

The study of toxicity With Down syndrome, life is no longer hard but rather joyful.

Cilian

Lincoln University College, Malaysia.

***Corresponding Author :**

Cilian, Lincoln University College, Malaysia.

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Abstract

Many people associate "Down syndrome" with a severely crippled individual who leads a miserable life. Thanks to medical advancements, that stereotype is no longer true. Public awareness of the skills of people with Down syndrome is being worked on by advocates for the condition. According to Brian Skotko, co-director of Massachusetts General Hospital's Down syndrome programme, the lives of the 250,000 Americans who have Down syndrome now are very different from those of those who lived through it a generation ago. People with Down syndrome now have a longer life expectancy and a higher quality of life because to medical advancements and educational resources. Skotko conducted a poll and found that 99% of people with Down syndrome were content with their life.

Furthermore, according to the survey, 88% of siblings said that having a sibling with Down syndrome has improved them as individuals. John Langdon, a physician, was the first to examine and characterise down syndrome. Down. The nucleus, which houses the genes that store genetic material, is present in every human cell. All of our inherited qualities are coded by genes, which are arranged along rod-like structures called chromosomes. Half of the 23 pairs of chromosomes that make up each cell's nucleus are inherited from each parent. When someone has a complete or partial extra copy of chromosome 21, they are said to have Down syndrome.

The traits linked to Down syndrome are brought on by this extra genetic material, which modifies the path of development. Low muscle tone, small stature, an upward slant to the eyes, and a single deep crease

across the centre of the palm are some of the common physical traits associated with Down syndrome. However, as each person with Down syndrome is unique, they may or may not have these characteristics. The most common chromosomal disorder is Down syndrome, which affects one in every 700 newborns born in the United States, according to the Centres for Disease Control and Prevention. Every year, over 6,000 newborns in the US are born with Down syndrome. In summary, even though people with Down syndrome continue to encounter substantial medical and educational obstacles, it's critical that the public's impression of these people fairly represents their talents.

OVERVIEW

own Syndrome (DS) may be an aberration resulting from a trisomy of all or a portion of chromosome 21, which carries significant medical and societal implications. It is the most common congenital illness in the world and the major hereditary cause of intellectual disability, which affect 1 in 400–1500 births. The illness was named after John Langdon Down, who described its clinical description in 1866, even though it had been recorded thousands of years earlier. Researchers have found potential genes that contribute to the development of particular DS traits. These developments could eventually aid in the development of focused treatment for those with congenital anomalies. Essential to standard prenatal treatment is DS screening. Up until recently, maternal serum analyte testing and ultrasonography were the only methods used for noninvasive aneuploidy screening. The Non Invasive Prenatal Screening (NIPS) test, which uses cell-free foetal DNA sequences extracted from a mother blood sample, is the product of more recent advancements.

The most common chromosomal defect in humans, Down syndrome (DS) affects 1 in 400–1500 newborns born in various populations, depending on the mother's age and the timing of prenatal screenings. DS is the main hereditary cause of intellectual disability globally, and a large proportion of people experience many other health problems. such as early-onset Alzheimer's disease, cardiac abnormalities, and haematological diseases. The syndrome results from trisomy

of chromosome 21 in its entirety, in some bodily cells, or both. As a result, the trisomy genes' dosage causes an increase in expression. Apart from that, there are hematopoietic disorders, gastrointestinal anomalies, slowness, congenital heart defects, weak neuromuscular tone, dysmorphic features of the top, neck, and airways, audiovestibular and disablement, distinctive facial and physical features, and a higher incidence of other medical disorders. The likelihood of having children with Down syndrome rises as the mother ages.