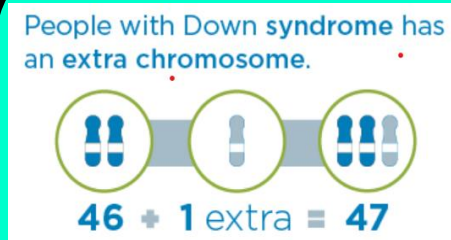


DOWN SYNDROME

INTRODUCTION



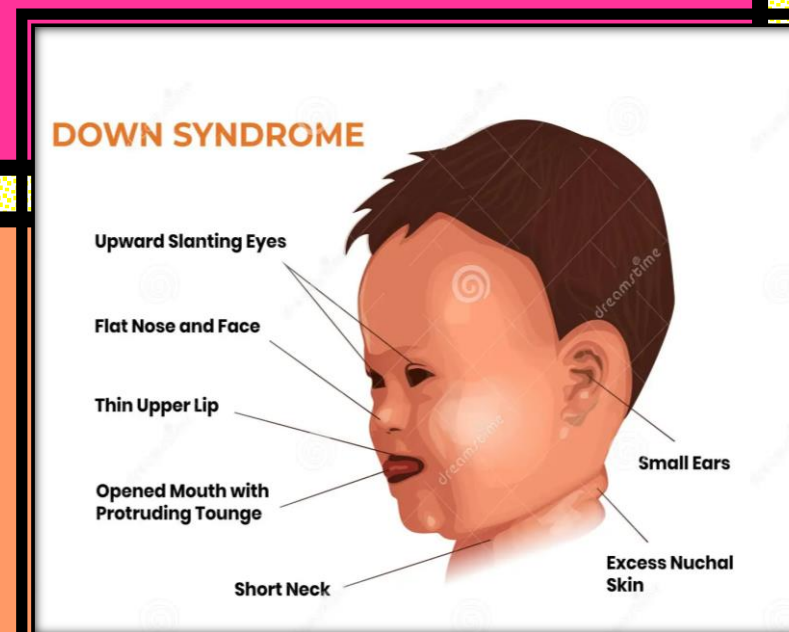
What is Down Syndrome? Down syndrome is a genetic disorder caused by having an extra chromosome. Most people have 46 chromosomes—23 from the father and 23 from the mother. These chromosomes determine how the baby grows and develops in the womb. A child born with Down Syndrome has an extra Chromosome 21, so they have 3 chromosome 21's which is why Down Syndrome is also known as Trisomy 21. This additional chromosome affects how the body and brain develop, leading to physical, intellectual, and developmental differences (Cinelli, 2022). Down syndrome is one of the most prevalent chromosomal conditions, occurring in approximately 1 in every 700 live births worldwide (United Nations, 2023).

IDENTIFICATION AND DIAGNOSIS

The Down Syndrome Medical Interest Group (2024) say that there are three types of Down syndrome: Trisomy 21, accounting for about 95% of cases, where every cell has an extra chromosome 21; Translocation, where part of chromosome 21 attaches to another chromosome; and Mosaicism, a rarer form where some cells have the extra chromosome while others do not.

There are two ways Down Syndrome is detected. Expectant mothers can be screened for Down Syndrome by a blood test and from measurements taken in an ultrasound scan in their prenatal check-ups (Downs Syndrome Association, 2024). Public Health Wales says that screening is a choice given to mothers to check if the baby has any health conditions. Parents are also offered an amniocentesis if they have received a positive test result; this is where a sample of amniotic fluid is taken from around the baby (New Health Advisor, 2019).

Down Syndrome can also be detected when the baby is born. The image on the poster shows the characteristics that babies with Down Syndrome are born with, which may be a marker to show that a child may have Down Syndrome. Healthline (2019) say that there are distinctive physical characteristics such as a short head, a flat facial profile, the corners of the eyes slant upwards, they have a flat nasal bridge and a protruding tongue. These are common features of a child with Down Syndrome, but it is not used to diagnose Down Syndrome. NHS (2023) says that once Down Syndrome is suspected, DNA tests are carried out for confirmation.



Source: dreastime (n.d)

COMMUNICATION BARRIERS

Children with Down syndrome may face a range of barriers that can affect their development, learning, and participation in everyday life.

Including Pupils with Down's Syndrome. (n.d.) say that the majority of children with Down Syndrome have speech and language difficulties. All children use communication to interact with others and children with Down Syndrome have a strong understanding of non-verbal communication and gestures making it easy for them to make friends (Down Syndrome Association, 2021). However, they need the skills and support to navigate these relationships through guidance from practitioners (Downs Syndrome Association, 2024). Downs Syndrome Association (2021) states that children understand more than they can say; resources such as communication boards can help them to communicate and provide them with a voice. This is underpinned in the United Nations Convention on the Rights of a Child, article 12 (UNICEF, 1989).

Prath (2022) describes the way children with Down Syndrome communicate as unique because there are so many different characteristics which vary from child to child. These can include muscle tone, and a narrow palette compared to tongue size, which both make it difficult to pronounce words correctly. Special Strong (2024) reports that non-verbal communication such as gestures, facial expressions and touch are strong traits of a child with Down Syndrome, adding that they are very good at reading people's emotions.

Interventions such as speech and language therapy and the use of sign language are ways to overcome the barrier of communication.

SUPPORTIVE STRATEGIES - VISUAL AIDS

Bird (2016) states that children with Down Syndrome all have learning difficulties but these vary from child to child, so practitioners need to plan and support activities for every individual. Woodhouse (2025) and Hargreaves et al (2021) both share the view that children with Down Syndrome have been shown to have better learning outcomes and achievements in education when they have practitioners who offer support and drive the individual learner.

Timetables

Positive Action, 2021 and Ups and Downs Southwest, (n.d.) both state that using pictures and symbols helps children to know what is coming next, which can alleviate anxiety and support children in understanding the daily routines and concept of time. Additionally, Ups and Downs Southwest (n.d) add that independence and resilience can be improved from the child's understanding of their activities.

Social Stories

Beelfwa (2023) says that social stories guide children through unfamiliar situations. They can help children understand how they must behave and act through personalised pictures. Shabiralyani, et al (2015) advocates the use of social stories as these can help children understand and resolve situations, therefore making it clearer and easier to understand the reasons why one should behave in a particular way and the benefits of this, for example to keep them safe. Sheffield Children's NHS Foundation Trust, (2021) also adds that social stories can be used to prepare for changes, such as a transition period or to teach new skills. Frank (2024) and Positive Action (2021) believe that social stories can develop strategies to socialise with others or to put anxieties at ease.

Visual Cues

Children with Down Syndrome use visual clues to develop independence and to aid them in remembering and understanding situations (Frank, 2024). Visual cues can be shown as a prompt for instructions or expectations of behaviour (Positive Action, 2021).

Communication boards

These boards can aid children to communicate. As previously discussed, children with Down Syndrome have difficulty with speech and communication (Down Syndrome Resource Foundation, n.d.), therefore using communication boards allows a child to be heard and help practitioners to understand their needs. Wellbeing check-ins can help the children to communicate how they are feeling (Frank, 2024). Providing a board which children can use to choose what they want to do, or what they like, develops independence.

CONCLUSION

The Down Syndrome community strive for children with Down Syndrome to be included in everyday life and mainstream education (The Down Syndrome Association, 2020). A holistic approach should be individualised, considering the child's needs.

Overcoming barriers requires early and consistent support, inclusive education, and community awareness to ensure every child with Down syndrome can reach their full potential. With the Down Syndrome Act 2022, and with government funding, children and their families can receive the support and care they need to ensure a successful and independent life.