

Touch as the Key to Unlocking Communication for Learners with Hearing & Vision Loss

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Pulling it all together...

- Science
- Research
- Personal Narratives
(lived experience)





Science

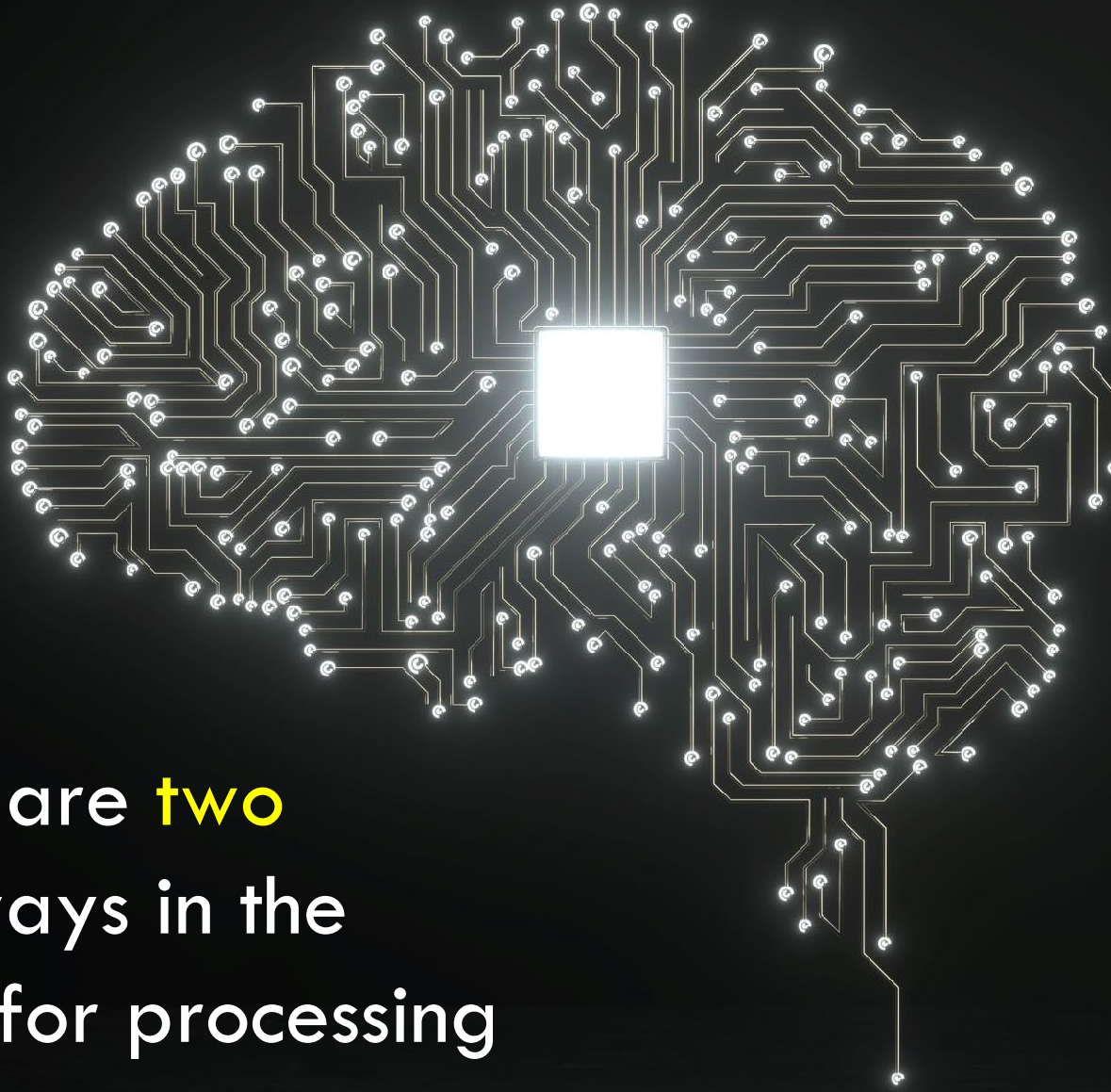
Touch is a matter of **SCIENCE**

- All humans experience the sense of touch
- Very rare cases of 'touch blindness' or damage to the central nervous system, traumatic brain injury





Students with impacted sensory channels
(hearing & vision) rely on touch for access



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

Discriminative Touch

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



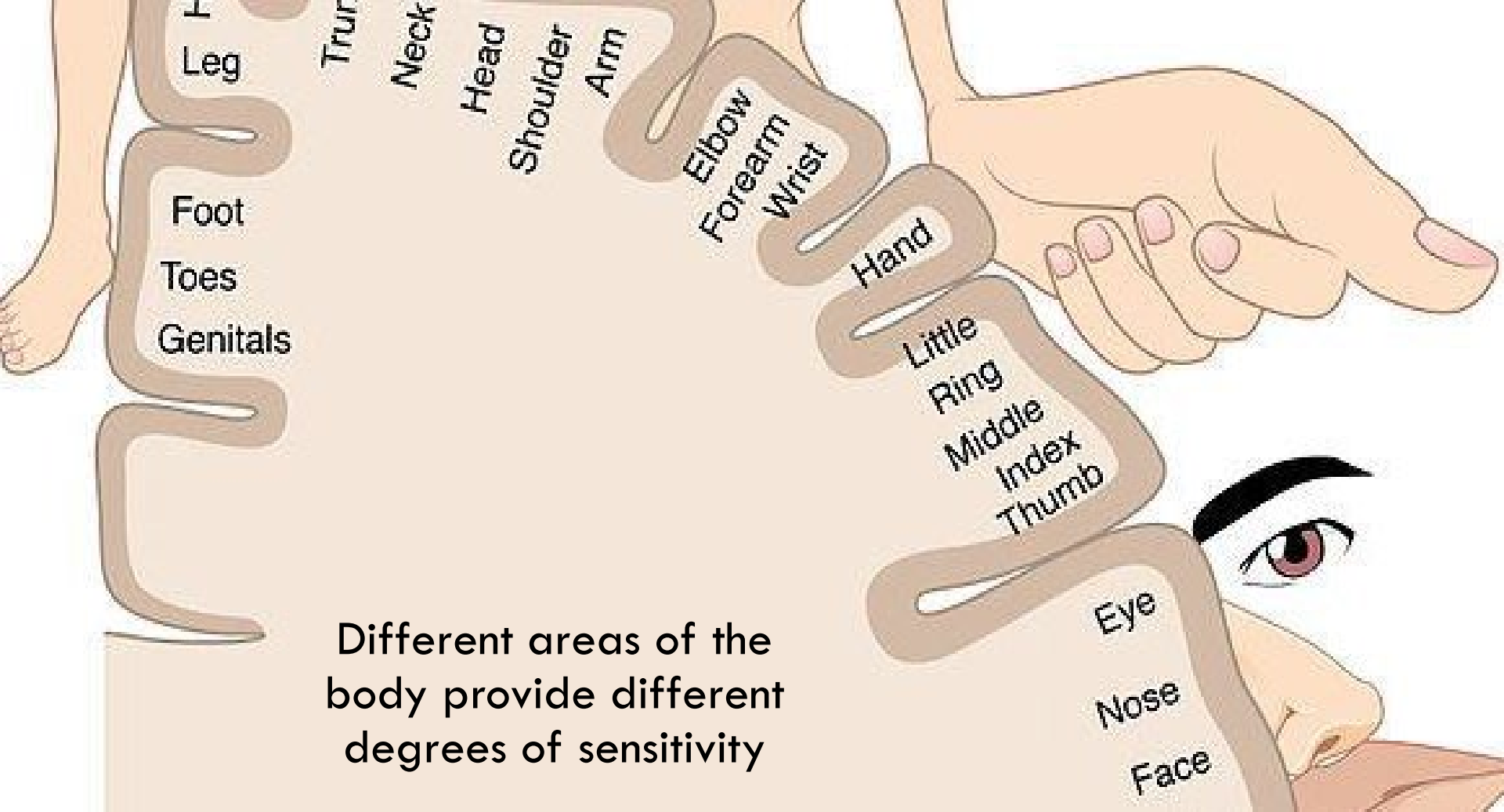
How do we experience
discriminative touch?



Social & Emotional Touch

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





Cortical sensory
homunculus

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

A close-up photograph of two hands clasped together. The hand on the left is wearing a white, rectangular wrist device with a black sensor area. The skin on both hands appears aged and wrinkled. 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)

“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)



Early
touch in
the life
of an
infant is
critical.





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





Research



Best Practices in DeafBlind Education

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

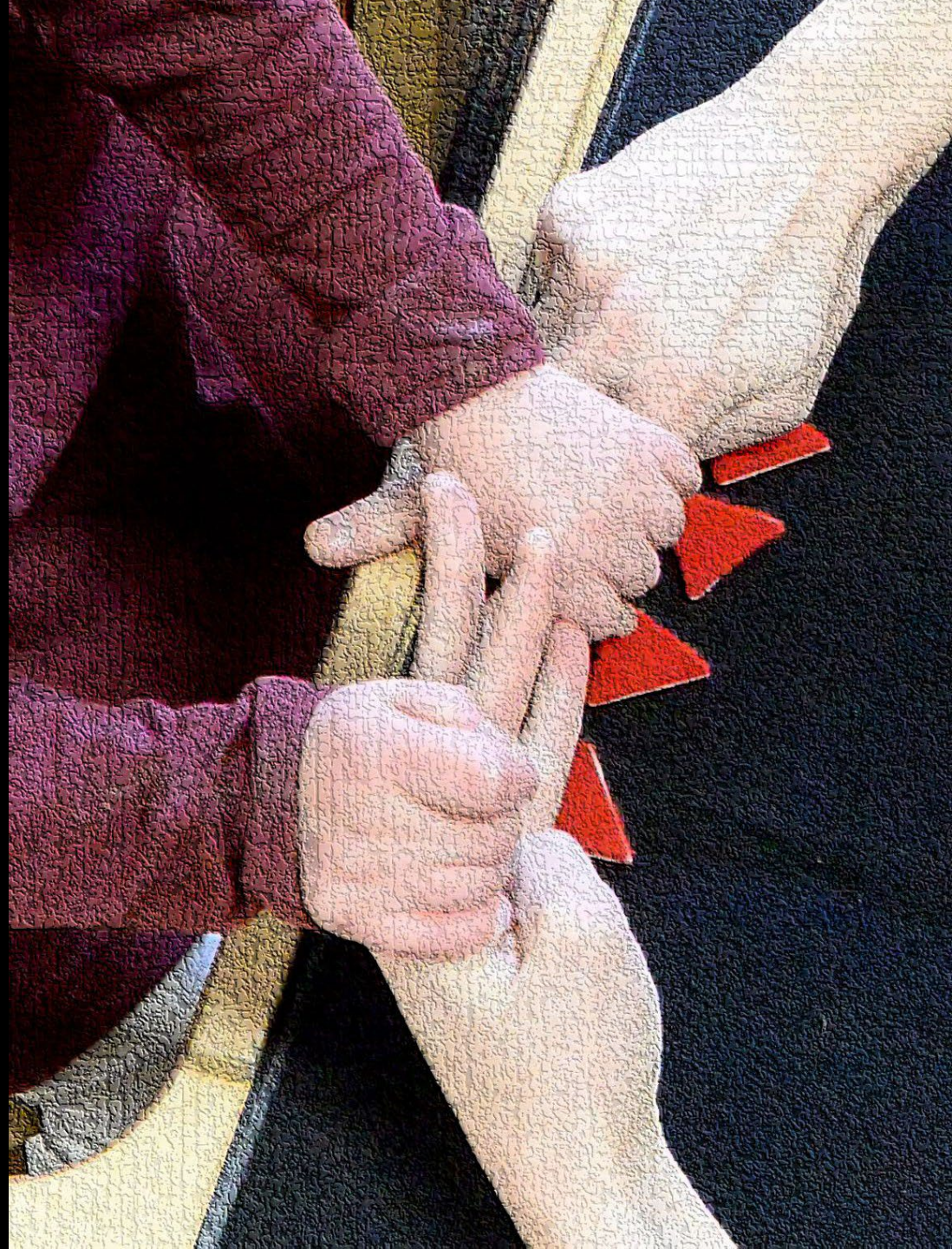


Tactile Cognition

“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/
multiple
disabilities?



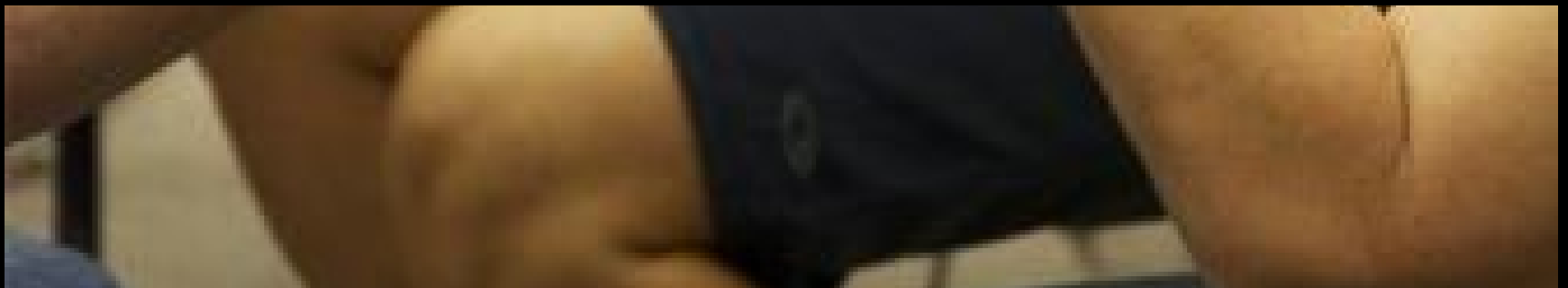
“Just as they would never poke or control the sensitive eyes of a child who can see, they must learn not to control the equally sensitive hands of a child who is deafblind, whose hands must function as eyes.”

-Barbara Miles, 2003





Personal Narratives (Lived Experience)





Learning From DeafBlind Adults

Protactile Language

“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.”



What is Co-Presence?

INTRODUCING AN OBJECT



BEGIN AT THE SHOULDER



AND SLOWLY SLIDE
THE OBJECT UNDER
YOUR CHILD'S ARM



UNTIL IT REACHES
THEIR HAND



CO-PRESENCE

**INTRODUCTION OF
THE BABY BOTTLE**

**TACTILE AWARENESS:
"I'M HERE"**

**TAPS OF
AFFIRMATION**



Increased
positive touch

Increased neural
pathways

Increased self-
awareness &
self-actualization

Increased
connections



Early &
consistent
tactile
exposure

Increased
tactile
cognition

Increased
Self-
Actualization

Best Practices

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



-Parker with Intervener, Cindi

Why do we need touch for learners with sensory variations?

- Information-seeking
 - Things
 - People
 - Communication
 - Orientation
- Equate hand use to the mouth for spoken language and for the eyes to see





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