Mini dental implants are ultra-small diameter (1.8 millimeter width), bio-compatible titanium alloy implant screws, conceived and developed over 20 years ago by a Manhattan dentist, Victor I. Sendax, DDS. Dr. Sendax originally created the unique design of this innovative dental product as a transitional device to help support fixed bridge replacements for missing teeth. His novel theory was that min implants could function free standing by themselves or in combination with natural tooth supports and/or larger conventional type implants. This was a revolutionary concept in dental science.

Late in 1997, Dr. Sendax collaborated about his mini-implant theory and design concepts with a colleague, Dr. Ronald A. Bulard. Convinced they were on to something special, and recognizing the need for dental applications involving the new implants, Drs. Sendax and Bulard spent countless hours studying and refining the original creative design, resulting in a more efficient top and collar for the implants. The two doctors recognized the need for dental applications involving the new implants. The trade name MDI (mini dental implants) was agreed upon and copyrighted.

**What are Mini Implants?**

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**Is the MDI FDA approved?**

Yes. After research, clinical trials and exhaustive studies, a formal application was filed with the FDA in Washington, D. C. seeking permission to market the mini dental implant devices to the general public. After providing satisfactory technical and clinical evidence to that federal agency that the product was safe for public use and in fact had beneficial attributes, the FDA granted its formal consent to market the MDI device not only as a transitional or temporary dental product, but significantly, as a long-term device.

No other mini dental implant product currently on the market can make this claim.
When can they be used

When critically needed for support purposes, and where solid bony adaptation (integration) has clearly occurred, mini implants can function as long-term supporting structures rather than as short-term or medium term devices.

In fact, some have been successfully functioning in patients jaws for several decades. Further, they’re particularly effective in crown and bridge applications, as well as single-tooth replacements.

What’s the primary and most effective use for them?

The most effective use of this unique dental product is stabilization of a mandibular denture. There are approximately 30,000,000 people in the United States who are “edentulous” (literally meaning lacking teeth) who struggle daily with prosthetic devices.

A majority suffers a great deal of discomfort as a result of loose or ill-fitting dentures. Also, many denture wearers simply withdraw from any type of social engagement as a result of being compelled to wear them. Moreover, it’s not uncommon for family members to complain about a denture wearer’s disagreeable breath as a result of food being trapped and decaying under their denture prosthesis.

Successful placement of the MDI addresses and solves all of these social and practical problems and concerns.
IMTEC Corporation manufactures and sells the implants in six lengths, 6, 8, 10, 13, 15 & 18 millimeters.

One trained in dental science will recognize instantly that these lengths appropriately anticipate the type of depths that are needed in a wide variety of prospective MDI patients.

The company also manufactures the MDI MAX that’s sold in 10, 13, 15 & 18 millimeters.

As a revolutionary departure from routine implant methods, mini implants are so narrow they are typically inserted directly through the overlying gum tissue and into the bone underneath.

Consequently the need to surgically cut and “flap” open the gum tissue, routinely required for standard dental implant systems, is avoided in most MDI applications.

As a result, post-insertion patient irritation and soreness is significantly reduced. While all dental implants require care during insertion to avoid encroaching on vulnerable nerve, sinuses or bony structures, the ultra small width of the IMTEC mini implants offers a comfortable margin of safety.
I’m somewhat aware of the tremendous forces the human jaw usually endures during normal chewing of food.

How can these tiny implants withstand that?

It’s true that what the dental profession calls occlusal forces create dynamic pressures on the human jaw. The jaw is marvelously designed to adequately withstand those forces. It’s also true that mankind has been struggling for centuries to come up with some type of metal or metallic element that can efficiently withstand those forces. Most have been outright failures. However, approximately twenty-five years ago some doctors around the world began experimenting with titanium as a potential dental medium.

Titanium is an extremely strong metal used in the construction of aircraft and aircraft engines. The metal in its commercial form, is incredibly strong and durable. The Sendax MDI takes that metallurgical concept to the next level by adapting an industry approved mixture of commercially pure titanium, a small percentage of the strongest metals on earth, now commonly referred to as titanium alloy. In fact, extensive tests conducted several years ago by the University of Alabama-Birmingham School of Orthopedics revealed that the particular titanium alloy implants used in the IMTEC Sendax MDI’s are 64% stronger than ones constructed of commercially pure titanium.

The bottom line is simple: If a denture patient has sufficient bone mass to create a rock hard placement of the tiny implant, which an experienced dentist can usually determine by an initial examination, the mini dental implants will generally withstand normal occlusal forces just like natural teeth. Fractures are extremely rare, but as is the case with a person’s normal teeth, can certainly occur. In those rare instances, a dentist can quickly remove the fractured implant and replace it.
It must be recognized that all implants system as well as natural teeth are subject to potential failure due to natural causes, including osteoporosis, poor oral hygiene, wear and tear attrition, poor health, heavy, stressful biting habits, and lack of follow-up dental maintenance care.

Mini implants similarly do not carry any actual or implied guarantee of longevity.

However, the loss of a mini implants is a far less critical event to the patient since it may be replaced at relatively minimal cost compared to larger conventional implants, and with minimal associated bone or gum deterioration. Case failures involving mini implants are extremely rare.

What type of surgery is involved?

A single, minimally invasive surgery is needed for insertion of the MDI mini implants. They are then put into immediate biting or “loading” function thanks to their “self-tapping” design, thereby anchoring a fixed bridge system.

As a result, it is often possible to provide the complete mini implant service in a single office visit.

What about failures?

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I’ve been told by my dentist that my jaw bone is not “dense”. Is this a problem with MDI? Will a dentist be able to get a rock-solid resistance state in such a situation?

After the MDI was developed, Dr. Bulard anticipated this type of dental patient, and as a result, took steps to expand IMTEC’s original production offering to provide an MDI Max implant.

Equipped with approximately the same dimensions as the standard ones, the MAX has a different thread design that enables the implant to bite into softer bone and hold. It’s ideal for a patient whose bone density is lacking. The MDI Max has a diameter of 2.2 millimeters.

What’s a typical daily routine one might expect once the MDI’s have been placed?

As with all dental applications, there’s a short adjustment period during which time the MDI patient becomes comfortable placing and removing the denture. Typically, this involves removal of the lower denture in the morning, brishing the gums and implant area with an ACCESS curved bristle toothbrush, using the ACCESS Oral Care implant gel and mouth rinse, rinsing the denture itself, then replacing it.

The result is a normal day’s activity for the patient, including eating, talking, taking a nap, etc. Then, in the evening, the denture is usually removed again, the ACCESS Oral Care system is used, and the mouth thoroughly rinsed.

The result is a fully functioning dental appliance that works, is socially acceptable, has comfortable fit, etc.