

## **What is Down Syndrome?**

In every cell in the human body there is a nucleus, where genetic material is stored in genes. Genes carry the codes responsible for all of our inherited traits and are grouped along rod-like structures called chromosomes. Typically, the nucleus of each cell contains 23 pairs of chromosomes, half of which are inherited from each parent. Down syndrome occurs when an individual has a full or partial extra copy of chromosome 21.

This additional genetic material alters the course of development and causes the characteristics associated with Down syndrome. A few of the common physical traits of Down syndrome are low muscle tone, small stature, an upward slant to the eyes, and a single deep crease across the center of the palm – although each person with Down syndrome is a unique individual and may possess these characteristics to different degrees, or not at all.

### **Down Syndrome – a few facts**

- Down syndrome is a common genetic variation that usually causes delay in physical, intellectual, and language development. There is an extra 21<sup>st</sup> chromosome in all cells of the body in most children with Down syndrome; a small percentage have “mosaic Down syndrome” where not all cells have the extra chromosome.
- The exact causes of the chromosomal rearrangement and primary prevention of Down syndrome are currently unknown. Nothing that mother or father DO causes the trisomy 21.
- Down syndrome is one of the leading clinical causes of cognitive delay in the world – it is not related to race, nationality, religion, or socio-economic status.
- The incidence of Down syndrome in the United States is estimated to be 1 in every 700 live births. Of all children born in this country annually, approximately 5,000 will have Down syndrome.
- There are approximately a quarter of a million families in the United States who have a family member with Down syndrome.
- While the likelihood of giving birth to a child with Down syndrome increases with maternal age; nevertheless, 80 percent of babies with Down syndrome are born to women under 35 years of age, as women in that age group give birth to more babies overall. In a small percentage of pregnancies, the extra chromosome comes from the father.
- There is wide variation in mental abilities, behavior, and physical development in individuals with Down syndrome. Each individual has his/her own unique personality, capabilities, strengths and talents.
- 30–50 percent of the individuals with Down syndrome have heart defects and 8–12 percent have gastrointestinal tract abnormalities present at birth. Most of these defects are now correctable by surgery.
- Individuals with Down syndrome benefit from loving homes, early intervention, inclusive education, appropriate medical care, and positive public attitudes.
- In adulthood, many persons with Down syndrome hold jobs, live independently, and enjoy recreational opportunities in their communities.