# BOSTON BRACE 3D FAQ

## HOW IS THE BOSTON BRACE 3D DIFFERENT FROM THE BOSTON BRACE ORGINAL?

The Boston Brace 3D is made from a scan of the patient. Rather than being fabricated over a symmetrical model, it is fabricated over an asymmetrical model. Specific coronal shifts and pushes are built in along with larger relief areas.

## WHAT ARE THE PRIMARY BENEFITS?

The Boston Brace 3D is more aggressive in the transverse plane. By incorporating a selective push/shift combination we are seeing improved corrections. We have found that patients can tolerate more shift/push pressure – we are not flattening their abdomen nor are we adjusting their sagittal profile. In addition, the corrective forces are created in conjunction with open/void areas that allow for easier breathing mechanics.

## WHO SHOULD WEAR THE BOSTON BRACE 3D?

All curve patterns and patient presentations are candidates. For mild curves, we may not shift or include as aggressive a push, so the custom fabricated symmetrical Boston Brace Original would work. For out of balance curve patterns, we recommend the Boston Brace 3D.

## IS THE BOSTON BRACE 3D MORE COMFORTABLE?

Yes. Boston O&P incorporates adherence monitors in all our braces so we can objectively review the hours of brace wear. Our data shows that the majority of our patients are able to wear the brace as prescribed. Having a team in place to offer support and answer questions is key. We know that our patients wear the Boston Brace 3D and achieve positive results.

To find a clinic near you, please visit our website.

www.bostonoandp.com

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# The Boston Brace 3D

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## HOW THE BOSTON 3D WORKS

Scoliosis is a tri-planar deformity, and the Boston Brace 3D orthosis works to correct the spine in all three planes—coronal, sagittal and transverse.

The Boston Brace 3D features an improved brace design with a unique shift/push combination of corrective forces that create a unique force coupler to improve correction. An enhanced anterior lateral relief is added to provide additional room for de-rotation and breathing mechanics.

## THE USE OF CAD/CAM

To ensure maximal curve correction, the Boston Brace 3D is custom designed for each individual patient. Shape capturing technology (scans) and precise measurements of the patient are obtained to create a three dimensional CAD/CAM model. Systematic analysis of the x-ray is performed to optimize the corrective forces (push/shift) creating an asymmetrical shape, while optimizing sagittal plane balance. The corrective forces are created in conjunction with open/void areas that allow for easier breathing mechanics.

## BOSTON BRACE 3D OUTCOMES

Patient outcomes are very important to us at Boston Orthotics & Prosthetics. Initial in-brace x-rays (x-rays with the brace on) show that most patients achieve greater than 50% correction of the primary curve when wearing the Boston Brace 3D.

AVERAGE CURVE REDUCTION:
BOSTON BRACE 3D VS. BOSTON BRACE CUSTOM

SINGLE CURVE

| Thoracic | | Thoracolumbar | |
|---|---|---|---|
| 3D | Custom | 3D | Custom |
| 57% | 52% | 64% | 55% |

DOUBLE CURVE

| Primary curve | | Secondary curve | |
|---|---|---|---|
| 3D | Custom | 3D | Custom |
| 51% | 47% | 58% | 45% |

The combination of in-brace curve reduction and adherence to the prescribed wear schedule has been shown in multiple studies to reduce the risk of curve progression. To aid in brace wear adherence, all Boston Brace 3D braces are equipped with the iButton thermal sensor.