

## The purpose of MACS

The Manual Ability Classification System has been developed to classify how children with cerebral palsy use their hands when handling objects in daily activities. The classification is designed to reflect the child's typical manual performance, not the child's maximal capacity. It classifies what children do when using one or both of their hands for activities, rather than assessing and classifying each hand separately. When defining the five levels of the MACS our primary criterion was that the distinctions in manual ability should be clinically meaningful.

During the development of MACS our intention was to go beyond a description of the details of "hand movements" and develop a classification based on what the child is able to achieve in everyday life with the hands. Hand function is complex and influenced by many different components such as sensorimotor components, cognition, postural control, visual perception, motivation etc but MACS does not consider underlying components. The focus is on "how" things are done, not "why". Therefore the concept of MACS is "The children's ability to handle objects in daily life".



## Why MACS?

There are several reasons for developing a classification of the ability to use the hands.

First of all we think it is important to highlight the importance of hand use, which is crucial for children's independence in daily life, to be able to attend the school and occupy themselves during leisure.

Second, there is no valid and reliable functional hand classification available. We want a system of classification that is more meaningful than "mild, moderate, severe" difficulties.

Finally we have understood the importance of the Gross Motor Function Classification System (GMFCS) and felt the need for something equivalent. We cannot take for granted that the development of hand function follows that for gross motor development. Thus MACS is designed to highlight the importance of hand function for independence in daily life.



## How to use MACS

Look for the most usual performances, rather than best abilities. Therefore, determination of the level must be done by asking someone who knows the child and not by conducting a specific assessment, because MACS is not a test. The parents, teachers or the child itself could be asked. Questions have the focus on the child's ability to handle objects in important daily activities, for example during play and leisure, eating and dressing.

You should ask about the child's most usual performance and the ability to handle object needs to be considered from an age related perspective. Notice that MACS reports the child's MACS level based on the participation of both hands in activities.

For further information read [the leaflet](#).

## MACS is for different ages

MACS can be used for children of different ages (4-18 years), but the interpretation of the levels needs to be related to the age of the child. Obviously, children handle different objects at age four years, compared to adolescent age. The same point concerns independence, as a young child needs more help and supervision than an older child but their handling of objects is the primary focus of MACS.

To date we have not investigated the stability of the classification over time, but our belief is that most children will stay at the same level.

## MACS is useful for...

- Communication with families
- Communication between staff
- Communication to policy maker and social service, care assistants etc
- Goal setting
- Defining groups for research

