**BACKGROUND**

- Diet during pregnancy and infancy represents an intervention during a developmentally crucial period.
- The effect of certain dietary components appears to have an effect after the initial exposure has ceased.
- Functional endpoints affected include metabolic syndrome, hypertension, atherosclerosis and mental/cognitive function.

**OBJECTIVE**

- To define the terms metabolic imprinting, programming and epigenetics.
- To provide insight into the effects of diet on later life through the interaction of food and its components with different phases of metabolic imprinting/programming.
- To assess if these effects are reversible by later intervention.
- To provide data on optimal dietary constituents for beneficial health endpoints.

**DEFINITIONS**

- **Programming** – alterations in nutrition and growth at specific developmental points resulting in long term or even permanent effects (Lucas).
- **Imprinting** – the basic biological phenomena that putatively underlie relations among nutritional experiences of early life and later diseases (Waterland).

**TASK FORCE DISCUSSIONS**

**Programming**

A dynamic process in which a nutritional or other programming stimulus exerts a long term metabolic effect when applied at a critical or sensitive period or periods.

**Imprinting**

A process by which specific genes are genomically imprinted (so far some 80 have been proposed). The results of this imprinting process could lead to programming effects mediated by these genes.

**NEXT STEPS**

- Are there possibilities for nutritional interventions?
- Is there a role for personalised nutrition products?
- Can policy recommendations for optimal nutrition be developed for groups of the population?
- Are there trans-generational effects?
- What are the best potential practical applications?