The NEST Stork: Delivering News To You

November 2012 **Volume 2**

Fun ways to complete Follow-up activities!

- Call us at :
  [1-3yr] (919)684-5420
  [Spanish] (919)681-6176
  [5-7yr] (919)668-6817

- Meet us at your child's annual doctor visit.

- Schedule a home or office visit

- Come to one of our monthly NEST parties

- Find us at a local health related event!

- Visit our website, neststudy.com for more information

Keep in touch!

Find us on…

Facebook.com/TheNestSTudy

@theneststork

Neststudy.com

Duke University Medical Center

What's New?

Thank you for participating in the Newborn Epigenetics Study (NEST). We recognize the amount of time it takes to make your contribution, and we sincerely appreciate it.

This was an exciting year for the study. Along with the release of our new website **neststudy.com**, we appeared on Univision, had commercials in newspapers, TV and radio! Additionally we participated in a few community events including, El Centro's Health Fair and Unity in the Community. We are making a greater effort to offer resources to our participants and be more involved with the families in our study.

NEST was designed to improve our understanding of how various environmental exposures during pregnancy and in the first few years of life can influence our children's future risk of chronic diseases and conditions such as obesity, diabetes, cancer, neurodevelopmental disorders (including ADHD and autisim spectrum disorders), and heart disease (ex: coronary heart disease). We are doing this by studying how the epigenome (the layer of our DNA that tells our genes how to work) responds to these exposures in our children, and to see whether such changes in the epigenome actually alters the way genes work throughout life.

Current Study Results

Results from studies suggest that nutrition during pregnancy may affect the health status of your children and grandchildren. These effects, that are passed down through generations are thought to be explained by changes in chemical marks that attach to our DNA.

Our NEST data show that before conception, if the father is obese it could influence the reprogramming of chemical marks (imprint marks) that attach to the DNA of sperm cells during sperm cell creation and may influence the future health status of the babies (Soubry A. BMC Medicine 2013, 11:29).

Women who take antibiotics during pregnancy have smaller babies. The chemical marks that attach to our DNA seem to facilitate this association, mainly the marks that attach to a gene called *pleomorphic adenoma gene-like 1 (PLAGL1)*. This finding provides another example of how exposures the mother has during pregnancy could affect the outcome of the babies, and also how imprint marks attached to our DNA can control this interaction (Vidal A. International Journal of Obesity, 2013, in press).

Differences in the DNA marks of the gene called *insulin-like-growth factor 2 (IGF2)* are associated with higher circulating levels of the growth factor that this genes encodes (IGF2) and increases the risk for obesity (Hoyo C, 2012; Perkins E, 2012).
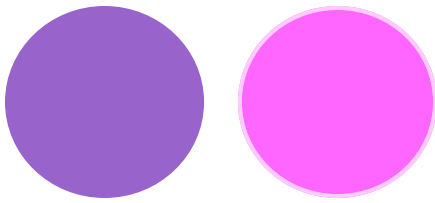
Find your Fruits and Veggies!

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H M D H T E J N Q O W L J Z G     APPLE

K C X X G P U I A Y S G S X R     BANANA

V C A N T O I K Q J C C N P A     CARROT

C D A N S L J P F V C T J D P     GRAPE

L R E R I W O M B A N A N A E     ORANGE

O M G F R P U U C Z P X M Z O     PEAS

N X E S D O S P W P G E B N H     PUMPKIN

G P Z V V G T V L E S E S V W     SPINACH

Q V I G C W F E T F V K I K T

S A E P N O F V U I N T B Q J
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Nutrition is very important for our children! Do you need to finish your Diet Recalls? Call 919-966-8913

Resources for you and your child!

Child Care Services Association:

Durham County: 919-403-6950
Orange County: 919-967-3272
Wake County: 919-779-2220

Durham's Alliance for Child Care Access919-560-8300

Orange County Department of Social Services

919-967-9251 or 919-732-8181

Wake County Human Services

919-773-7600

Duke Appointment Scheduler

888-ASK-DUKE

CAARE Clinic (free clinic and other services) - (919)687 - 0793

2200 W. Main St. ste 600 Durham, NC 27705

NEST
Newborn Epigenetics Study

Address Service Requested