

# 3D CUSTOM-MADE IMPLANTS

Solutions to correct anatomical deformations



3D custom-made implants



Sebbin  
PARIS

The partner your body can trust

To fulfill every patient's specific needs, Groupe Sebbin and AnatomikModeling propose a custom-made solution for bone's deformities or muscular deficiencies.

## A SIMPLE AND PRECISE SOLUTION

From the 3D scan, AnatomikModeling creates a virtual copy of the patient's body, including every tissue (bone, muscle, skin, cartilage) then, the implant is virtually designed by computer to correct the anatomical deformity.

The final silicone implant is unique and perfectly fits to the anatomy of each patient.



## LIFE LONG IMPLANTS

The custom-made implants are made of a medical-grade silicone elastomer. This smooth rubber is indestructible.

There is no risk of retraction, secondary migration and rupture due to their semi-rigid consistency, meaning they do not need to be replaced.



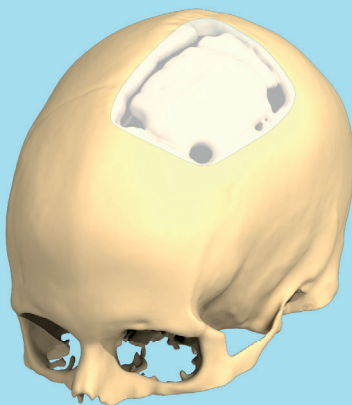
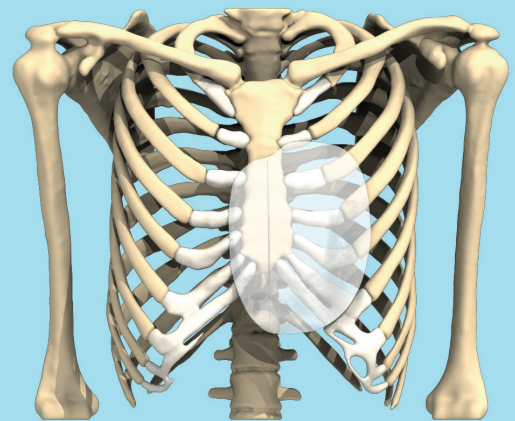
## FOR THE CHEST WALL

Custom-made implants are a reliable and minimally invasive solution for treating congenital deformities such as Pectus Excavatum (depression of the sternum), Poland syndrome (pectoral muscle deficiency), and resulting breast's deformities.

This technique allows to fill the deformity without affecting the chest cavity, unlike remodelling techniques such as Nuss or Ravitch<sup>1,2</sup>.

A single one-hour surgery is required. The risks of complications are minimal. Post-operative pain is moderate and recovery is rapid.

Morphological results are immediate<sup>1,2</sup>.



## FOR THE SKULL

Certain changes to the cranial vault (irregularity, loss of bone substance) can be congenital, or be the result of an accidental trauma or a neurosurgical procedure.

The use of a 3D custom-made 3D implant allows to reshape the skull and mask the deformity.

# For calves muscle hypotrophy

Calf hypotrophy is a lack of volume in the leg. It can be unilateral or bilateral. The etiology can be a congenital deformity or an acquired pathology (poliomyelitis, Charcot's disease, lupus, Spina Bifida). It can also result from a trauma or surgery (clubfoot surgery).

The impact of calf hypotrophy is primarily psychological, due to the lack of volume or asymmetry between the two legs<sup>3</sup>.

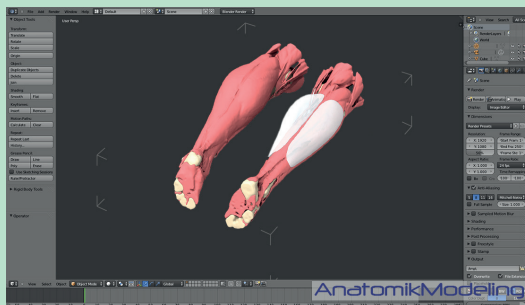


*Sequela of clubfoot on the left side*

## IMPLANTS ADAPTED TO THE PATIENT'S ANATOMY

In the case of atrophy, the virtual implant is designed by mirror effect with the 'healthy' muscles of the opposite calf, in order to restore some symmetry between the 2 legs. Depending on the deformity, one or two implants may be required in the same leg.

In the case of bilateral hypotrophy, the volume is recreated in consultation with the surgeon.



## A SIMPLE SURGICAL TECHNIQUE

The technique is simple and inspired by Dr Glicenstein's technique<sup>4</sup>.

The definitive silicone gum implant(s) are placed under the muscle fascia, through an incision in the hollow of the knee.

The correction can concern a single calf muscle (gastrocnemius medialis) or both with the gastrocnemius lateralis.

Surgery lasts from 30 minutes to 1 hour, depending on the number of implants (1 to 4).

After the surgery, common painkillers are required, as well as a gentle compression for 8 days. Progressive walking is recommended from the day after the surgery.



## Bibliography :

**1-Correction of Pectus Excavatum by Custom-Made Silicone Implants: Contribution of Computer-Aided Design Reconstruction. A 20-Year Experience and 401 Cases** - Chavoin J.P., Grolleau J.L. , Moreno B., Dahan M., Chaput B. - *Plast Reconstr Surg.* 2016 May;137(5)

**2-Correcting Poland Syndrome with a Custom-Made Silicone Implant: Contribution of Three-Dimensional Computer-Aided Design Reconstruction** - Chavoin J.P., Taizou M., Moreno B., Leyx P., Grolleau J.L. , Chaput B. - *Plast Reconstr Surg.* 2018 August;142(2)

**3-Correcting of Calf Atrophy With a Custom-Made Silicone Implant: Contribution of Three-Dimensional Computer-Aided Design Reconstruction: A Pilot Study** - Jean-Pierre Chavoin, MD, PhD, Elise Lupon, MD, Benjamin Moreno, MSc, Pierre Leyx, MSc, Jean-Louis Grolleau, MD, PhD, Benoit Chaput, MD, PhD - *Aesthetic Surgery Journal*, Volume 41, Issue 2, February 2021, Pages NP12–NP22

**4-Correction of amyotrophies of the limbs with silicone prosthesis inclusions**, 1979, 69:117 - Glicenstein, J.

## IMPORTANT

This document is intended for health professionals. The custom-made implants are Class IIb devices designed to be used in plastic, reconstructive and cosmetic surgery. Groupe Sebbin only allows its devices to be used by medical professionals trained in plastic, reconstructive and cosmetic surgery.

In accordance with Medical Devices Directive 2005/745/EEC, the custom-made implants are manufactured and distributed by Groupe Sebbin. Being custom-made, the product does not have a CE mark. However, it meets all GSPR safety and performance requirements.

In France, custom-made implants can be reimbursed by health insurance organisations after prior agreement.

Please read the Instructions for use carefully before use. They are available in private access in [www.mysebbin.com](http://www.mysebbin.com).

## MANUFACTURER

### Groupe Sebbin SAS

39 Parc d'Activités des Quatre Vents 95650 Boissy-l'Aillierie FRANCE

Email : [contact@sebbin.com](mailto:contact@sebbin.com)

 @groupe\_sebbin -  Groupe Sebbin

[www.sebbin.com](http://www.sebbin.com)

## 3D DESIGN AND TRAINING

### AnatomikModeling

19 rue Jean Mermoz 31100 Toulouse FRANCE

Email : [contact@anatomikmodeling.com](mailto:contact@anatomikmodeling.com)

 AnatomikModeling -  anatomikmodeling

Professional documentation on 3D custom-made implant

(surgical procedures, operation videos, webinars, etc.) is available in the professional area of the website.

[www.anatomikmodeling.com](http://www.anatomikmodeling.com)



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Postal address

39 Parc d'Activités des Quatre Vents 95650 Boissy-l'Aillierie FRANCE