

# bio.materials



**DSI** is a Israeli company that offers advanced solutions for implantology, dental element replacement and bone reconstruction.

Currently, our **biomaterials product line** consists of synthetic and natural origin solutions for bone grafting procedures, absorbable membranes, post-extraction plugs and peri-implantitis prevention materials.

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syntoss.granules



syntoss.multi



syntoss.blocks



syntoss.ring



syntoss. in syringe

Bone Grafts of 100% synthetic origin, based on time-proven TCP/HA (TriCalcium Phosphate/ Hydroxyapatite) formula or novel ß-TCP (beta-Tricalcium Phosphate) material.





zenoss.granules



zenoss.chips



zenoss.blocks



zenoss.ring



zenoss. in syringe

Natural bone substitute material of bovine origin. Specially treated to make it fully biocompatible, while keeping a key physical properties: composition, morphology and resorbability.



Allograft material.

DBM (Demineralized Bone Matrix) from human bone.

Maximum biocompatibility and faster healing process.



alyoss.allograft



zenoss.matrix



syntoss.membrane



zenoss.barrier

Resorbable Barrier Membranes. Thin and flexible or thick and rigid, with a wide range of resorption profiles to fit any type of regeneration procedure.





sponge.pure



sponge.hemostatic



silver.sponge



sponge.plus



**sponge.**jar

Post-extraction resorbable hemostatic plugs. The widest choice in industry – from gelatine, collagen, pure – or with additions. Various shapes for any possible indication.

04









**sponge.**zengraft

Biomaterials to prevent, treat and restore tissues. Including Syntoss BioGel for bones & gums and ViruSeal to protect implants from peri-implantitis. Bone-impregnated collagen plugs for post-extraction site regeneration.



syntoss.biogel



repio.glue



viruseal.gel

# syntoss.bonegraft

**DSI Syntoss** Synthetic Bone Graft Material is used as a filler and scaffold to facilitate bone formation and promote wound healing. This graft is bioresorbable and has no antigen-antibody reaction. Original Syntoss is 60% ß-tricalcium phosphate and 40% hydroxyapatite.

DSI Syntoss Plus is 100% pure ß-tricalcium phosphate.

A **Syntoss Multi-Layer** granules formula consists of  $\beta$ -tricalcium phosphate (20%) / hydroxyapatite (80%) in polylactide glycolide matrix. The inner layer contains sodium hyaluronate.



### **DSI Syntoss Bone**

Product	Туре	Size	Code
Syntoss <b>Granules</b>	Bits in vial	0.25cc	BG47702
Syntoss <b>Granules</b>	Bits in vial	0.5cc	BG47705
Syntoss <b>Granules</b>	Bits in vial	1.0cc	BG47710
Syntoss <b>Granules</b>	Bits in vial	2.0cc	BG47720
Syntoss <b>Granules</b>	Bits in vial	5.0cc	BG47750
Syntoss Pure HA	Bits in vial	0.5cc	BG97705
Syntoss Multi-layer	Bits in vial	1.0cc	BG47799
Syntoss <b>Blocks</b>	5.0x5.0mm	4 pcs	BG470505
Syntoss <b>Blocks</b>	5.0x10.0mm	2 pcs	BG47510
Syntoss Cones	Ø5.0 / H 15.0mm	2 pcs	BG47515
Syntoss Cones	Ø7.0 / H 17.0mm	2 pcs	BG47717
Syntoss <b>Plus</b>	Granules in Syringe	0.5cc + 0.25cc Solvent	BG47075



Scan the QR-code for explanatory video

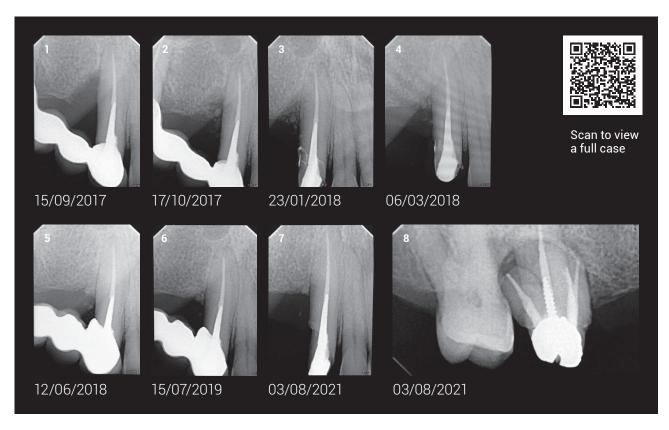


# periodontal.pocket restoration



**Dr. Miroshnik Vladislav DMD**Specialist in aesthetic dentistry, over 37 years of practice.
Ashdod, Israel

A clinical case that I have been observing since 2017. A patient came to the clinic with complaints of swelling and pain in the area 1.3, 1.4, 1.5. Conservative therapy was suggested, and after dealing with the acute period, a surgical procedure including cleaning of the periodontal pocket, scaling and root planing and filling the bone pocket with DSI Syntoss Plus that contains beta-tricalcium phosphate granules. The procedure was performed in 2017, the old bridge was replaced with a new one, which is fixed with temporary cement for regular revision due to the unstable condition of 2.6. The patient is unable to undergo implantation for a number of reasons, so the 2.6 will be kept until the last possible moment. Its mobility is grade 2 and the condition of the mucosa can be seen in the photo. The whole process of bone maturation is shown on the x-rays.









# zenoss.bonegraft

Natural Bone Graft Material from Bovine Origin, **DSI Zenoss** Bone Graft is used as a filler and scaffold to facilitate bone formation and promote wound healing. This graft is bioresorbable and has no antigen-antibody reaction. **DSI Zenoss** Bone Graft is based on a bovine 20/80 cortical-cancellous bone mineral matrix, making it perfect choice use in guided bone regeneration procedures.



### **DSI Zenoss Bone**

Product	Туре	Size	Code
Zenoss <b>Granules</b>	Bits in vial	0.25cc	ZG47702
Zenoss <b>Granules</b>	Bits in vial	0.5cc	ZG47705
Zenoss <b>Granules</b>	Bits in vial	1.0cc	ZG47710
Zenoss <b>Granules</b>	Bits in vial	2.0cc	ZG47720
Zenoss <b>Granules</b>	Bits in vial	5.0cc	ZG47750
Zenoss <b>Chips</b>	Bits in vial	1.0cc	ZGC40100
Zenoss <b>Chips</b>	Bits in vial	2.0cc	ZGC40200
Zenoss <b>Blocks</b>	5.0x5.0mm	4 pcs	ZG470505
Zenoss <b>Blocks</b>	5.0x10.0mm	2 pcs	ZG47510
Zenoss <b>Cones</b>	Ø5.0 / H 15.0mm	2 pcs	ZG47515
Zenoss <b>Cones</b>	Ø7.0 / H 17.0mm	2 pcs	ZG47717
Zenoss <b>Plus</b>	Granules in Syringe	0.5cc	DS-ZP05
Zenoss <b>Plus</b>	Granules in Syringe	1.0cc	DS-ZP10
Zenoss <b>Plus New</b>	Granules in Syringe	1.0cc	DS-ZP10N
Zenoss <b>Plus New</b>	Granules in Syringe	2.0cc	DS-ZP20N



Scan the QR-code for explanatory video



# implant.replacement



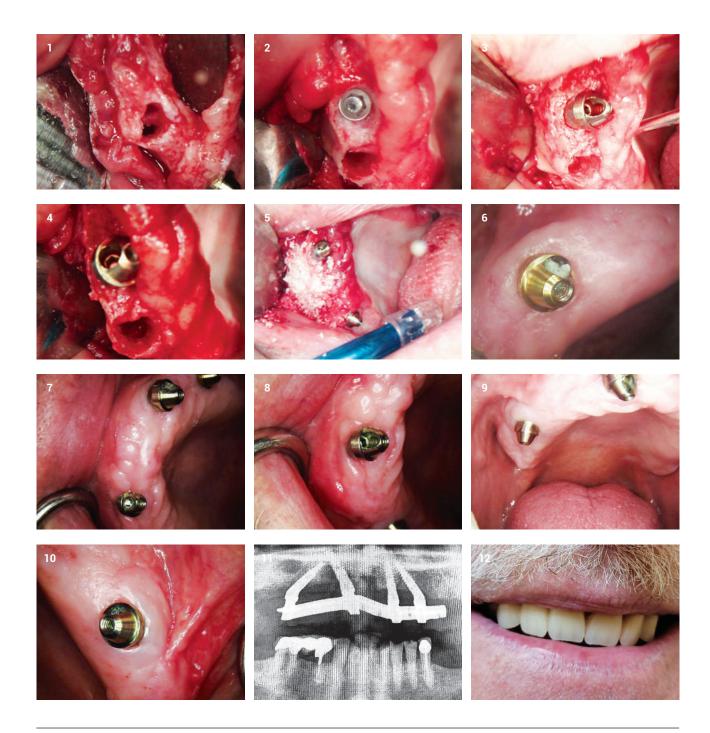
**Dr. Carmy G. Michael, DDS**Dental Implant Institute of The West Coast.
Santa Ana, CA (USA)



Scan to view a full case

Failed non-DSI implant replacement, buccal side of the ridge was restored using Zenoss Graft. All-on-4 multi-unit screw-retained final restoration.

DSI Premium Spiral + Premium M1.6 Multi-units were used.



# zenoss.bonering

Three-dimensional bone grafting using custom-milled bone ring transplant – introducing **DSI Zenoss Ring**. The ring allows immediate implant placement and bone augmentation in one step. The use of a ring eliminates the need for a second surgical procedure, shortens total treatment time and increases patient acceptance. This bone ring transplant can be used successfully in most defects, including large 4-, 3-, 2-, and one-wall defects, as well as vertical augmentation procedures, including sinus lifting.



- Predictable bone augmentation.
- No need to harvest bone, so the associated risk of infection, donor-site morbidity and pain can be avoided.
- Improved initial implant stability.
- Successful in ridge defects, effective in sinus floor elevations.
- Decreases the overall number of procedures and treatment time is reduced for a satisfying patient experience.

### **DSI Zenoss Bone Ring**

Product		External size, mm	For implant, mm	Code
Zenoss <b>Bonering</b>	1 pcs in vial	Ø 6.0 / H 10.0	Ø 3.0 / 3.5	ZGR33160
Zenoss <b>Bonering</b>	1 pcs in vial	Ø 7.0 / H 10.0	Ø 3.3 / 3.75	ZGR33170
Zenoss <b>Bonering</b>	1 pcs in vial	Ø 7.0 / H 10.0	Ø 4.0 / 4.5	ZGR33174

### **Bone Ring Graft Holder**

Product	Code
DENTAL SOLUTIONS ISRAEL	BRH

### **Bone Ring Drill**

Product	Туре	H (mm)	Ø (mm)	Code
	Trephine Drill	32.0	7.0	TRBG-07
	Trephine Drill	32.0	8.0	TRBG-08
	Plain Reamer	25.0	7.0	PTR-70

# bonering.vertical augmentation

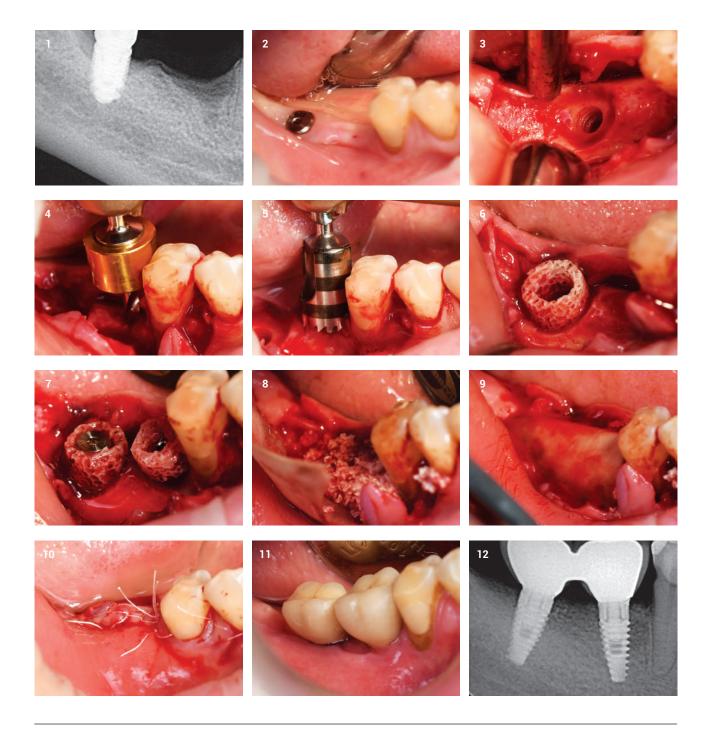


**Dr. Miroshnik Vladislav DMD** Specialist in aesthetic dentistry, over 37 years of practice. Ashdod, Israel



Scan to view a full case

Patient, 48 years old. Perhaps as a result of an incorrect and outdated approach to prosthetics, bone tissue resorption occurred in the implant area, bone loss. In 2021, implant 4.6 was removed. It was decided to remove the 4.7 implant and perform implantation of two implants in combination with vertical augmentation using bone rings.



# syntoss.membrane

**DSI Syntoss Membrane** is a highly purified bovine collagen (type II) resorbable membrane. The interfiber structure was cross-linked to expand the biodegradation of the membrane and eliminate the risk of incomplete bone healing. Collagen possesses an number of valuable properties that include outstanding biocompatibility, low antigenicity, and the ability to stimulate adhesion, chemotaxis and physiological degradation of progenitor cells. **DSI Syntoss Membrane** facilitates a fast stabilization of the wound area.



### **DSI Syntoss Bio+**

Product	Туре	Size, mm	Code
Syntoss Membrane	1 pcs in vial	15.0x15.0	SM780310
Syntoss <b>Membrane</b>	1 pcs in vial	25.0x25.0	SM780327
Syntoss <b>Membrane</b>	1 pcs in vial	30.0x40.0	SM780334

### zenoss.membrane

**DSI Zenoss Membrane** is engineered from highly purified type I collagen from young steers tissues, thus providing such key factors as an increased resorption period, fast hydration, excellent tensile strength, easy shaping and trimming, to ensure optimal bone regeneration. Clinicians can be confident that **DSI Syntoss Bio+** will serve as a perfect solution at GTR and GBR cases such as:



- Extraction Sockets
- Site preparation for the implant.
- Sinus floor augmentation over the lateral window and under the Schneiderian membrane tears.
- Bony defects and Alveolar ridge preservation.
- Peri-implant bone defects around implants.

#### **DSI Zenoss Bio+**

Product	Туре	Size, mm	Code
Zenoss <b>Membrane</b>	1 pcs in vial	15.0x15.0	ZM780410
Zenoss <b>Membrane</b>	1 pcs in vial	25.0x25.0	ZM780427
Zenoss <b>Membrane</b>	1 pcs in vial	30.0x40.0	ZM780434

# membrane.implant loading

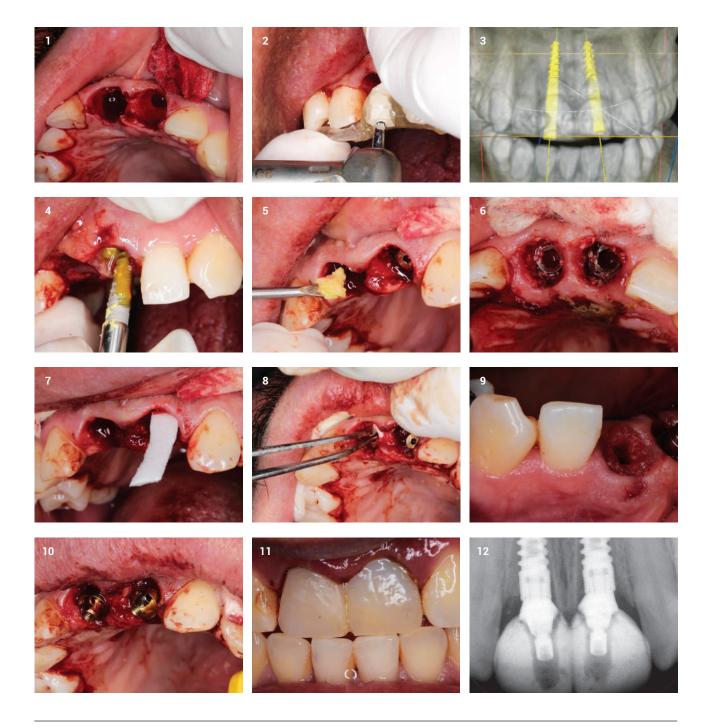


**Dr. Oscar Gutierrez Reyes**Specialist in dentistry, orthodontist.
Reynosa, Mexico



Scan to view a full case

Patient Male (43 years). Teeth 11 and 21 were extracted and replaced with two Premium Slim implants. Implants were coated with tetracycline, Syntoss membrane was used for hard/soft tissue separation. Premium Narrow Multi-units for a final screw-retained bridge restoration.



### zenoss.matrix

**DSI Zenoss Matrix Bio+** is an innovative resorbable acellular collagen matrix, ideally suitable for a wide range of clinical cases and situations. During the manufacturing process, collagen is carefully purified to remove potential immunogens, bacteria and viruses to ensure complete safety for the patient.

**DSI Zenoss Matrix Bio+** is an excellent alternative to autologous soft tissue grafts, allowing to avoid a number of disadvantages associated with harvesting autologous tissue including limited availability, second surgical site morbidity, and risks of complications.



### **DSI Zenoss Matrix Bio+** is indicated for:

- Gingival recession coverage.
- Gain of keratinized tissue.
- Soft tissue ridge augmentation.
- Exposed root coverage.
- Filling of defects after the removal of cysts.
- Closure of extraction sockets (socket seal).
- Soft tissue grafting with GBR/GTR technique.
- As a stabilizer of the cloth.
- DSI Zenoss Matrix Bio+ plug form, making it ideal to use in post extraction sites.

#### **DSI Zenoss Matrix Bio+**

Product	Туре	Size, mm	Code
Zenoss <b>Matrix</b>	Plag, 1 pcs	Ø 8.0	DS-ZMP08
Zenoss <b>Matrix</b>	Plag, 1 pcs	Ø 12.0	DS-ZMP12
Zenoss <b>Matrix</b>	1 pcs in vial	10.0x30.0	DS-ZMP10
Zenoss <b>Matrix</b>	1 pcs in vial	15.0x20.0	DS-ZMP15
Zenoss <b>Matrix</b>	1 pcs in vial	20.0x30.0	DS-ZMP20



# connective.tissue grafting



**Dr. Miroshnik Vladislav DMD**Specialist in aesthetic dentistry, over 37 years of practice.
Ashdod, Israel



Scan to view a full case

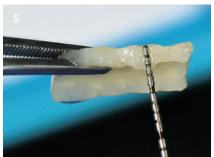
After endo treatment and replacement of the coronal part of teeth with casted post, the root changed colour and became visible through thin mucosa. For concealing effect, I've decided to thicken up the mucous membrane. For this purpose, zenoss bio matrix membrane was used instead of a soft tussue graft. An incision was made, followed by dissection of the papillae, flap mobilization, membrane fixation, and flap suturing. At 3-months post-op, prosthetic phase was started. During this time, a temporary crown was used with a correction of the marginal edge length.

















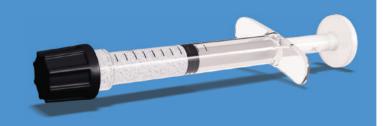


# alyoss.allograft

**DSI Alyoss Plus** cortical cancellous bone graft is applicable in cases where a scaffold and longer resorption is required. It can be used alone mixed with an autogenous bone in order to increase the osteoinductive properties of the graft. As with all DSI bone grafting materials, the source bone is prepared to stringent standards and only EU-registered tissue banks are used for the graft production. Bone is harvested from the different sections of the ilium and ground into several particulate sizes. It results in the unique combination that gives this product the

ideal cell structure of cortical, with the open scaffold and support offered by cancellous bone types.

**DSI Alyoss Plus** is the premium blend of two most popular allograft particles used in dentistry – cortical and cancellous – all in one convenient syringe.



### **DSI Alyoss Plus**

Product	Туре	Size	Code
Alyoss <b>Plus</b>	Granules in Syringe	0.25cc	AG25
Alyoss <b>Plus</b>	Granules in Syringe	0.5cc	AG50
Alyoss <b>Plus</b>	Granules in Syringe	1.0cc	AG100

### The procedure of use is simple:

- Pull the plunger and tap the syringe to prepare the graft inside.
- Remove the external cap and rehydrate the material with sterile saline or the patient's blood.
- 20% saline / 80% blood combination is recommended.
- Return the plunger to remove the excess liquid through the filter cap.
- Twist the filter cap and deliver the DSI Alyoss Plus graft to the site.



Scan the QR-code for explanatory video





# spongegraft+allograft

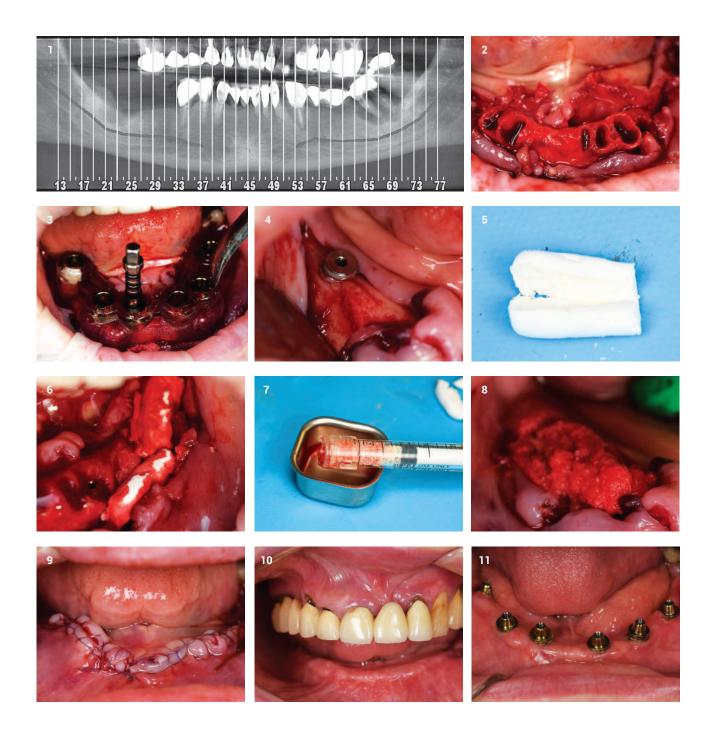


**Dr. Miroshnik Vladislav DMD** Specialist in aesthetic dentistry, over 37 years of practice. Ashdod, Israel



Scan to view a full case

Full mouth restoration using multiple surgical techniques: Ridge expansion GTR, GBR, All-on-6 on mandible. SpongeGraft plugs with addition of Alyoss Allograft.



# sponge.graft

**DSI Sponge Graft** is revolutionary product, which has a two-phase composition of pure bovine collagen and calcium phosphate/hydroxyapatite formula due to which it retains its resemblance to natural bone. **DSI Sponge Graft** is used as a protection and temporary filler of the post-extraction socket during early implantation, or as a regenerative material that promotes the formation of new bone during delayed implantation.



- Sterile, every unit is packaged individually.
- · Seals up the bleeding tissues immediately.
- Simple adaptation in the area of the defect.
- Volume maintenance and prevention of tissue collapse.
- Reducing the need for further augmentative procedures.
- Improving the aesthetic result of the final restorations.

### **DSI Sponge Graft**

Product	Туре	Size, mm	Code
Syntoss <b>Sponge Graft</b>	Blister, 5 pcs	Ø 10.0 / 20.0	DS-SG1020
Zenoss <b>Sponge Graft</b>	Blister, 5 pcs	Ø 10.0 / 20.0	DS-ZG1020

### **Sponge Graft Dedicated Tool**



**DSI Sponge Zengraft** – a netx step in bone grafting procedures. With a two-phase composition of bovine tendon collagen type I, impregnated with deproteinized bovine xenograft, Sponge Zengraft is suitable for repair of any kind of bone defect – with a faster healing period compared to a synthetic version.



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### new.bone formation

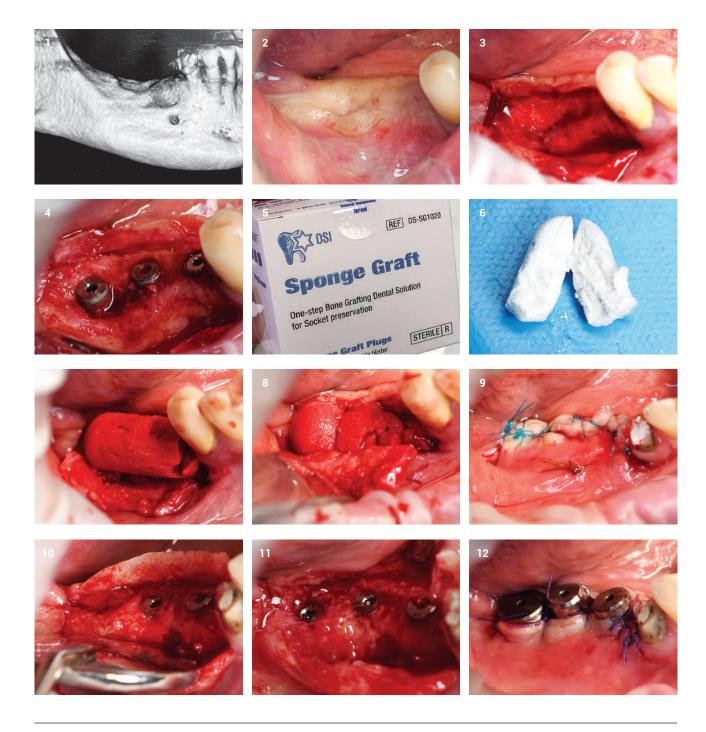


**Dr. Miroshnik Vladislav DMD** Specialist in aesthetic dentistry, over 37 years of practice. Ashdod, Israel



Lateral ridge augmentation with simultaneous implant placement, and using DSI Sponge Graft as a bone filler – without a barrier membrane.

Scan to view a full case



# sponge graft.video case



**Dr. Alexey Martynov**Implant-surgeon, 16 years of practice.
Active member of the World Association of Implantologists.
Kazakhstan, Almaty



**Video Clinical Case1:** Post-extraction Implant Placement at Molar Zone.



Video Clinical Case2: Open Sinus Lifting (Lateral technique) Using DSI Sponge ZenGraft.











Scan the QR-code for explanatory video



# post.extraction implantation



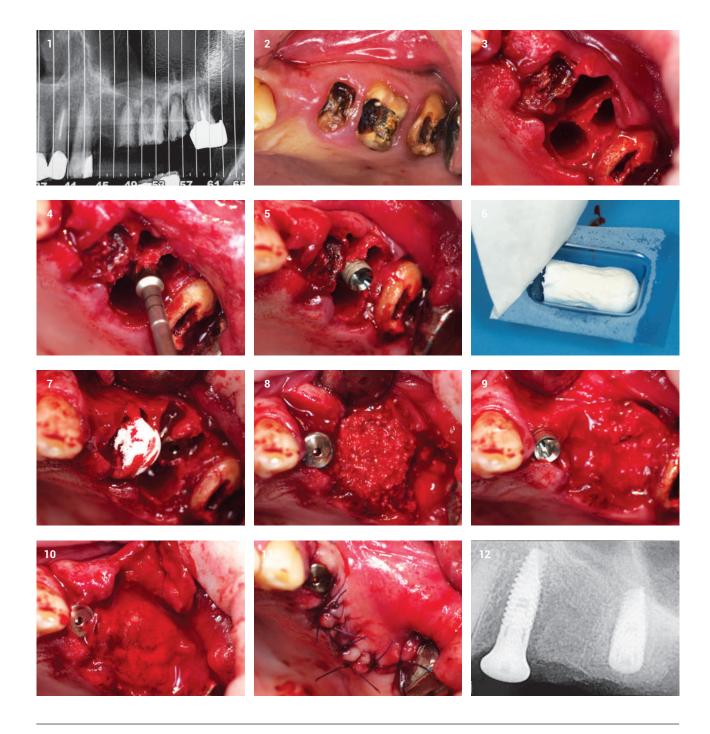
**Dr. Miroshnik Vladislav DMD** Specialist in aesthetic dentistry, over 37 years of practice. Ashdod, Israel



Scan to view a full case

Multiple post-extraction implantation in multiple techniques – bone condensing, septum of molar placement, guided bone regeneration.

Material and Method: using DSI Zenoss xenograft, DSI ZenGraft Sponge, DSI Pure Sponge, DSI Zenoss bio membrane, DSI PGA Suture.



# sponge.hemostatic

**DSI Sponge** is manufactured from highly purified first extract grade collagen material. It is used in many surgical procedures where traditional hemostatic measures are irrelevant or inappropriate. **DSI Sponge** absorbs approximately 40-50 times of the weight of liquid and adheres easily to the bleeding site.

**DSI Sponge** is non-toxic, hypoallergenic, does not provoke an immune reaction, and is 100% biocompatible. When implanted, it is completely absorbed within 3-4 weeks.

#### Product indications:

- On operating tissues it controls oozing and seals up the bleeding tissues immediately.
- During bone harvesting from the iliac crest by filling the donor site.
- Dento-alveolar surgery and extraction of teeth in patients with risk of hemorrhage.
- · Regeneration of mucosal tissue removal of mandibular cysts.
- Maxillo-facial surgery.

Additional packaging variation is bulk jar with non-sterile cubes, ready to be impregnated with material of your choice – hemostatic or antibiotic.

**DSI Sponge** 

### **DSI Sponge**

Product	Туре	Size, mm	Code
Sponge <b>sterile</b>	Blister, 32 pcs	Cubes 10.0x10.0	DSP-32
Sponge <b>non-sterile</b>	Jar, 50 pcs	Cubes 10.0x10.0	DSP-50



### Dr. Ehab Rashed

Dental surgeon with over 24 years of experience in Dentistry. Dubai, United Arab Emirates

"I have been using DSI Sponge as a routine in my extraction sites alone or in combination with a biomaterial. Handling properties are excellent. I am very much satisfied with the results".



Scan to view a full video case

# sponge.silver

DSI Silver Sponge is a gelatin collagen sponge of hemostatic action with the addition of 5% colloidal silver. The evenly porous foam structure of DSI Silver Sponge absorbs its own weight several times over, promotes thrombocyte aggregation due to the large surface and fills the wound cavity like a plug. When implanted, DSI Silver Sponge is completely absorbed within 2 weeks. The addition of colloidal silver has an antimicrobial effect and virtually no reaction or resistance. Unlike many other bacteriocide substances, silver from DSI Silver Sponge is not washed away, so last-lasting depot effect with continuous silver ions release is achieved.



### **DSI Sponge**

Product	Туре	Size, mm	Code
Sponge <b>sterile</b>	Blister, 24 pcs	Block 7.0x7.0x14.0	DSPS-24
Sponge <b>non-sterile</b>	Jar, 50 pcs	Cubes 10.0x10.0	DSSP-50

# **sponge.**plus

**DSI Sponge Plus** is manufactured from highly purified first extract grade collagen material. It is a ready-to-use collagen freeze-dried sponges with a mix of hemostatic & antiseptic components: iodoform, eugenol, thymol, and lidocaine. **DSI Sponge Plus** contains iodoform and works as an antiseptic sponge, that allocates iodine when got in a contact with living tissues, providing antimicrobial action, has astringent and anti-inflammatory properties, and enables the formation of granulation tissue.



### **DSI Sponge Plus with iodoform**

Product	Туре	Size, mm	Code
Sponge <b>non-sterile</b>	Jar, 50 pcs	Cubes 10.0x10.0	DSPP-50

### pure.sponge

DSI presents **PureSponge**, a highly porous absorbable collagen material used as a hemostatic agent and wound dressing in a wide array of oral surgical procedures, designed to help protect, repair and heal oral wounds. Prevents the stop of blood thinner intake in heart patients, prior to any dental surgical procedure.

- Made from purified 100% bovine collagen type 1.
- Three convenient shapes for common oral wounds and procedures.
- Protects the wound bed.
- An absorbable matrix supports newly formed tissue.
- Designed to resorb in 3 weeks short timeframe.



### **DSI Pure Sponge 100% bovine collagen**

Product	Qty. box	Size, mm	Blister 10pcs	Individual blister
Cone <b>Short</b>	10 pcs	Ø 4.0x7.0	DS-PS47	DS-PS47-B
Cone <b>Long</b>	10 pcs	Ø 5.0x15.0	DS-PS515	
Plug <b>Short</b>	10 pcs	Ø 8.0x7.0	DS-PS87	DS-PS87-B
Plug <b>Long</b>	10 pcs	Ø 8.0x14.0	DS-PS814	DS-PS814-B
Plug <b>Big</b>	10 pcs	Ø 10.0x20.0	DS-PS1020	DS-PS1020-B
Sponge <b>Cube</b>	10 pcs	□ 10.0x10.0	DS-PS10	DS-PS10-B
Sponge <b>Cube</b>	20 pcs	□ 10.0x10.0	DS-PS20	



### Dr. Yaniv Mizrahi

General dentist since 2004. Member of the World Association of Implantology ICOI. Bat Yam, Israel

"I have been using DSI collagen products for a few years. I found the product to be strong, yet pliable and very comfortable to work with. I am happy and product for the opportunity to buy quality biomaterials made in Israel".



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# repio.glue

**DSI Repio Glue** is designed with a two-component formula purified bovine serum albumin (BSA) and glutaraldehyde based



- material that makes sutures,

sealants, staples, electrocautery, and patches old-fashioned and obsolete. All you need is 120 seconds for sealing and stopping the blood. Can be used at vertical and hard to reach areas, as well as be applied to seal and/or reinforce damaged Cells.

- The material is composed of bovine serum albumin and glutaraldehyde.
- Two product's components are mixed within the applicator tip of the syringe during application to tissue.
- The adhesive components bind to the tissue proteins of the recipient, forming an insulating layer, where tissue connective cells (fibroblasts) are subsequently introduced. That creates a new intercellular layer that ensures complete replacement of the adhesive with a new organic tissue.

### **DSI Repio Glue**

Product	Туре	Size	Code
Repio <b>Glue</b>	Dual syringe	1.0 ml	DSI-BIOG

## syntoss.biogel

**DSI Syntoss Biogel** is a multi-purpose periodontal restoration gel. It is used to relieve swelling and inflammation of the tissues in the surgical dentistry, trauma, fractures, splinting of the jaws, as well as for the prevention and treatment of periodontitis, gingivitis, and stomatitis.

- Created for treatment of periodontitis, gingivitis and stomatitis.
- It can be used to relieve swelling and inflammation of the tissues in the surgical dentistry, trauma, fractures, splinting of the jaws.



### **DSI Syntoss Biogel**

Product	Туре	Size	Code
Syntoss Biogel	Syringe	3.0 ml	DSBIO

# viruseal.gel

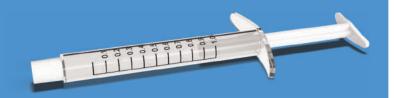
Peri-implant infections are the pathological conditions – inflammation and ulceration of the soft tissues surrounding dental implants. Similar to a natural tooth, bacteria can build upon the implant base, below the gum line.

The main indication is the screw-retained suprastructures because of the gaps and threads that are the most vulnerable target for the pathogenic bacteria. However, ViruSeal is also recommendable for cemented works, as the cement can be also penetrated by bacteria and germs providing access to the interior of the implants.

Peri-implantitis is a much more severe disease and leads to bone loss. **DSI ViruSeal** is a highly effective anti-bacterial material based on a viscous silicone matrix. It closes micro-gaps at the two-component implant systems, making it impenetrable for the bacteria and preventing infection. Just apply a couple of gel drops to the implants immediately after the insertion and close by inserting a cover screw/abutment. The implant is now protected.

#### Features:

- Guarantees sealing of the gaps and hollow spaces of implants.
- Eliminates risk of periimplantitis infection caused by possiblegerm accumulation.
- Antibiotics-free bacteriaresisting formula.
- Ideal for screw-retained and cemented restorations.



### **DSI ViruSeal gel**

Product	Туре	Size	Code
ViraSeal <b>Gel</b>	Syringe	0.5 ml	VSEAL



Scan the QR-code for explanatory video



# viruseal.implant protector



**Dr. Carmy G. Michael, DDS**Dental Implant Institute of The West Coast.
Santa Ana, CA (USA)



Scan to view a full case

Patient female, 74 year. Remaining dentition on the maxilla was terminal. Immediate dentures was premade with metal framework built-in DSI Premium Multi-unit. All DSI Implants, Internal hex 3.75x13mm.

DSI Viruseal used when placing abutments.







# **Publication:** Comparative evaluation of the microbial leakage at two different implant abutment interfaces using a new sealant

We evaluate the microbial leakage at two different implant abutment interfaces using a new sealant. Forty implants of the size 4.2 Dx11.5L (Adin, Israel), internal hex, were selected. Twenty Titanium abutments (Adin, Israel) with twenty titanium implants were used in Group 1, Twenty CAD/CAM Zirconia abutments with twenty titanium implants were used in Group 2. Each group was subdivided into two subgroups, Subgroup A – Control without sealant and Subgroup B – with new sealant (**DSI Viruseal**, **Israel**). Implants were immersed in brain heart infusion broth (Accumix Microxpress, India) and a poly microbial solution (ATCC 10556 Streptococcus sanguis, Himedia, India and ATCC 90030 Candida glabrata Himedia, India) was introduced into the eppendorf tubes (India) containing the implant assemblies of the four subgroups and incubated for 14 days. Then samples from implant wells were taken using sterile absorbent paper points (Korea) and cultured in Mueller Hinton agar (Himedia, India). The colonies formed were counted using digital colony counter. The results obtained were tabulated and statistically analysed.

Mann Whitney U test was used to compare the values between the two groups. There was a significant difference in microbial leakage in Titanium abutments with and without the new sealant **Viruseal** for both microorganisms (P<0.05). There was a significant difference in microbial leakage in Zirconia abutments with and without the sealant for both microorganisms (P<0.05). There was no statistically significant difference in microbial leakage between Titanium and 7irconia abutments with new seal – ant for both the microrganisms (P>0.05). There was significant reduction in microbial leakage for both microorganisms on application of sealant **DSI Viruseal** in both Titanium and Zirconia abutments over Titanium implants. The new sealant used has both antibacterial and antifungal efficacy on usage with both types of abutments over Titanium implants.



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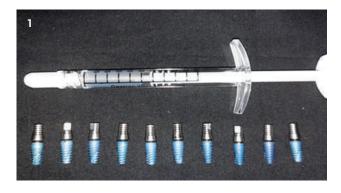


Fig 1. Subgroup 1B (n=10) – Titanium abutment / Titanium implant – Sealant applied at IAI.



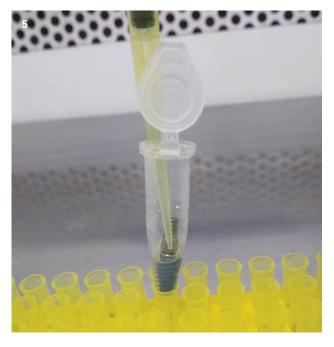
Fig 2. Subgroup 2A (n=10) – Zirconia abutment / Titanium implants – control-unsealed.



Fig 3. ATCC 10556 Streptococcus sanguinis (Himedia, Mumbai, India).



Fig 4. ATCC 90030 Candida glabrata (Himedia, Mumbai, India).





Polymicrobial inoculation. Fig 5. Subgroup 1A / Subgroup 1B. Fig 6. Subgroup 2A / Subgroup 2B.

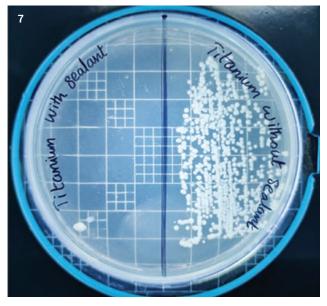


Fig 7. Petri dish showing colony forming units in Titanium abutments with and without sealant using colony morphology.

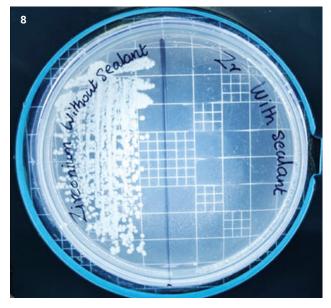


Fig 8. Petri dish showing colony forming units for Zirconia abutments with and without sealant using colony morphology.

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