



**krabat**™

HEPRO

A PART OF AddLife®

# Krabat Pilot



The development of the brain, sensory perception and motor skills go hand in hand

# From supine position to crawling position

The natural motor development starts when the baby is born, and a lot is about being able to control the different parts of the body against gravity.

When you move from a supine position into a crawling position, you are well on your way, and this is where the real preparation for being able to sit, stand and walk begins.



## Crawling position contributes to:

- Increased strength and stability in the shoulders
- Improved head- and neck control
- Improved muscle strength in upper body, both front and back
- Increased stability and strength in the hip joints
- Improved balance
- Improved coordination







# Crawling and brain development

The nervous system develops fastest during our first two years of life, and the brain uses approx. 60% of total body energy on precisely this development.

For optimal development, it is important that the nerves receive stimuli from movement through the musculoskeletal system.

Movement shapes the important nerve pathways that will be used and developed for the rest of the child's life.

Factors that affect each other:

The development of the sensory perception, motor skills and the brain takes place interdependently and simultaneously.

As an infant becomes more mobile, we therefore expect to see a leap in brain development.



*Thalidomide children from the 1950s and 60s, born without arms, who lack distance assessment. They could literally run straight into a wall.*

# Effect of crawling

- Judge distance and speed
- Interpret information about moving objects
- Assess direction
- React with blinking, popping, pulling away or grasping
- Keep your head against gravity
- Raise from floor level, and get a new overview
- Social competence
- Preparation for a stable sitting position, standing and walking

# Crawling for children with disabilities

Because it is now believed that the development of sensory perception, motor skills and the brain occur dependently of each other, and not separately, it becomes incredibly important to stimulate the child with impaired function.

- Train where the child is
- Train to reach the next milestone



# Down Syndrome

- Shoulder- and hip stability
- Head control
- Eating and facial motor skills
- Endurance
- Coordination









# Cerebral Palsy, GMFCS level 4 and 5

- Head control
- Weightbearing hips and shoulders
- Coordination
- Stimulating the brain and nervous system
- Getting up from the floor

# Spina Bifida

- Weightbearing hips and shoulders
- Strengthening arms, shoulders and neck
- Coordination
- Head control
- Play and participation
- Stability upper body



# Adjustments

Gas spring tension



Height of board



Length of board





# Accessories



Co-Pilot system



Back strap



Pilot Harness