

The Importance of Touch for Young Learners with Hearing & Vision Loss

2024 EARLY HEARING DETECTION &
INTERVENTION CONFERENCE

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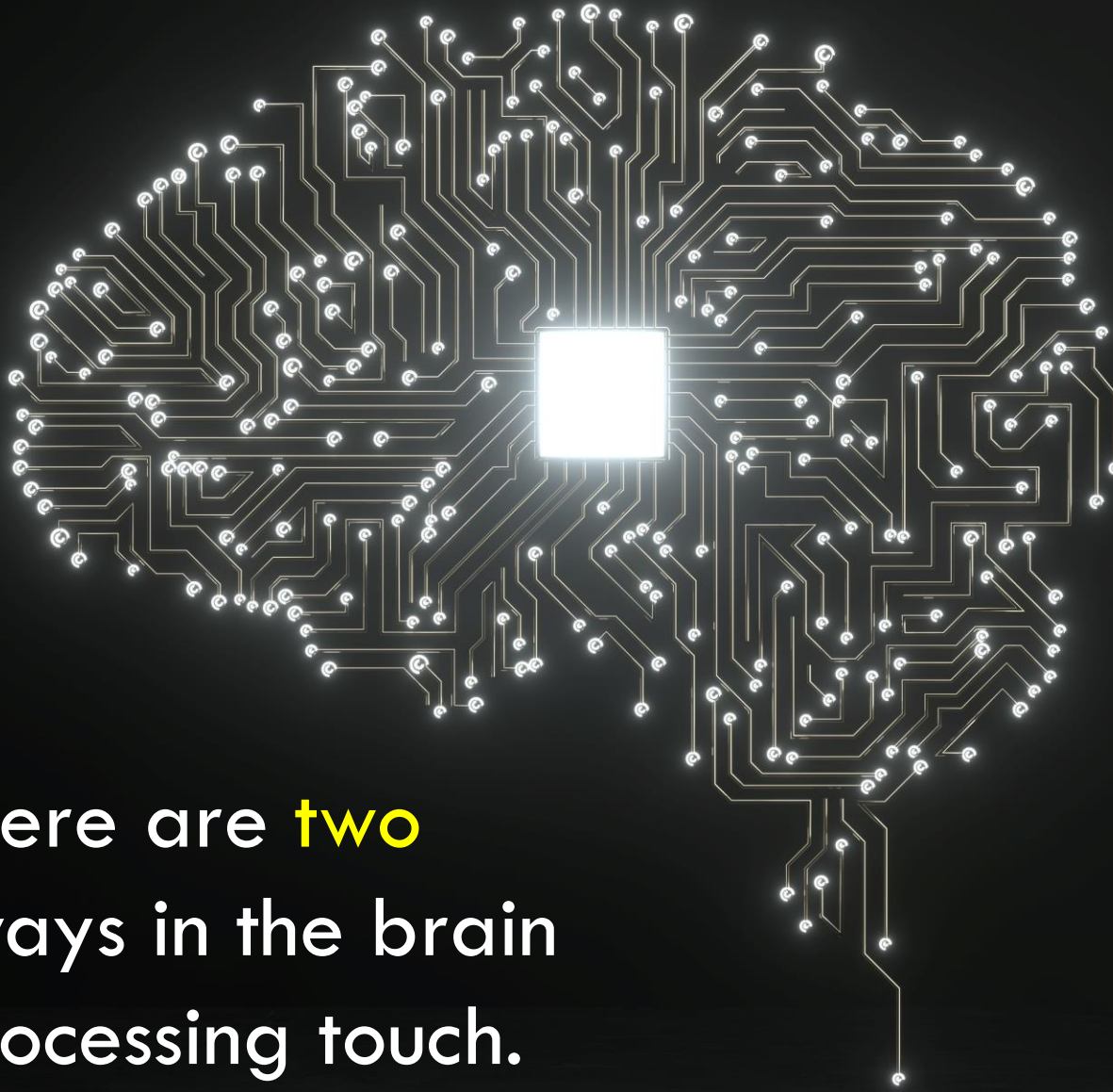
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Overview

- Why touch is important
- Tactile Cognition
- Enhanced access to touch leads to self-actualization
- Learning from DeafBlind Adults
- Best Practices for Learners who are DeafBlind



Why Touch is Important



There are **two** pathways in the brain for processing touch.

Discriminative Touch

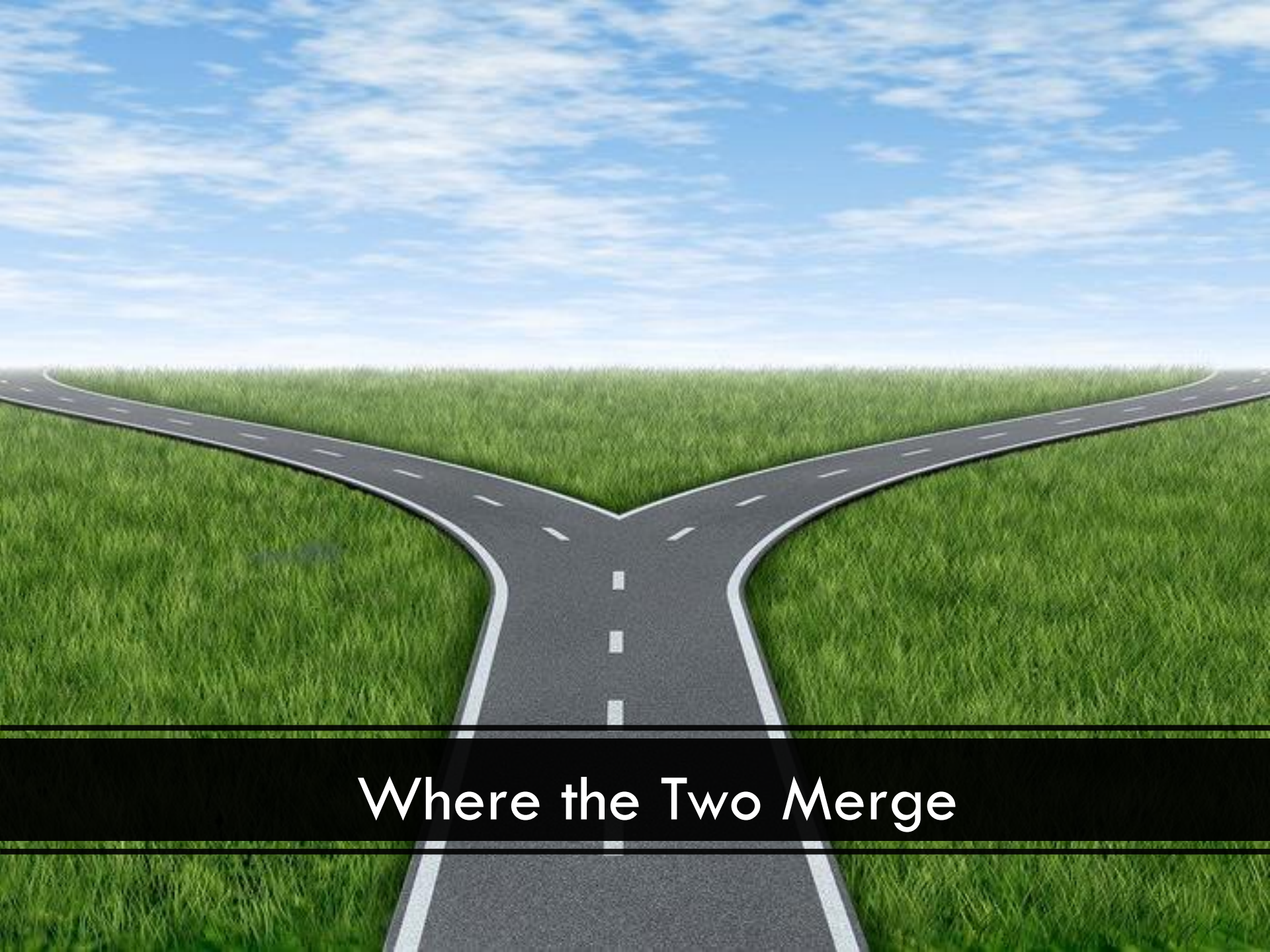
- The **facts** about touch
- vibration
- pressure
- location
- fine texture



Social & Emotional Touch

- the **emotional content** of interpersonal touch using different sensors in the skin.





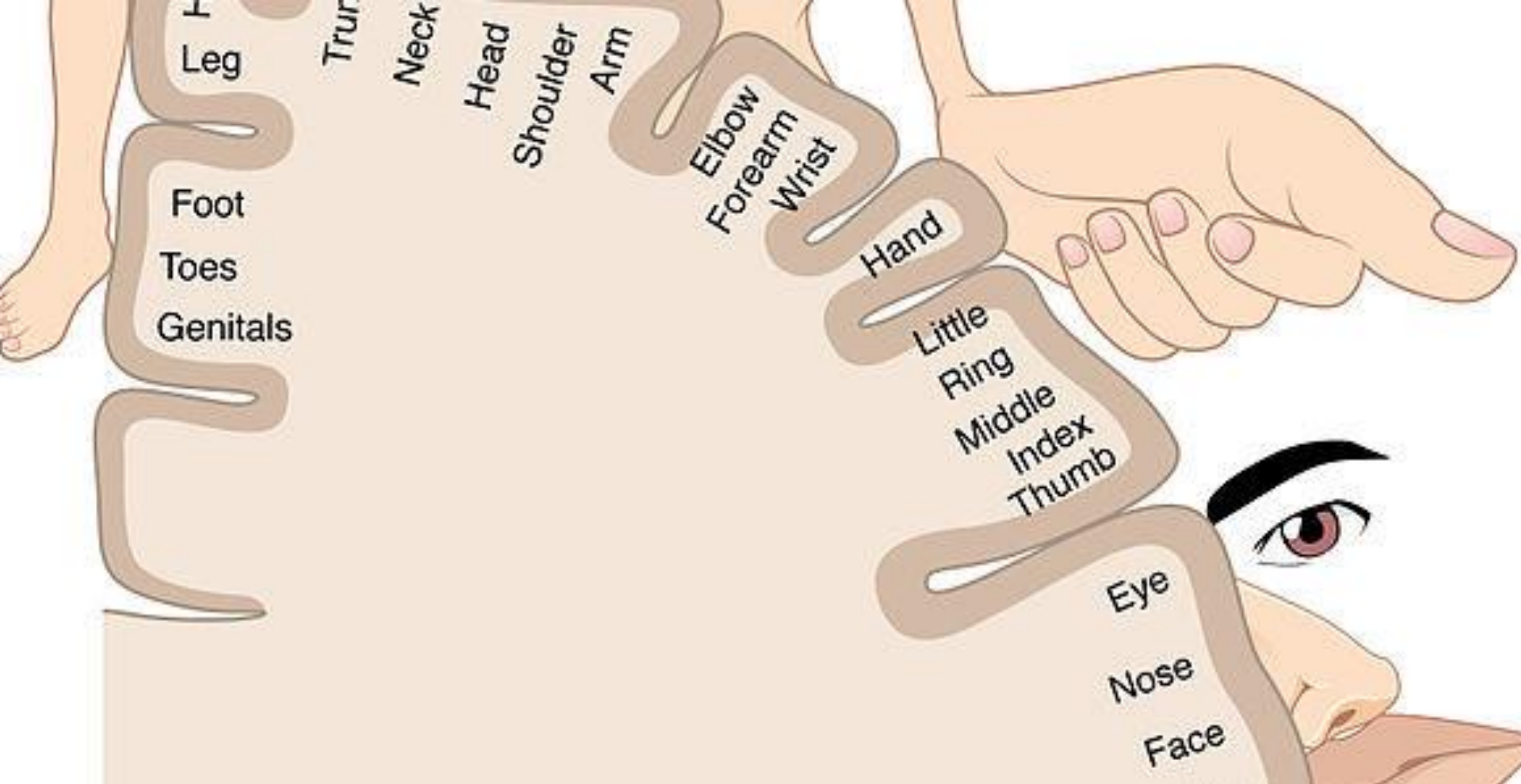
Where the Two Merge

Touch is a matter of **SCIENCE**

All humans experience
forms of touch

Only very rare cases of
'touch blindness' or
damage to the central
nervous system, traumatic
brain injury





Cortical sensory homunculus

- Portion of the human brain directly responsible for the movement and exchange of sensory and motor information of the body

Studies show significant and longstanding impact on the global development in children when there is the **absence of touch** in infancy or the presence of **negative touch**



Early
touch in
the life
of an
infant is
critical.



How does this
impact young
children and
developmental
delays?



“Much evidence now points to the importance of touch in child development and suggests the possibility that these orphaned infants are not suffering from maternal deprivation, per se, but from **sensory deprivation**, and more specifically a **deprivation of mechanosensory stimulation.**”

Frank DA, Klass PE, Earls F, Eisenberg L (1996)



What is
Kangaroo
Care?



Why is it
important?

What are the
benefits?



- Whenever possible, mothers and babies should be in direct contact for at least the first 1–2 hours after birth.
- In skin-to-skin care, the baby is naked (a dry cap is okay, as is a diaper), and is placed on the mother's bare chest, between her breasts.



- Within minutes the mother and baby begin to relax.
- The baby's body temperature, breathing, and heart rate stabilize
- Transfer of good bacteria
- Reduced pain during clinical procedures

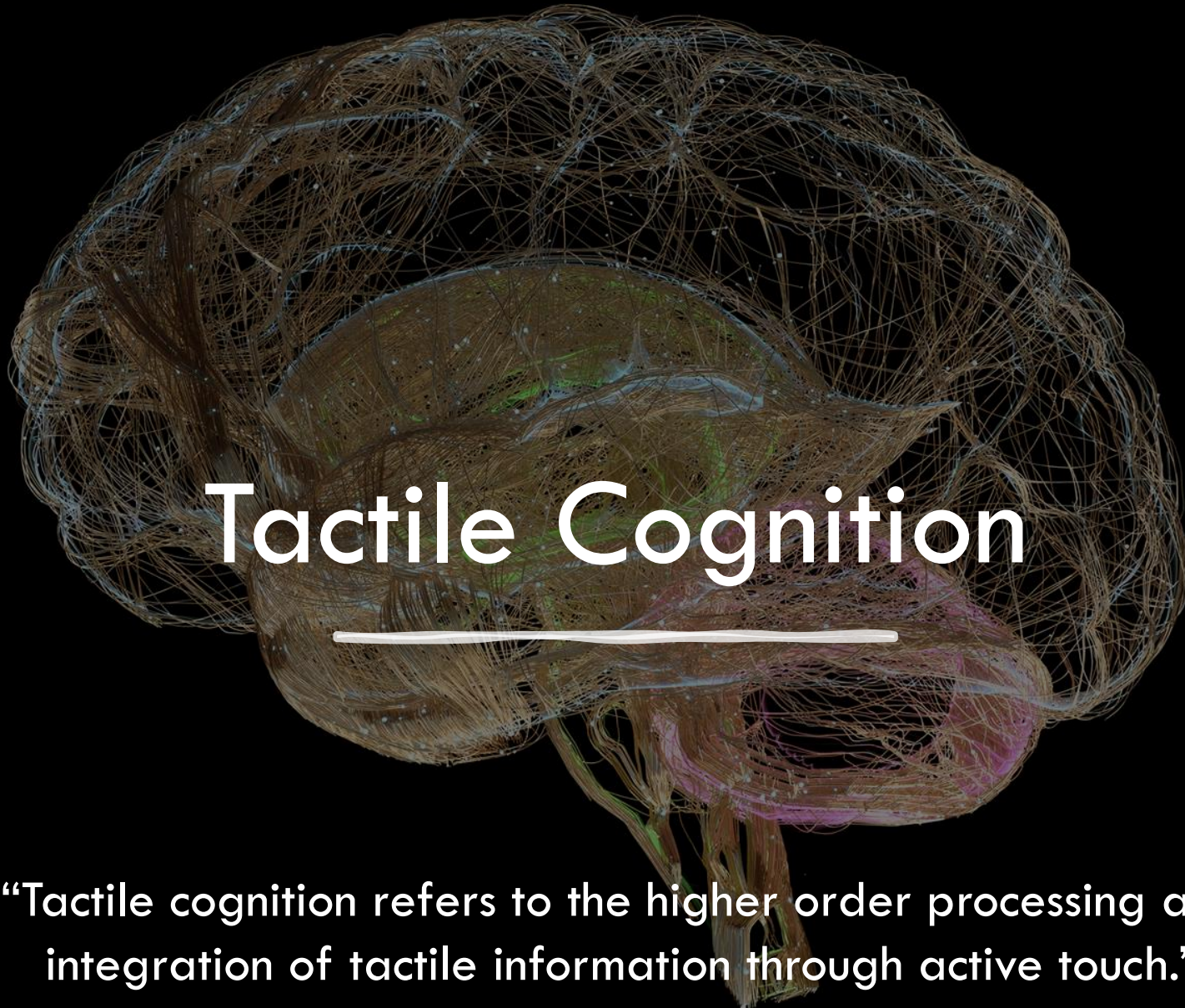


Long-Term Effects of Touch

- Better cognitive skills
- Increased executive functioning
- More organized sleep
- Better neuroendocrine response to stress
- More mature functioning of the autonomic nervous system
- Better cognitive control

- We lose touch receptors over time
- They tend to peak around age 16 – 18 and then begin to fade
- Early introduction is better





Tactile Cognition

“Tactile cognition refers to the higher order processing and integration of tactile information through active touch.”

Nicholas, Jude (2010)

How do we
develop
tactile
cognition in
learners
who are
DeafBlind?





- Constant & repetitive access to things and people
- Touch that is:
 - Respectful
 - Mindful
 - Intentional
- Shared tactile exploration



**Invitation to
Touch Allows for
Self-Exploration**

**...and Leads to
Self-Actualization**



Meaningful Tactile Information for Orion

-Heather Withrow, Mother

A close-up photograph of two hands clasped together. The hand on the left is wearing a white, rectangular wrist device with a black strap. The hands are positioned in a way that suggests support or care. The background is a plain, light-colored surface.

“The sense of touch is the first sense to develop, and it functions even after seeing and hearing begin to fade.”

Nicholas, Jude (2010)

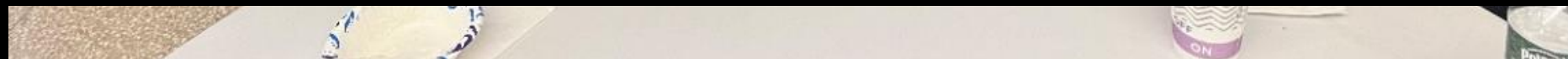
“When part of the sensory cortex is not used for a long time, the area changes.

Instead of ‘throwing out’ the area of the brain that is no longer used, the brain “recycles” the neurons.”





Learning From DeafBlind Adults



“Protactile language allows DeafBlind people to give, receive and exchange information through a tactile channel, rather than relying on auditory or visual channels to access information and language.”



“ProTactile philosophy is not just about ‘accessing’ communication; it affects all areas of life, including DeafBlind culture, politics, empowerment, and language.”



www.protactile.org

-aj granda & Jelica Nuccio

Increased
positive touch

Increased neural
pathways

Increased self-
awareness &
self-actualization

Increased
connections



Early &
consistent
tactile
exposure

Increased
tactile
cognition

Increased
Self-
Actualization

Multi-Modal,
Constant Contact,
Availability,
Respectful Touch,
Wait Time,
Assistive
Technology

*Parker with Intervener,
Cindi*





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