We have previously reported that 19% of cases with brachial plexus birth palsy (BPBP) had impaired function of the affected arm in adolescence. The literature suggests that recovery of elbow flexion later than 3 months of age increases the risk of permanent disability. However, little is known about long-term prognosis of BPBP.

**OBJECTIVE**

To study how the time to regain elbow flexion during the first postnatal months in infants with BPBP predicts arm function in adolescence.

**METHODS**

**Study group**
- 91 children born at St. Olavs Hospital in Trondheim, Norway, between 1991-2000 with a diagnosis of BPBP were invited to participate.
- 69 (76%) met for examination at a mean age of 15 years (range 10-20 years).
- Age when elbow flexion was regained was recorded.

**Participants**

Participants were evaluated by:
- Modified Mallet score
- Active and passive range of motion (ROM)
- Assisting Hand Assessment (AHA)
- Canadian Occupational Performance Measure (COPM)

Participants reported presence/absence of pain.

**RESULTS**

- The table shows that 52 participants had normal shoulder function according to Modified Mallet score, with better prognosis for the children who regained elbow flexion before 1 month of age.
- 17 participants had limited active movements in the shoulder and some difficulty using the arm efficiently in bimanual activities and in ADL. The majority of these children regained elbow flexion after 3 months of age.

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**Table:**

<table>
<thead>
<tr>
<th>Arm function and pain according to age when regaining elbow flexion</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>&lt; 1 month (N=38)</strong></td>
</tr>
<tr>
<td>Normal shoulder function</td>
</tr>
<tr>
<td>Normal shoulder function - Minor limitations in elbow/forearm</td>
</tr>
<tr>
<td>Restricted shoulder and arm function</td>
</tr>
<tr>
<td>Occasional pain when using the arm</td>
</tr>
</tbody>
</table>

*Somewhat restricted range of motion in elbow and/or forearm, no functional limitations.
** Limited active movements in the shoulder and elbow/forearm and less efficient use of the affected arm in bimanual activities.

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**CONCLUSION**

Our findings confirm previous knowledge by showing a good prognosis of BPBP into adolescence in children who regain elbow flexion within three months of age. The majority of children who regain elbow flexion later than three months of age have restricted range of motion in the shoulder and elbow. None the less, most of them are still independent in ADL and none of the participants experienced daily pain in the arm.