

Dental Implants

Updated: 29 August 2001

This paper serves as a source of information to the service member contemplating a dental implant to replace one or more missing teeth. It discusses how this decision impacts the individual as well as the military dental health care system.

Initial Considerations:

There are several common misunderstandings in the initial treatment planning process. The most common is that an implant can be done in a very short period of time. In fact, it often is 8-12 months from beginning to finished product, sometimes even more.

Another common misunderstanding is the total cost of the procedure. A surgeon (oral surgeon, periodontist or specially trained general dentist) places the implant fixture (explained later). A prosthodontist or general dentist places additional parts on top of the fixture to create the final tooth. There are separate charges for each of these procedures. There are often other miscellaneous charges (general anesthetic, for instance). In general, each individual restored implant costs \$2,500 – 4,000.

The service member must be aware that nothing in dentistry is permanent. Implants are no exception. It is true that current implant techniques have shown a much higher success rate than those of 30 years ago. However, to achieve this result the procedures involved are much more technique sensitive and expensive. If you are contemplating an implant you should ask your provider about their personal success rate. In short, you have the responsibility to be an informed consumer, regardless of who is paying the bill.

Procedure:

Implants have several components. Each has its unique function. First, there is the implant fixture. This is the part that is placed in the bone. To achieve long-term success, this part needs to fuse to the living bone. If it does not fuse properly the body will eventually “reject” it over time (months to a few years) and it will need to be removed. To maximize success of this fusion, the fixture is usually placed in the bone and then totally covered with gum tissue for 6-12 months. The length of time depends on several factors but your dentist should be able to explain that to you.

Second, after an appropriate healing time the gum tissue is again opened to allow access to the top of the fixture. A piece of metal called an abutment is then fastened to the top of the fixture (usually by means of a small screw). Impressions are made so that an artificial tooth can be made to fit on top of the abutment.

Last, the artificial tooth is fastened to the top of the abutment. This is done by means of another even smaller screw or by cementing the artificial tooth to the abutment.

Risks:

As you can see, there are several areas where things can go wrong over time. The fixture itself can become loose from the bone. If this happens, you start all over again (after waiting for the original hole in the bone to heal with new bone). Any of the various components can break. The fixture is usually the largest piece and is the least likely to break. The small screws are the most likely to break. If the artificial tooth has porcelain, the porcelain can break and the artificial tooth will need to be remade.

It is unreliable to make a general prediction about any of these potential problems. It is possible to make a good prediction given complete, specific information on the patient, surgical technique, location, type of implant and artificial tooth. The thickness and density of the bone and the angulation of the fixture in that bone are only a few of the many factors that determine if the fixture may come loose from the bone. The forces placed on the implant will vary with each individual person and placement. The position of the tooth in the mouth is also a factor in how much force is placed on the implant fixture, retaining screws, abutment and finally the artificial tooth itself. You need to discuss these factors with your dentist.

Maintenance:

There are many manufacturers of implant systems. Although they have common basic parts, each part is as varied as the engines, tires, fenders, etc., on an automobile. If you purchase a really unique implant system, getting maintenance for it will be as difficult (and expensive) as trying to have your local Ford dealer maintain your Ferrari. Not only are the parts themselves unique and expensive, the tools to place these parts can be equally varied and expensive.

Many years ago, the Federal Services recognized the enormous cost they would incur if every implant placed was of a different type. Therefore, they standardized to using the Branemark system. (The current name may change from time to time, but the basic company is the same.) The question arises, if the service member elects to have a non-standard implant placed at their own expense, who is responsible for maintaining that implant? The service member must also consider the cost of maintaining the implant after the service member has separated from active duty.

Comments:

There are situations where an implant is the best way to replace a missing tooth. There are other situations where although an implant can be used to replace a missing tooth (or multiple missing teeth) there are alternative means that are much more conservative. Each implant situation will need to be evaluated on its own merit. The service member must be an informed consumer and realize the short and long term commitments this procedure requires.

This information paper is not an authorized document representing any government agency or service. It was written by myself to assist the active duty service member requesting information concerning implant decisions from the Military Medical Support Office (MMSO). If you have any questions or comments please direct them to: MMSO, Dental

Prior Authorizations, PO Box 886999, Great Lakes Naval Base, IL 60088-6999 Attn: Joel C. Knutson, Lt Col, USAF. Or call at: (888) 647-6676. For more information about MMSO see our Website: <http://navymedicine.med.navy.mil/mmso/> .