

# OUR KNOWLEDGE FOR THE YOUNGEST

*... in the treatment of infant head deformities due to positioning  
...to guide growth after craniosynostosis surgery  
...in the fabrication of protective helmets*



# THE INTEGRATED APPROACH OF ORIGINAL CRANIOFORM HELMET THERAPY

Head deformities due to positioning in young children have gained significance in recent years. The therapy approach focuses on deformities that develop after birth and are frequently caused by the practice to lay infants on their back in order to prevent sudden infant death syndrome.

## ***Guiding growth with helmet therapy***

Not all cases of head deformities can be treated with a skull orthosis. Deformities that are the result of premature craniosynostosis usually require corrective surgery, which may be followed by guided growth through helmet therapy. While chil-

dren normally entirely “grow out of” deformities caused by trauma at birth as a result of intracranial (blood) pressure and brain growth, head deformities that develop after birth due to positioning frequently require treatment. Therapy depends on the cause, the age of the child and the severity of the head deformity.

Based on these factors, two things are important for successful treatment: an exact diagnosis and a helmet fabricated to medical and technical specifications.

We pursue this integrated approach with our international Cranioform network.





## THE INTERNATIONAL CRANIOFORM NETWORK

Cranioform was founded by Dr. Christoph Blecher. As an oral and facial surgeon, he began treating affected children with so-called skull orthoses using Cranioform helmet therapy more than 15 years ago at the Gießen University Hospital under Professor H.-P. Howaldt. Dr. Blecher has been accumulating substantiated practical experience across Europe ever since. He contributes his knowledge to the large international Cranioform network, which continues to grow. The network includes renowned university hospitals and highly specialised medical professionals.

***Close cooperation in the network supports a process of continuous further development.***

The treatment methods and the original Cranioform helmet therapy are always being improved. In

regards to diagnosing and treating head deformities due to positioning, we contribute all our knowledge for the youngest time and time again. Paediatricians, paediatric surgeons, neurosurgeons, orthopaedists, oral and facial surgeons, orthodontists, paediatric neurologists, physiotherapists and osteopaths are perfectly integrated in our interdisciplinary network.

***Our helmet therapy is used with great success by leading craniofacial centres across Europe today.***

We have successfully treated many thousands of children with helmet therapy to date. Technical further development, indications and ongoing quality control are of particular interest to us. Our young patients therefore consistently obtain the best possible treatment according to the latest state of knowledge.



## THE CRANIOFORM TREATMENT CONCEPT

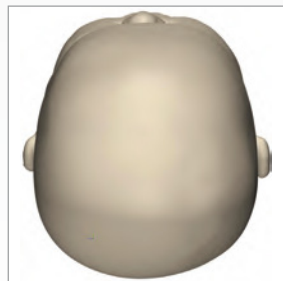
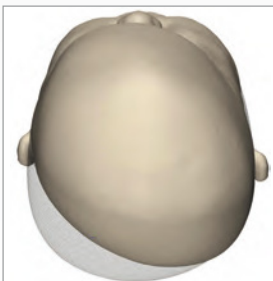
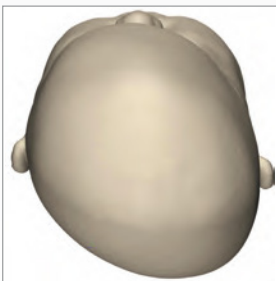
In treating affected children with original Cranioform helmet therapy, we take advantage of the skull's natural growth by guiding it in the direction of the flattened areas.

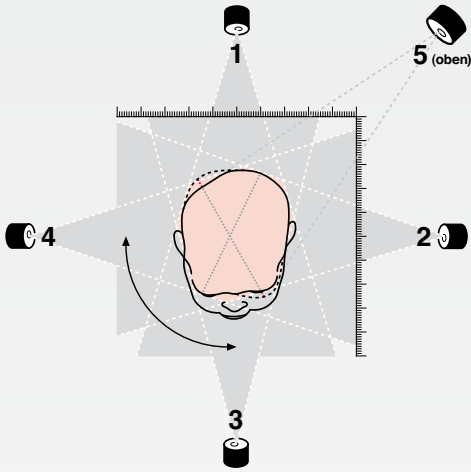
This is done by means of a custom helmet fabricated by us, designed on

the basis of a 3D scan of the child's head. We use highly modern measuring technology for this purpose.

***A contactless 3D scanning process without laser beams captures the precise coordinates of the head within 1.5 milliseconds.***

## ESTABLISHING THE IDEAL HEAD SHAPE



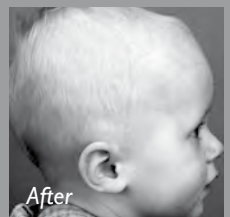
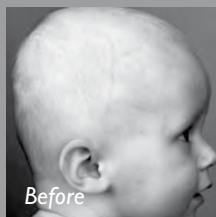
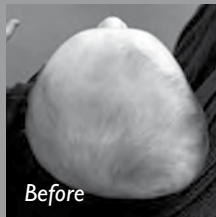
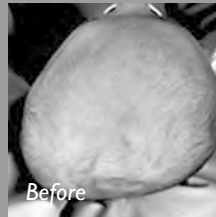


The therapy helmet is made of light-weight, skin-friendly synthetic materials fashioned into the idea shape. It touches the skull on the prominent sections of the head. Growth in these areas is therefore suppressed during treatment. On the other hand, it leaves space over the flattened areas so that growth into the ideal shape is facilitated.

**Overall head growth is not restricted during treatment; it strictly follows percentile growth.**

With this integrated approach of the original Cranioform helmet therapy, we were able to achieve significant results with many different versions of head deformities due to positioning over the past years.

## TREATMENT EXAMPLES





# THE ORIGINAL CRANIOFORM THERAPY HELMET

The key to the integrated Cranioform therapy approach is the seamless interaction between indications, therapy and helmet fabrication.

In order to steer treatment with the Cranioform helmet in the right direction from the outset, we determine how much volume is needed in the affected areas based on the measurement data.

**To determine these values, we have developed our own high-performance: Cranioform Analytics®.**

This software allows us to capture the extent of the head deformity in three dimensions. The 3D photo data are analysed in a special CAD programme, which shows us how the helmet needs to be designed.

With the help of this process, we are able to assess head growth and

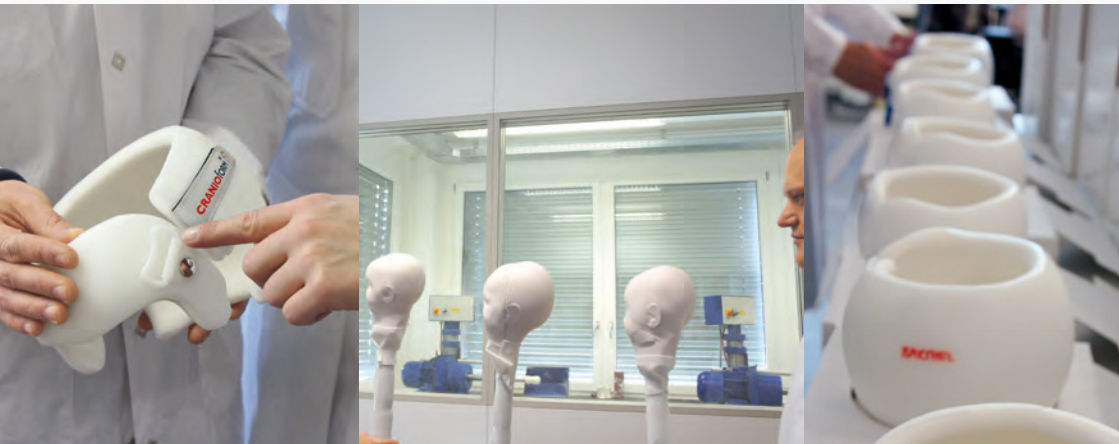
the expected duration of treatment. Last but not least, these data permit precise ongoing quality control in the course of therapy.

**The shape of each Cranioform helmet is entirely customised.**

The helmet should be worn 23 hours a day to achieve good results. The treatment takes from eight weeks to a few months on average, depending on the degree of deformity and the age of the child when treatment begins (ideally in the fourth to fifth month of life).

Our experience shows: children get accustomed to the helmet very quickly and it hardly appears to slow them down at all.

**The results that are achieved remain stable for life.**



## Our knowledge for the youngest

We – the extensive network of Cranioform helmet therapy – put all our knowledge to work for the treatment of head deformities.

On the following pages we have put together a whole range of information, which should help you: information on the diagnosis of head deformities, their causes and treatment of the possibilities and characteristics of our original Cranioform helmet therapy.



NEWS

### Dear Parents, learn more about



the treatment of head deformities using the original Cranioform helmet therapy

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### Dear doctors and physiotherapists,



read details on head orthosis in case of plagiocephaly, brachycephaly due to positioning and guided growth after craniostylosis surgery

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# INFORMATION AND CONSULTING SERVICES FOR PARENTS, ATTENDING DOCTORS AND PHYSIOTHERAPISTS

For the benefit of our youngest patients, our support services consciously go even further. We are always providing opportunities for continuing education and the exchange of experiences.

**Visit [www.cranioform.com](http://www.cranioform.com)**

for comprehensive information. Our website not only features extensive information on indications, original Cranioform helmet therapy and the Cranioform helmet; we have also set up a platform for the exchange of experiences between

parents. We supplement this forum with web consultations, giving the affected parents a fast and uncomplicated way to network with us and clarify urgent questions directly.

The website also provides information on who from our extensive Cranioform network is available close to your home.

Parents do not have to travel far in order to obtain a professional consultation and optimum support from Cranioform.



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