

# HBCD

PROTOCOL SUMMARY

**VISIT 5: 10-17 MONTHS**



HEALthy Brain and Child Development  
*Babies · Brains · Bright Futures*

**HBCDStudy.org**



# The HEALthy Brain and Child Development Study

The HBCD Study is the largest longitudinal study of early brain and child development in the United States. Knowledge gained from this research will have lasting impacts on future generations of children.

This ambitious project will enroll over 7,000 participating families from across the United States and follow them from pregnancy through early childhood. The HBCD Research Consortium consists of the HBCD Consortium Administrative Core (HCAC), the HBCD Data Coordinating Center (HDCC), and 27 recruitment sites across the country (see map).

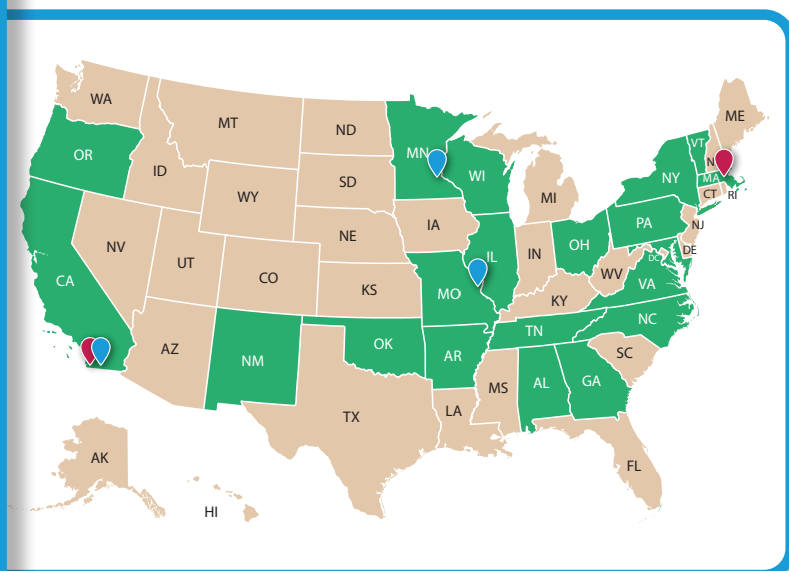
Leading researchers in the fields of child development and neuroscience will work with participating families and their children to understand how the brain develops and how exposure to substances and other environmental, social, and biological factors during pregnancy and after birth impact outcomes.

## HBCD Open Science Model

The data generated in the study will be made broadly available to the research community through an open science model and serve as a resource to support numerous additional studies and foster new hypotheses to be explored.

## Locations of HBCD Recruitment Sites in the United States

<b>Recruitment Sites</b>	Arkansas Children's Hospital Research Institute Boston Children's Hospital   Harvard Medical School Cedars-Sinai Medical Center Children's Hospital of Los Angeles Children's Hospital of Philadelphia Cincinnati Children's Hospital Emory University Johns Hopkins University/Kennedy Krieger Institute New York University School of Medicine Northwestern University Oklahoma State University Center for Health Sciences Oregon Health & Science University Pennsylvania State University-University Park Pennsylvania State University College of Medicine University of Alabama at Birmingham University of Alabama at Tuscaloosa University of Arkansas for Medical Sciences University of Maryland University of Minnesota University of New Mexico University of North Carolina Chapel Hill University of Vermont University of Wisconsin-Madison University of California, San Diego Vanderbilt University Virginia Tech Washington University
 <b>HCAC</b>	University of California San Diego Boston Children's Hospital   Harvard Medical School
 <b>HDCC</b>	University of California San Diego University of Minnesota Washington University



# 10–17 Months of Age

HBCD Measure	What it Measures	Child (min)	Adult (min)
Social and Environmental Determinants			
<b>Baby's First Years (BFY) Services/Support</b>	Use of benefit programs and services during the past 12 months		2
<b>Baby's First Years (BFY) Economic Stress</b>	Experiences with economic stress during the past 12 months		2
<b>Caregiver Occupations and Employment</b>	Occupations and employment schedules of caregivers during the past 12 months		2
<b>Environmental Exposures</b>	Household environmental and chemical exposures		5
	Lead exposures		2
	Second-hand smoke		5
<b>Incarceration Questionnaire</b>	Caregiver incarceration, probation, or parole in the past year		2
<b>Protective and Compensatory Experiences (PACES)</b>	Experiences that protect against risk and increase resilience during the past 12 months		2
<b>PhenX Discrimination</b>	Experiences with unfair and discriminatory treatment during the past 12 months		3
<b>PhenX Neighborhood Safety</b>	Perceptions about safety and crime in the neighborhood		1
<b>Residential History for Geocoded Data Linkage</b>	Home, work, or other frequented addresses for linking to external data sets		5
<b>Vancouver Index of Acculturation</b>	Participation in culturally relevant activities		5
Transitions in Care			
<b>Transitions in Care Screener</b>	Survey to assess whether there were changes in child's main caregiver since the last visit		3
Continued next page >			

# 10–17 Months of Age

HBCD Measure	What it Measures	Child (min)	Adult (min)
Physical Health			
<b>2-Item Food Insecurity Screen</b>	Household food insecurity		1
<b>Early Childhood Longitudinal Survey (ECLS) Modified: Medical History</b>	Overall health, immunizations, medications, surgeries, medical conditions, health symptoms, and injury prevention behaviors		10
<b>Infant Nutrition Questionnaire</b>	Assess nutritional behavior related to breastfeeding, formula feeding and introduction of solids.		10
<b>Patient-Reported Outcome Measurement Information System (PROMIS) Early Childhood: Sleep Problems</b>	Sleep quality and sleep-related disruption of daily behaviors		1
<b>PhenX Breastfeeding and Infant Nutrition Questionnaire</b>	Whether the child was breastfed, breastfeeding duration, and introduction of solid foods		11
<b>Physical Activity in Greenspace</b>	Time spent outdoors in parks, gardens, and other spaces with vegetation		2
<b>ScreenQ Screen-Based Media Use Measure</b>	Access to and use of screen-based devices, including TV, video game systems, handheld devices, and computers		5
Neurocognition and Language			
<b>Vineland Adaptive Behavior Scales</b>	Communication, daily living skills, social skills and relationships, physical activity, and internalizing and externalizing behaviors		15
<b>Sensory Processing Measure 2 (SPM-2)</b>	Vulnerabilities in the child's sensory systems, including under- and over-reactivity, sensory seeking behaviors, and perception		15
Continued next page >			

# 10–17 Months of Age

HBCD Measure	What it Measures	Child (min)	Adult (min)
Behavior and Caregiver-Child Interactions			
Infant Behavior Questionnaire - Revised - Very Short Form (IBQ-R-VSF) + Behavioral Inhibition: Ages 9-11 Months Only	Child temperament, including surgency, negative affect, effortful control, and behavioral inhibition/shyness		10
Early Childhood Behavior Questionnaire - Revised - Very Short Form (ECBQ-R-VSF) + Behavioral Inhibition: Ages 12-17 Months Only			
Multidimensional Assessment Profile Temper Loss (MAP-DB-TL)	Child temperament and temper modulation		2
Patient-Reported Outcome Measurement Information System (PROMIS) Early Childhood	Child-Caregiver Interactions		2
	Peer Relationships		2
	Self-Regulation Flexibility Scale		2
Total Visit Time (min)		127	







**HEALthy Brain and Child Development**  
*Babies · Brains · Bright Futures*

**HBCDStudy.org**