A blue circle with white background

AI-generated content may be incorrect.

**example**

**REMAKE**

A blue and white background with white text

AI-generated content may be incorrect.

**السلام عليكم ورحمة الله وبركاته،**

زملائي الأعزاء،

هذا الملف يحتوي على إعادة صياغة لمحتوى محاضرة

example

تمت إعادة صياغة المحاضرة بهدف عرض المعلومات بطريقة أكثر تنظيما مع الحفاظ على المحتوى الأصلي للمحاضرة.

يرجى العلم أن هذه الأسئلة تم إنشاؤها باستخدام تقنيات الذكاء الاصطناعي باداه MedSense-AI التي طورتها.

وقد تم مراجعة هذا الملف للتأكد من دقته، ولكنه لا يغني عن الرجوع إلى المصادر الرئيسية للمادة.

**بالتوفيق والسداد ولا تنسونا من صالح دعائكم.**

**مع تحيات زميلكم يوسف الصباغ.**

A screenshot of a phone

AI-generated content may be incorrect.

## Incidence of Down Syndrome

| Key Point | Details |
| --- | --- |
| **Occurrence** | Down syndrome occurs in approximately 1 in 600 births. |
| **Male to Female Ratio** | Male: female ratio at birth is 1.24 : 1.0 |

## Genotypes of Down Syndrome

| Key Point | Details |
| --- | --- |
| **Meiotic Non-disjunction Trisomy 21** | Accounts for 95% of Down Syndrome cases. |
| **Translocation Trisomy** | Accounts for 4% of Down Syndrome cases. |
| **Mosaic Type** | Accounts for 1% of Down Syndrome cases. |

## Meiotic Non-disjunction (Maternal Age Dependent DS)

| Key Point | Details |
| --- | --- |
| **Chromosome Composition** | All the cells show an additional No. 21 chromosome, i.e. 47, XX, +21. This type results from meiotic non-disjunction. |
| **Prevalence** | Approximately 95% of all Down syndrome cases are of this type. |
| **Maternal Age Correlation** | About 70% of trisomy 21 cases are born to mothers over 30 years. |
| **Parental Karyotype** | Karyotyping of both parents is usually normal. |

## Translocation Trisomy 21

| Key Point | Details |
| --- | --- |
| **Chromosome Composition** | All cells show a normal number of chromosomes (46), however an extra chromosome 21 is attached to another one (13, 14, 15 or 21) i.e. 46, XX, +t (14q 21q). |
| **Prevalence** | Approximately 4% of Down syndrome cases are of this type. |
| **Mechanisms of Translocation** | The mechanisms of underlying translocation are:\* Sporadic type: half of translocated Down syndrome arises de novo in the affected individual. Both parents are usually normal.\* Inherited type: another half inherited the disease from a balanced translocation carrier parents i.e. 45, XX, t (14q 21q). |

## Mosaicism (Mitotic non-disjunction)

| Key Point | Details |
| --- | --- |
| **Prevalence** | This type represents 1% of Down syndrome cases. |
| **Cellular Composition** | They have various proportions of trisomy 21 (47, XX, + 21) and normal cells (46, XX). |
| **Intelligence** | This group may be of normal intelligence, depending on the number of trisomic cells present. |
| **Parental Karyotype** | The parents are usually normal. |