### **Congenital Abnormalities**

- Non-typical, although indicative
- Congenital heart disease
- Skeletal defects
- Abnormal palm patterns
- Absence of genitalia

## Symptoms

- Symptoms diminish over time, but FAS children continue to be short and underweight and always live with the consequences of prenatal brain damage
- 1. Heavy prenatal alcohol exposure is associated with a wide range of neurobehavioral deficits including visuospatial functioning, verbal and nonverbal learning, and executive functioning
- 2. Heavy prenatal alcohol exposure causes microcephaly and disproportionate reductions in the corpus callosum, basal ganglia, and cerebellum
- 3. Children with and without physical features of the foetal alcohol syndrome display qualitatively similar deficits

## Animal Models and Prenatal Alcohol

- Many studies simply could not be done on humans
- Alcohol is rarely the only drug used
- Many abnormalities occur at low rates
- Epidemiological studies are extremely time consuming and expensive
- Areas where similar findings have been found both with the animal models and with humans. The point is that the models appear to be valid for studying FAS

# How much alcohol is too much?

- Mother does not need an alcohol drinking problem to give birth to a baby with 546
- Need only to drink in ecosy of her livers ability emetabolize alcohol
- Even of P dl in C day threatens the n-dr U great development (PEA)
- 4 Drinks per day dramatically increases the risk for infant physical malformations
- Drinking patterns also important (binging poses a risk of exposing the foetus to toxic amounts)

### When the damage is done

- During T1: Malformations
- During T2: Increased risk for spontaneous abortions and growth retardation
- During T3: Body and brain growth retarded

### The father's alcohol intake

- Animal studies found males consuming alcohol prior to conception: smaller litter size, LBW, reduced survival rates, impaired learning ability of the offspring
- Farther alcohol intake 1 month before conception also proved to influence BW

- Animal models Example of the comparability of effects
- Growth retardation
- > Facial characteristics
- Heart, skeletal defects
- Microcephaly
- > Reduction

Volumes

- and cerebellar
- > Hyperactivity
- > Inhibitory deficits
- > Impaired learning
- Fearing difficulties
- Hearing abnormalities