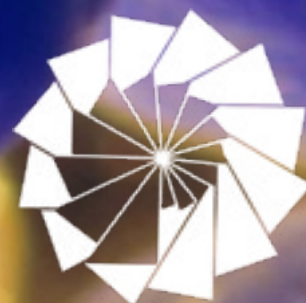


**Ceraball<sup>®</sup> is *en marche*.**

**The Future of Dental Augmentation.**

PRODUCT INFORMATION

**boneArtis AG**



swiss made

EN

# Primary Mature Cancellous Bone Formation? No longer a Dream.

## 1. Replica-based Cancellous Bone Formation



The dream to reconstruct cancellous bone has a long history<sup>1</sup>. The newly formed bone should provide:

- A scaffold carrying the load from the beginning
- the osteoconductive ceramic should suctioning-in blood and bone marrow
- should provide full interconnectivity
- should offer a maximum specific surface for osteoblast colonization.

**Ceraball®** presents a pure and fully synthetic material, providing high porosity up to 90% and at the same time an unachieved strength of the material. **Ceraball®** is suited to reconstruct maxillo-facial bone segments and can be used for the treatment of tumor cavities, traumatic bone loss, dental bone defects, bone loss in parodontology and it is suited to augment jaw bone in implantology. It is available as hydroxyapatite (HA) and  $\beta$ -tricalcium-phosphate; due to its strength no biphasic material is necessary.

## 2. Interconnectivity

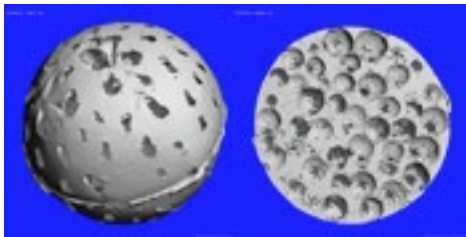


The challenge of ceramic bone substitutes is considered the high strength of the material and the maximum of its porosity and interconnectivity. From USA the trend is transferred to combine the HA and  $\beta$ -TCP raw materials yielding so-called biphasic implants. There is, however, no longer any predictable resorption in those implants and no advantage.

**Ceraball®** offers a fully interconnected ceramic implant providing high capillary forces suctioning-in blood and bone marrow<sup>2</sup>.

**Ceraball®** provides:

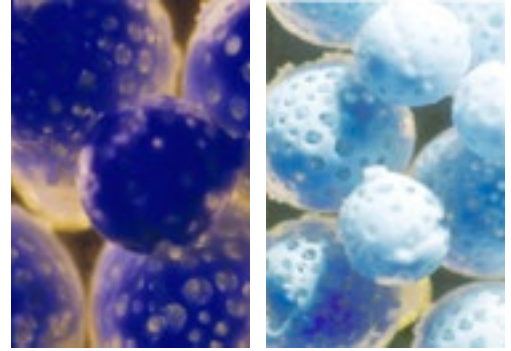
- suctioning-in **blood and bone marrow** and stops bleeding
- is **colonized by osteoblasts**
- guides primary cancellous bone formation by mature lamellar bone,
- achieves bone healing **in weeks instead of months.**



### 3. Primary Formation of a Cancellous Scaffold

The unique properties of Ceraball® yield early bone formation and reconstruction of a primary cancellous bone scaffold comprising mature lamellar bone<sup>3</sup>. The striking features are:

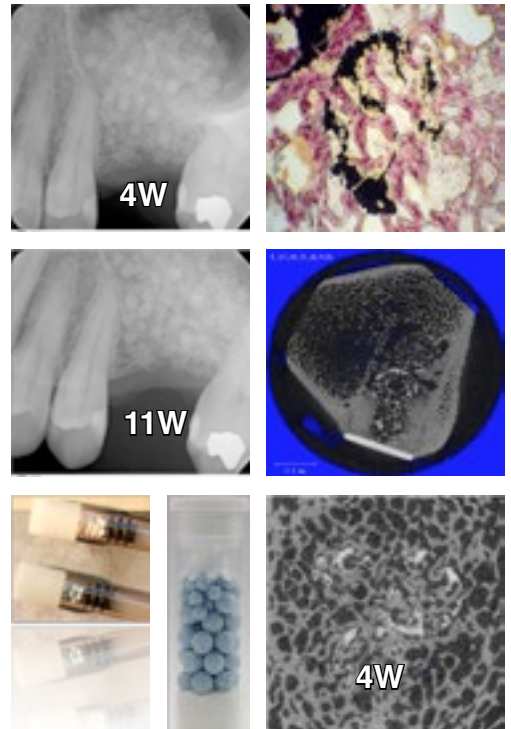
- **Early bone healing in weeks instead of months**
- **Full reabsorption** of the  $\beta$ -TCP beads
- There is no need for morcellized bone
- **Ceramic disease will not appear**



### 4. Unique Osseointegration

**Ceraball®** succeeds to reconstruct cancellous bone with a load-bearing scaffold, whereas bovine, coralliform and even synthetic bone void fillers do not. The micro-chambered **Ceraball®** implants are overgrown by newly formed mature lamellar bone under load, there is no remodeling necessary, therefore the healing time is drastically shortened. There is no need for autologous or allograft bone. The striking features are

- no scratching along the jaw bone – no pain
- the suctioned blood and bone marrow provide own body defense against infections
- healing within 4-6 weeks
- full reabsorption depending upon the strain acting on it (turn-over rate).



**Ceraball® - the Gold Standard for reconstructing cancellous scaffolds – not after months, but in weeks.**

More information about **Ceraball®** under [www.boneartis.com](http://www.boneartis.com).

- 1 Gluck (1891), Dreesman (1892), Tarsoly und Timory (1963), Draenert (2015),
- 2 Draenert et al. (2013)
- 3 Draenert et al. (2013)
- 4 Draenert et al. (2014)

\*Literature on request.

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**This instruction is for Medical Doctors and authorized persons only trained in the operating theatre.**

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