What is a helmet/cranial remolding orthosis and how does it work?

A **cranial remolding orthosis (CRO)** is a custom-fitted medical device designed to guide the growth of an infant's skull.

It is not designed to squeeze or compress the baby's head. Instead, the orthosis holds or limits growth over areas that are already prominent while providing additional space over areas that are flatter. As the baby's skull continues to grow, growth is directed toward the available spaces. The helmet therefore works together with the baby's **natural skull growth** rather than physically reshaping a fully developed skull (Clarren et al., 1979; Tamber et al., 2016).

During treatment, the orthotist periodically evaluates the helmet and the baby's head shape and adjusts or replaces the orthosis as needed to accommodate growth and continue the treatment plan. Three-dimensional measurements may be used to document changes in cranial shape and guide treatment (Thompson et al., 2009).

Most CROs consist of a rigid outer shell with a foam or other liner. Designs and materials vary, and treatment protocols can differ among clinicians and manufacturers. The important feature is that the orthosis is custom designed to provide areas of contact and relief appropriate to the individual infant's head shape (Clarren et al., 1979; Tamber et al., 2016).

A typical treatment program involves wearing the CRO for approximately **23 hours per day**, with the helmet removed for activities such as bathing and according to the treating clinician's instructions. Treatment duration varies with age, severity, growth, and response to treatment; several months of treatment are common (FreudIsperger et al., 2016; Tamber et al., 2016).