit programs, benefit programs offered by MetLife and its affiliates contain certain exclusions, exceptions, waiting periods, reductions of benefits, limitations and terms for keeping them in force. Please contact MetLife for complete details.

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