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# **How does social touch modulate arousal states? An investigation in early development.**

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**Abstract:** Caregiver-infant interaction through touch was shown to have long-term effects on child's cognitive development, but the mechanisms are poorly understood. Our aim is to investigate how affective touch (slow gentle caressing) affects arousal states in young infants. Previous work showed that slow-touch decreases heart rate in 9-month-old infants.

We tested two groups of 6-months-old ( $n=26$ ) and 9-months-old infants ( $n=23$ ). We measured heart rate and saccadic reaction time while infants performed a visual orienting task, where speed of re-orienting from a central fixation to a peripheral target was measured. During the experiment, infants received either slow or fast-touch on their back in blocked trials. We found no effects of touch on heart rate in either age-group, and only marginal effects of slow-touch on reaction times in 9-month-old infants. We are currently testing 2 months-old infants to investigate if these effects are observed earlier in life; these new results will be discussed.