Foliensatz zum Factsheet Pädiatrie

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Take home messages

- In childhood development, VARIABILITY is the norm and OVERLAP in developmental domains is larger than gender difference.
- There are, however, sex and gender differences related to normal development and in particular to neurodevelopmental disorders and immunological responses.
- In neonates, there is a higher prevalence of birth defects in males. Males, especially when preterm, appear to be more susceptible to respiratory problems and brain injury in the perinatal period, with differences affecting later childhood development.
- Care and treatment of pediatric patients needs to be based on an INDIVIDUAL APPROACH where sex and gender may play a role in specific situations.
Gender identity and gender roles

At what age does gender identity develop?

- Understanding the concept of gender: 2-3 y
- Gender identity: 3-5 years
- Gender role/expression: 6-7 years
### Neonatology

- Prevalence of birth defects higher in males (3.9% male, 2.8% female)
- Higher mortality in early onset neonatal infection in males
- Respiratory problems (RDS) more severe in males
- Males with bronchopulmonary disease at higher risk for impaired lung function later in life
- Preterm males more susceptible to brain injury in perinatal period

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Infectious disease/immunology

- Prevalence, severity and complications of infectious diseases higher in males
- Females display increased innate and adaptive immune responses to most viral infections
- Twice higher risk of severe congenital CMV disease leading to brain damage in females (induced by immune-inflammatory responses)

- Vaccination
- Females show higher measles, mumps and rubella (MMR) antibody titers that persist longer
- Long-term protection against rubella higher in girls, long-term protective effect of BCG vaccine greater in girls

Intellectual development in extremely preterms

Louise Linsell et al. Arch Dis Child 2018;103:363-370
Organ-specific differences

Cardio: Higher risk for death in female pt with congenital heart disease
CHD – more males with CHD surgery and high risk procedures.
Females: higher risk for death in high risk procedures. Marelli Circulation 2010
Sickle cell – higher morbidity in males (lower responsiveness to nitric)
ALL: Female survivors w lower cardiorespiratory fitness

Asthma
more prevalent in boys age 4-14,
after puberty more prevalent and severe in women

Bronchiectasis
more common in males (2:1), but more severe infections and mortality in females (hormone dependent)

Crohn: childhood: males w higher incidence, adulthood: females

Juvenile arthritis predilection for girls, Hashimoto more common in girls – development of autoimmune disease: role of miRNA, sex chromosomes?
Scoliosis more frequent in females – Puberty: estrogens play a role in progression of spine deformation
Females higher risk for congenital dysplasia of the hip