



## BLOG DISCUSSING ASTRA AND BIOHORIZON IMPLANTS

### COMMENT:

**Gerald --it is amazing to me that a company like Nobel has increased their business in the last 2-3 years when in fact the company has really digressed to an ordinary implant provider----incredible!!! Good luck to you this year---but do us a favor--- add something to the postings we don't know and can learn from.**

**Niznick's Question:** Tell me what system are you using and I will tell you something you do not know.

**Dentist's Answer:** Astra and BioHorizons----so far so good as far as success. Astra is expensive, BioHorizons a little less----basically no muss no fuss

### **Niznick's Response:**

OK...here are apparently some things you do not know or at least have not fully considered.

1. First, these two systems have conflicting theories of design...either Astra's claims about shallow micro-threads near the crest of bone is wrong or BioHorizons' claims of deep threads near the crest is wrong. I believe that BioHorizons is wrong on this point. For immediate stability and immediate load, it is how much bone is in contact with titanium at time of placement that counts, not how much after the bone grows into deep threads that can only self-tap in soft bone.
2. Neither have a tapered implant so maybe you do not understand the value of tapering the implant. With a tapered implant, you can stop at the intermediate drill and get the narrow apex started into the undersized hole so that as you screw-in the implant, you expand the bone. The attached 2006 article by Shalabi proved that seating a tapered implant into an undersized socket increased initial torque which increases the chances the 35Ncm needed for immediate load can be achieved, and also increases the % of bone contact and removal torque after osseointegration. In other words, it accomplishes increased stability so critical to osseointegration and increased bone attachment than is being claimed by all the companies marketing surfaces as a differentiator, like OsseoSpeed from Astra or SLActive from Straumann or TiUnite from Nobel.
3. Astra's 12 sided double hex can not be used for inserting an implant and when it offered a fixture mount, you had to use counter-torque on the implant to remove the fixture mount. When they eliminated the fixture mount, saving production costs, they raised the price of the implant.
4. BioHorizons exactly copied the Screw-Vent internal connection once Zimmer licensed them so they have a Generation 1 Niznick connection whereas I have moved on to Generation 2 with an external bevel vs. the internal bevel. That directs the forces in instead of out by having the abutment wrap over the top of the implant.
5. BioHorizons does offer an abutment as the fixture mount which is a good thing, but it does not designed for snap-on transfers, like Astra's Direct Abutment. As the industry moved from two-stage to one-stage implant surgery, it became apparent to many that in non-esthetic situations, a straight abutment could be attached at time of implant placement with the implant still left out of occlusion. Because once the abutment is attached, you can not do an implant level transfer, the snap-on transfer idea introduced

- by Straumann because more important to do abutment level transfers. So while a free BioHorizons abutment is a good thing, it is not the right design abutment for allowing attachment at time of placement and later allowing abutment level transfers, forcing the dentist to take a conventional transfer with retraction cord.
6. BioHorizons does not even make a snap-on abutment nor does it make any abutments with contoured margins. The abutments of Astra leave a lot to be desired also from an esthetic standpoint. For example, the contoured margin abutments of Nobel (and Implant Direct) allow the margin of the restoration to get to within 1mm of the top of the implant (3/4mm for ID's angled contoured abutment). Astra on the other hand, because of its conical connection, has to have an undercut below the height of contour of its abutments which can present a problem, especially if soft tissue recedes.
  7. Both implant systems are priced to support sales forces. Here is something else you apparently do not know....they cost 50-70% more than Implant Direct's ScrewPlant implant that does come with a fixture-mount that can be used as a transfer and shortened to be used like the Astra Direct abutment. It also comes with a healing collar and a snap-on comfort cap for the abutment, giving you two ways to do one-stage surgery. It has an even taper from top to bottom designed for use with soft bone and hard bone drills, and it has micro-threads that are deeper than Astra's mini-threads but only half as deep as the threads over the rest of the body. It has double lead body threads for faster insertion which neither Astra nor BioHorizons has. Unlike BioHorizons, Implant Direct manufactures its own implants (as does Astra), and holds precision fits with less than 1/2 degree of rotational wobble without a screw in place, providing as good stability as Astra's conical connection but with a 2mm deep hex for use as an internal wrench-engaging feature during insertion.

I assume you did not know any of this or would have already switched to Implant Direct.

Jerry Niznick.

**Jerry----thanks for your reply---- I do have a few questions and observations about your comments----**

1. **"35Ncm needed for immediate load can be achieved, and also increases the % of bone contact and removal torque after osseointegration."**  
**From what I've read when stress is place on bone it retreats and repairs over the first 30-45 days---I don't immediate load my implant cases because of this research----a Misch Institute thing-----**

**NIZNICK'S RESPONSE:** Too much stress would cause bone loss. With an implant like Replace or RePlant, where the taper is in the lower half of the implant, the expansion of the bone can be excessive. With the Tapered Screw-Vent (starts taper 3mm below top) and even more so with the tapered ScrewPlant (starts taper 1mm from top) the gentle taper slowly expands bone if the implant is inserted into a socket prepared with the intermediate and not final drill. The drill diameters are dimensioned specifically for soft bone with expansion, and hard bone with self-tapping.

2. **I haven't had the pleasure of using your system ---the Astra system with the mini threads at the coronal aspect seems to engage when placed. I haven't had a problem with bone loss coronally with the Astra implants ----been using them for 8 years now.**

**NIZNICK'S RESPONSE:** OK...so I added this nice feature (small threads near top) on to my implants as well as many others that Astra does not have.

**3. I use the BioHorizons system because of convenience---abutment comes with the implant---nice touch from the manufacturer--- I feel a similar feeling when I place ---a snug finish when placed---the abutment comes off the healing screw or "perio-molding abutment" goes on---wait 4 months---voila!**

**NIZNICK'S RESPONSE:** OK... so I added this nice feature (abutment included) but made the abutment like the Astra Direct abutment and included the snap-on comfort cap... plus a 2mm healing collar plus, plus, plus at less than half the price.

**4. When I used a tapered implant I got bone loss---e.g. ---Replace Select---the manufacturer also didn't take advantage of the taper---the thread diminished at the apex---what's with that??**

**NIZNICK'S RESPONSE:** The shape of the Replace is a poor design... my RePlant does carry the threads to the bottom and does have a vertical cutting groove and does have mini-threads and is made from stronger alloy, but other than that, it has the same basic design flaw as Replace

**5. Actually Astra improved the delivery system by eliminating the mount---it is so much easier to place now--no muss no fuss--you're right though-- way too expensive**

**NIZNICK RESPONSE:** Removing the Astra fixture mount was an improvement over their fixture mount which did not engage their internal double hex. The reason it did not engage the double hex was because that 12 sided design was too weak to be used to insert the implant, necessitating the use of counter torque to remove the fixture mount. I developed and patented the fixture mount packaging in 1990 with the idea that it replaced the need to attach a fixture mount as Nobel was doing at that time. The advantage of a pre-attached fixture mount is that the square end is always the same regardless what the design or dimensions of the implant's platform. When the fixture mount can be designed to be multi-functional serving as a transfer and as an abutment, it is even better.

**6. Incidentally have you ever seen Carl Misch's take on internal vs. external---take a ball point pen---unscrew it with the top up---now turn it upside down---what's the difference????---He's been using an external system for a long time now and has very few problems--if any.**

**NIZNICK'S RESPONSE:** You have been overloaded with mischinformation and this is a good example. Firstly, the BioHorizons had an external hex because I refused to license them with an internal hex. As soon as Zimmer did, they jumped in with the Prodigy implant having the exact same platform design and dimensions as the Screw-Vent. There is a huge difference between internal vs. external and the fact that Carl tried to justify the external hex because he couldn't make it tells you something about what else he may be telling you about square threads etc. With an external hex, the fixation screw is exposed above the implant's hex and flexes with lateral forces whereas with an internal hex, the fixation screw is protected by the male hex of the abutment and does not flex, thus increasing stability of the joint and reducing screw loosening. Another advantage of internal vs. external is that the internal hex implant can be made narrower, and you can have a 2mm hex engagement for stability. Try that with an external hex and you would never be able to get an angled abutment to get past a 2mm projecting external hex.

**7. It is tough to teach an old dog new tricks---I have gone the multiple implant in the surgery room route and don't want to go there again. Maybe after I establish my sleep apnea part of the practice I'll consider looking into changing. Too much on my plate now  
Happy Holidays ----hope 2007 is good for you  
Bill L**

**NIZNICK'S RESPONSE:** Every time you put in an Astra Implant, you are spending about \$400 more than it would cost you to use my implant and every time you use a BioHorizons implant it is

costing you about \$250-\$300 more. If that and the opportunity to use better products are not enough to motivate you, then I do not know what is? The same companies that you are complaining about overcharging are relying on you being an old dog. With what you could save on dental implants from Implant Direct, you would not have to "establish my sleep apnea part of the practice." If you do 200 implants a year, you could save enough to buy a new Mercedes CLS every year, or fund your pension plan for \$1,000,000 in the next 7-10 years. If that is now worth learning a new trick or two, then you are probably not part of my target market... discerning dentists.

Thanks for the questions.

Jerry Niznick