Babies After SCOPE: Evaluating the Longitudinal Impact using Neurological and Nutritional Endpoints

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The BASELINE study
Immediate Aims 0-2 years

- Prevalence of food allergy and eczema
- Maternal and neonatal Vitamin D status
- Metabolic and developmental effects of IUGR
- Build foundation for study of the cohort through childhood into adulthood
Biobanking
TEWL
Body fat %
Anthropometry
Neonatal course

Feeding
Growth
Body fat %
Eczema TEWL
Food allergy
General health
Childhood illness
Developmental screening

Bone density, body fat

Detailed neurodevelopment assessment
Allergy, BP, Anthropometrics, 25-OH-D3, biobanking, DNA, skin prick testing
Early origins of childhood obesity and metabolic dysfunction
Assessment outline

• Growth
• Development
• Allergy
• Activity
• Dietary habits
• Metabolic/inflammatory risk
Biobanking

- Birth: umbilical cord blood: serum, plasma, DNA, RNA
- 2 years: whole blood DNA, FBC and serum:
- 5 years: fasting serum and DNA
Database

Internet based
Secure access
FDA approved

The BASELINE study
Progress to date

Born into the study 2137 at completion of recruitment

- 2 months - 1954 complete
- 6 months - 1817 complete
- 12 months - 1706 complete
- 24 months - 1604 complete

Biobanking at 24 months – 60%

Weaning diaries 823/1436 completed

Last 24 month follow up completed Oct 2013

Five year assessments: over 460 children


Skin barrier dysfunction measured by transepidermal water loss at 2 days and 2 months predates and predicts atopic dermatitis at 1 year. *J Allergy Clin Immunol* 2015

Child eating behaviours are associated with weight status at two years of age. Proceedings of the Nutrition Society 2014, 73 (OCE2), E52.


Concentrations of 25-hydroxyvitamin D in umbilical cord blood and achievement of gross motor outcomes in infants. *Nutrients* 2014, 6, 2759-2919 (abstract number 2.44).
Rapid growth and body size in infancy predict overweight/obesity at 2 years. *Proceedings of the Nutrition Society* 73 (OCE2) E106

Iron intakes and dietary sources in two year olds from the Cork BASELINE Birth Cohort Study 73 (OCE2) E61


An International Opportunity: Birth cohort resources in Europe and the opportunities for etiologic child health research. *Pediatric and Perinatal Epidemiology* 2012


Plans for the future

• We have learnt important information about children’s health, nutrition, growth and allergy risk

• At 5 years, we will look at risks of obesity, persisting food allergy and cognitive outcome

• At 10 years and beyond: focus on asthma, rhinitis, growth and academic achievement

• Adolescent health
From the BASELINE team

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Thank you!