

Krastin Invitational Skeffington Symposium on Vision  
2020

# Neuroplasticity in Children.

“The boy who denied to be spastic”

**Thorkild Rasmussen, optometrist, FCOVD, FANO**  
**Denmark**

**THE  
BOY  
WHO  
COULD  
RUN**



*"Compelling, engaging,  
and essential."  
—Norman Doidge, MD,  
author of The Brain's Way  
of Healing and The Brain  
That Changes Itself*

**BUT NOT WALK**

*Understanding Neuroplasticity in the Child's Brain*

**KAREN PAPE, MD**

# Cerebral Palsy

- Hypotonicity.
- Poor muscle control.
- Flexor / extension imbalance.
- Spastic posture and movement becomes habitual.
- Early therapy can prevent spasticity.

# Case story

Jakob 13 years

- Brain scan because of some developmental issues.

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Institution Name: KH Viborg  
Manufacturer's Model No  
Body Part Examined: HPA  
Z//

13  
1 31

A software control bar with several icons: a blue play button, a square, a circular arrow, and a zoom slider. The slider is positioned at 13, with a range from 1 to 31. Below the slider are two small horizontal lines.

# Caudate Nucleus

Involved in motor control and learning.

- The pediatrician stated that he never had seen a child with this impact on the brain that was not spastic.
- Why did Jakob “deny” to get spastic?

**March 2007**

Jakob 6 month.

Born 8 weeks premature. Hypotonic, almost never on his stomach and very passive.





# July 2007.

## Jakob is 10 month

### **Ophthalmologist:**

- Occasional left esotropia

### Prescription:

+5.00  
+5.00

- $+2.25 = -1.75 \times 4$
- $-0.50 = -0.75 \times 127$
  
- $+6.50 = -1.25 \times 30$
- $+6.00 = -0.75 \times 3$

# July 2007.

## Jakob is 10 month

### **Second opinion:**

- Parallel all time.
- Passive: +4.00
- Active: 0.00
- Hypotonic
- Passive
- No head control

### Recommendations:

- Maximum stomach time.
- Therapy ball.(Head control)
- Sit-ups (head control)
- Rolling exercises.
- Vestibular stimulation.
- Monocular stimulation, alternating
- Nutritional supplements.

# September 2007. Jakob is 12 month.

- Tendency for right esotropia. Parallel most of the time.
- Improved tonicity and activity.
- Good head control.
- Tries to crawl, but feet slips.

## Recommendations:

- Nutritional supplements.
- No shoes or socks.
- Stimulate and support crawling.
- Alternating monocular activities.
- Consider Rx. next time

# Jakob, summary

- 6 month – could not lift head 90. Parallel.
- 14 month – could not stand without holding on. Intermittent eso.
- 21 month – could walk on stairs, constant esotrope.