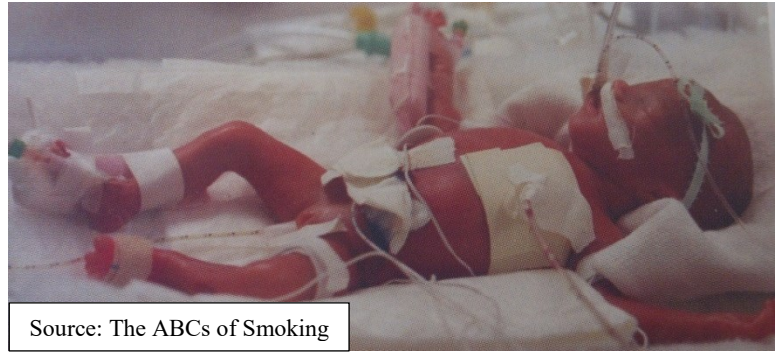


SMOKING DURING PREGNANCY



- **Harmful substances of cigarette smoke go through the placenta to the unborn fetus.**
- The fetus gets into a state of *hypoxia* (oxygen deficiency) and *hyponutrition* (nutrient deficiency) that lasts for 30-45 minutes.
- It is caused by nicotine, which causes the state identical to responses to stress.
 - accelerated heart rate and cardiac minute volume causes insufficient oxygen and nutrient supply to the organs and insufficient exhaust of harmful metabolic products,
 - the carbon monoxide concentration in the fetus blood is 25% higher than that of the mother's since it has even higher affinity for fetal haemoglobin
 - hydrogen cyanide stops transportation of oxygen from blood to cells, increasing hypoxia.
 - cadmium is being held by placenta in which it is stored and causes its necrosis.
- CO (carbon monoxide) causes a deficiency of oxygen in the fetus and thus severe damage to the development:
 - birth of a dead fetus,
 - premature birth,
 - low birth weight,
 - body damage - urogenital tract, lower limbs, heart septic defects and especially facial clefts,
 - SIDS (Sudden Infant Death Syndrome),
 - lung damage and increased morbidity.
- At a later age, harmful substances result in:
 - learning disorders, hyperactivity,
 - lack of self-control, aggression or even criminality.
 - These individuals have a reduced brain weight, layer of cerebral cortex and the density of the neurons is also reduced

Smoking during pregnancy causes more malignant tumors in childhood as the frequency of chromosomal aberrations in lymphocytes of such a newborn is similar to that of an adult middle-aged adult. Leukaemia or brain tumors are common (Hrubá 2011).