Evaluation of the SleepCurve© Mattress in the treatment of Positional Plagiocephaly (Flat Head Syndrome)

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This was an independent research study. SleepCurve’s only involvement was the supply of the mattresses.

This study was presented at the International Society of Cranial Facial Surgeons in September 2013.
The study investigated the effects of using a SleepCurve mattress on 40 babies with Positional Plagiocephaly (Flat Head Syndrome).

All the babies had some degree of cranial asymmetry (mis-shapen head).

The babies heads were measured pre-study. They were all given a SleepCurve mattress to sleep on and measured again in six months.
Summary of Conclusions

Patients using SleepCurve© mattress showed an improvement in head asymmetry.

The average Cranial Vault Asymmetry fell from 17mm pre study to 5mm post study.

[The improvements were] Equivalent to results reported for helmets.

SleepCurve © Mattresses are a low cost treatment for deformational plagiocephaly - 1/40th cost of a helmet
Reduced pressure on baby’s head

Pressure mapping showing the effect of the curve on a SleepCurve mattresses on the resting point on a baby’s head

Image courtesy of Alder Hey Children’s Hospital
The results

<table>
<thead>
<tr>
<th>Severity of Cranial Vault Asymmetry</th>
<th>Number of babies Pre study</th>
<th>Number of babies After 6 months on a SleepCurve mattress</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mild CVA &lt;6mm CVA</td>
<td>3</td>
<td>29</td>
</tr>
<tr>
<td>Mod CVA 6-12mm CVA</td>
<td>11</td>
<td>6</td>
</tr>
<tr>
<td>Severe CVA &gt;12mm CVA</td>
<td>26</td>
<td>5</td>
</tr>
</tbody>
</table>

Notes:
The average CVA fell from 17mm pre study to 5mm post study.

Cranial Vault Asymmetry (CVA) measured using anthropometric cranial callipers.

Image courtesy of Alder Hey Children’s Hospital
The Results:
A significant improvement in head shape was found after using SleepCurve mattresses.

Change in the number of babies with severe, medium and mild CVA (head shape distortion) over 6 months.
The study was undertaken on 40 babies aged 2 to 12 months, with an average age (mean age) of 4.5 months.

All had mild to severe Cranial Vault Asymmetry (CVA).

All were provided with a SleepCurve mattress.

Results were compared with an historical group of similar age with positional plagiocephaly – repositioning therapy.

The report recommended a larger study.
Our Comments

Our mattresses are recognised as being very effective at preventing Plagiocephaly and Brachycephaly (Flat Head Syndrome) and we are delighted that this study provides further evidence that our mattresses can be used for the treatment of this condition.

We are also pleased that the authors compared the results of using our mattresses with a baby helmet in the treatment of Plagiocephaly. This study reported very similar outcomes for both treatments and highlighted the considerable cost savings our mattresses provide parents and medical organisation in comparison to helmets.