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Can Teeth be Connected to Implants?

The efficacy of the connection of teeth to implants has been a long debated issue. Due to on-going innovations, techniques have changed since implants were first introduced. Recently, there was an excellent article by Frank Spear, DDS, MSD in *JADA* on this topic. Today's implants have either an internal hex, external hex, or Morse-taper. The hex head was introduced in 1982 by Nobel Biocare, but the restorative surface was flat and no antirotation features existed. So, in order to prevent rotation, either a second implant was placed and splinted or the implant was splinted to an adjacent natural tooth. Screws (which could break) were used to retain the res-

torations. In 1984 the first antirotational implant was introduced by Core-Vent. The abutments were ce-

the screw retained abutment (and the screws could break) which allowed retrieval of restorations, but

restorative doctor was still left with splinting to natural teeth or a second implant if both retrievability and antirotation were desired. The next step was the UCLA abutment (1988). This was a custom castable abutment that was screw retained and had antirotation features. Most implants today have

Single tooth restorations are predictable, retrievable, and do not require splinting to other implants or natural teeth.

mented and the restoring doctor would cut grooves into the abutment to prevent them from rotating. As a result, single tooth restorations could predictably be placed without splinting. These abutments had a narrow neck which could fracture and if this happened then a new abutment had to be made and this rendered the restoration irretrievable. In 1986, Zimmer introduced

this did not have any antirotational aspect to it. So, the

continued on reverse

Dental Fun Fact

DID YOU KNOW THAT...

People of ancient times believed that the stabbing pain of a toothache was caused by a toothworm, which either had appeared spontaneously or had bored its way into the tooth. If the tooth pain was severe, it meant that the worm was thrashing about; but if the aching stopped, then the worm was resting. Cultures all over the world, many of whom had no contact with each other, held stubbornly to this myth. The folklore of the toothworm persisted from ancient times to the beginning of the eighteenth century.

From *Toothworms and Spiderjuice: An Illustrated History of Dentistry* by Loretta Frances Ichord, Millbrook Press, 2000

News You Can Use

Bacteria love hanging out between teeth. If the bacteria start to form a cavity, a dentist must drill through the tooth to get at it. However, a new system called Icon developed by DMG may change that.

Usually when a dentist spots an early cavity-when bacteria have eaten away enough tooth such that it's a weak lattice but hasn't degraded into a true cavity's sinkhole-he or she prescribes an enamel-strengthening fluoride rinse and hope that the tooth heals itself. If that doesn't work, the only option is drilling through a healthy tooth to get to the problem spot.

Icon has done away with both the drill and the waiting time. A dentist simply slides a thin plastic applicator between the patient's teeth and squirts the cavity with hydrochloric acid, which etches away the enamel to access the tooth's deeper layers. Using a fresh applicator, the dentist then injects a low viscosity resin into the gaps in the tooth's lattice and hardens the resin with a quick flash of high-energy blue light to fortify the tooth. DMG is working on a version that could hold up to the wear and tear of a tooth's chewing surfaces.

From *Popular Science*, February 2010

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internal hex abutments which are screws retained with cemented restorations. Single tooth restorations are predictable, retrievable, and do not require splinting to other implants or natural

teeth.

The problem with connecting teeth and implants is that the implant is osseointegrated to the bone and does not move. Teeth of course are connected to bone via a

ligament and can move. The risk to the tooth is that it can be intruded and the risk to the implant is that it can be overloaded. In most cases, it is the implant that becomes overloaded. Stress breaking

mechanisms need to be employed. In order to protect the implant, try to distribute the occlusal forces over the widest surface area possible (other teeth, implants) and for the natural teeth, copings that are not cemented to the restoration.

(Spear, JADA, Vol. 140 May 2009, pp.587-593)

Dr. Brian Simpson

announces the third meeting of the

NANUET IMPLANT STUDY GROUP

speaker: Christos Angelopoulos, DDS, PhD

**Oral and Maxillofacial Radiologist at
Columbia College of Dental Medicine**

3D IMAGING IN DENTISTRY

Tuesday, June 15, 2010

Dinner: 6:30 Presentation: 7:00 — 9:00 pm

Mulberry Grill 149 Main St, Nanuet, NY 10954

2 CE credits awarded by the Ninth District Dental Association

Cost: \$30.00

**Please bring your cases and documentation
(photos, x-rays, models) for discussion.**

**To register, contact Theresa: 845-623-3497
or email her at theresag@drbriansimpson.com**

Don't forget the March 30th meeting on "New Technology in Implant Dentistry" with prosthodontist Dr. John Ruel!

*"Don't confuse fame with success. Madonna is one;
Helen Keller is the other." -Erma Bombeck*