



Frequently asked questions regarding the Iowa Brace

These are questions that are frequently asked about the design of the Iowa Brace. Dr. Jose Morcuende is the co-founder of Clubfoot Solutions and Professor of Orthopedic Surgery, Rehabilitation and Pediatrics at the University of Iowa. Dr. Morcuende is the lead designer of the Iowa Brace. He is a worldwide expert in clubfoot deformity correction. These are his clinical answers to the design features of the Iowa Brace.

Question:

Why does the Iowa Brace not have adjustable bars like other products on the market?

Answer:

The Iowa Brace comes in three length bars. 8 inch, 10 inch and 12 inch. The length of the bar was calculated based on normalized data of children shoulder width, see attached shoulder width file on the CFS website. Your provider can choose any of the three lengths available for each patient. In addition, biomechanical data shows that more than 10 inches of width affects leg alignment and decreases stretching of the muscles. The CFS 12-inch bar measures 10 inches after connected.

Question:

The Iowa Brace has a fixed abduction angle for the affected ankle at 60 degrees, whereas others on the market may set it to 70 or 50. Why was 60 degrees' abduction chosen for the Iowa Brace design?

Answer:

There are no clinical data on rotational angle differences with the recommendation of 60 to 70 degrees of abduction. Biomechanical data and comfort suggest 60 degrees is a good angle to stretch the muscles. In some children, 70 degrees' abduction can be too much rotation leading to external tibia torsion. 70 degrees can also affect the child's heel and result in additional valgus alignment leading to flatfoot in some children.

Question:

Why do we use nylon as the material for the Iowa Flex bar? Other than light weight, is there any consideration in its flexibility to facilitate stretching?

Answer:

Some degree of flexibility is desired especially for older children to improve adherence to the brace and have the ability to stretch tendons and muscles.