

# HEALTH CARE FOR PEOPLE WITH DOWN SYNDROME



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# **ABSTRACT**

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## **REFERENCES**

DO YOU HAVE DOWN SYNDROME?

YES.

THEN THIS BOOK IS FOR YOU TO LEARN HOW TO TAKE CARE OF YOUR HEALTH.



# 1. INTRODUCTION

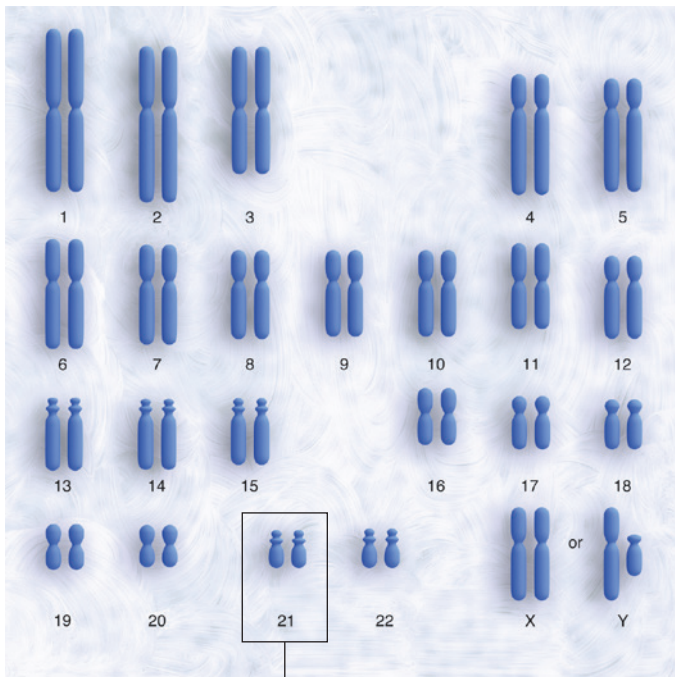
## WHAT IS DOWN SYNDROME?

A SYNDROME IS GROUP OF DIFFERENT CHARACTERISTICS. WHEN ENOUGH OF THESE CHARACTERISTICS HAPPEN TOGETHER, THEY MAKE A SYNDROME. DOWN SYNDROME IS ONE OF THEM.

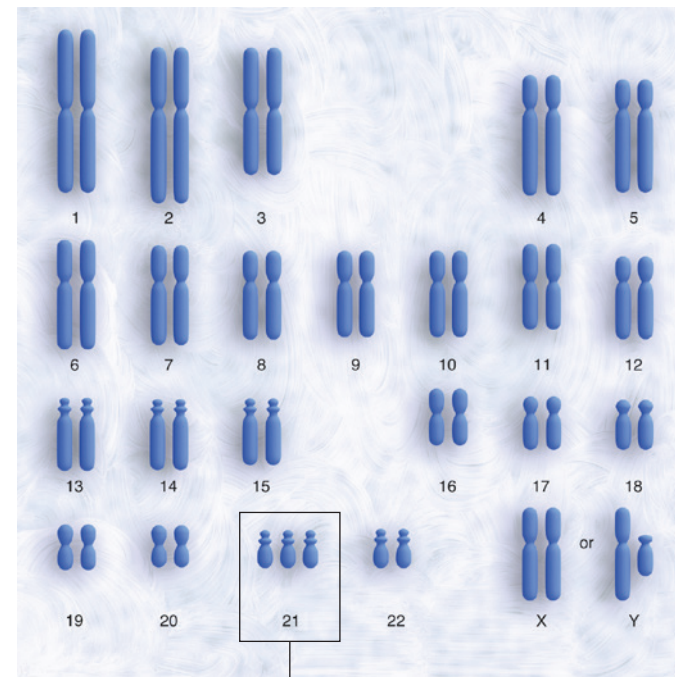
DOWN SYNDROME IS NOT A DISEASE.

DOWN SYNDROME HAPPENS WHEN A PERSON IS BORN WITH ONE CHROMOSOME MORE IN EVERY CELL OF THEIR BODY.

PEOPLE WITH DOWN SYNDROME HAVE THREE CHROMOSOMES NUMBER 21, ONE MORE THAN OTHER PEOPLE. THAT'S WHY MANY PEOPLE CALL DOWN SYNDROME TRISSOMY 21.



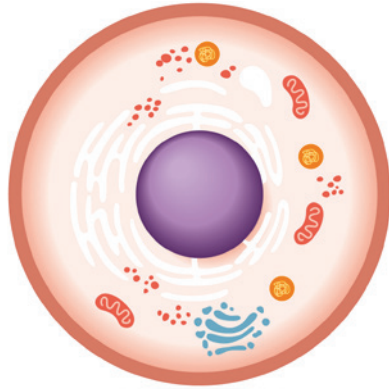
PERSON WITH TWO CHROMOSOMES 21



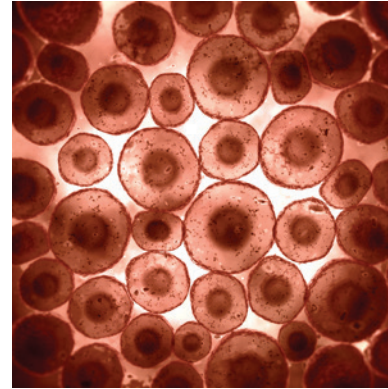
PERSON WITH THREE CHROMOSOMES 21

## WHAT IS A CELL?

THE HUMAN BODY IS FORMED BY MANY, MANY CELLS.



ONE CELL



MANY CELLS



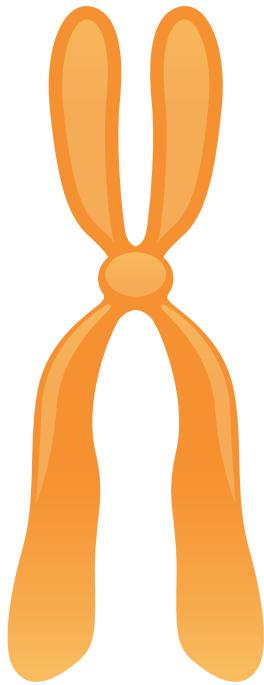
CELLS ARE PRESENT IN ALL PARTS OF OUR BODY.

PEOPLE WOULD NOT EXIST WITHOUT CELLS.

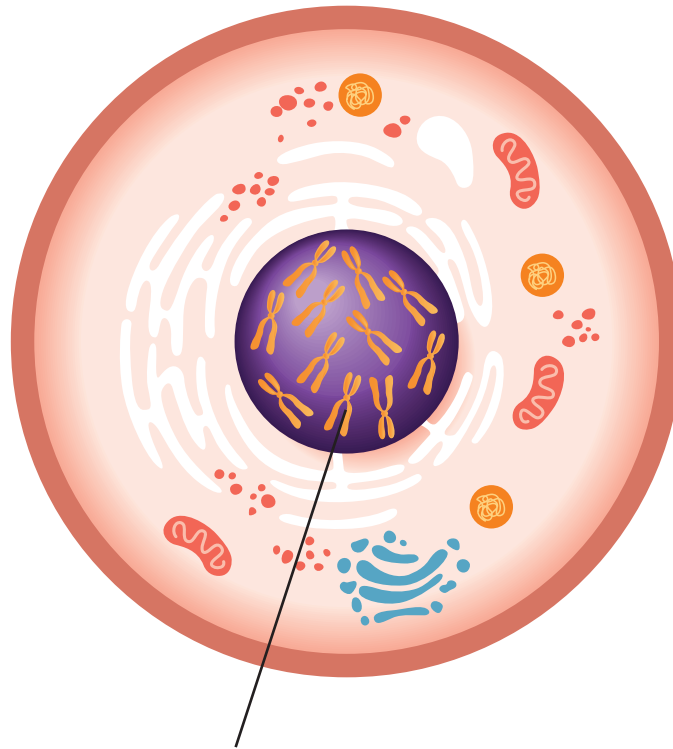
## WHAT IS A CHROMOSOME?

CHROMOSOMES ARE SMALL PARTS OF CELLS THAT CARRY INFORMATION ABOUT PEOPLE.

THE CHROMOSOMES DETERMINE THE COLOUR OF EYES, SHAPE OF NOSE, HEIGHT AND MANY OTHER THINGS.



CHROMOSOME



CHROMOSOMES IN A CELL



## WHO MAY HAVE DOWN SYNDROME?

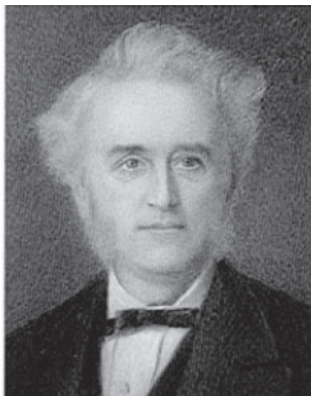
ANYONE CAN BE BORN WITH DOWN SYNDROME.

IN BRAZIL, THERE ARE MORE OR LESS 270 THOUSAND PEOPLE WITH DOWN SYNDROME.



## WHY DOES DOWN SYNDROME HAVE THIS NAME?

THE NAME COMES FROM THE ENGLISH DOCTOR JOHN LANGDON DOWN, WHO WAS THE FIRST TO WRITE ABOUT DOWN SYNDROME.



DR. JOHN LANGDON DOWN

## 2. HOW DO YOU KNOW IF YOU HAVE DOWN SYNDROME?

### PHYSICAL SIGNS

NOBODY IS EXACTLY THE SAME AS ANYONE ELSE. IF YOU HAVE DOWN SYNDROME, YOU CAN LOOK LIKE SOME OTHER PEOPLE WHO HAVE DOWN SYNDROME.

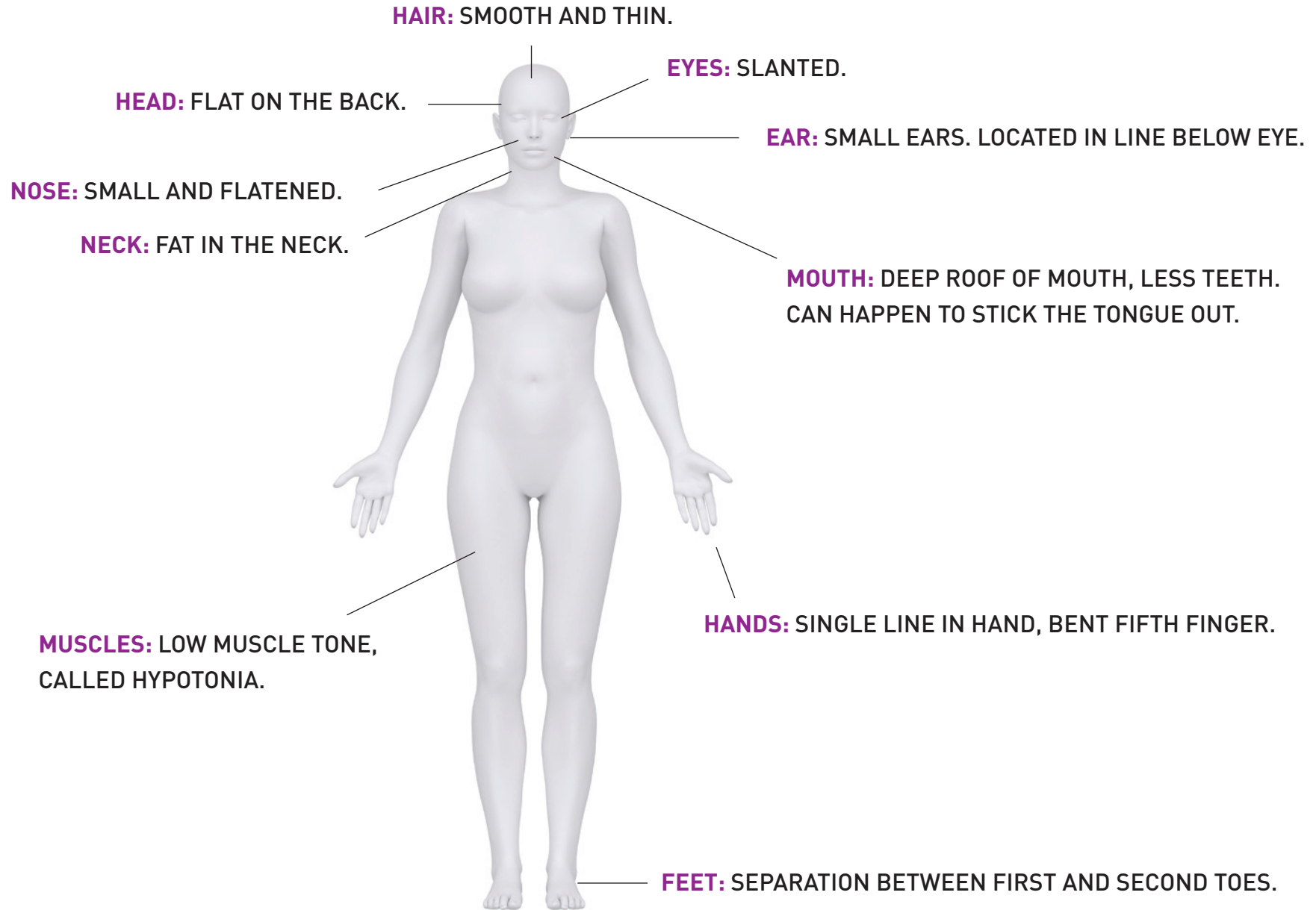
YOU WILL ALSO LOOK LIKE YOUR PARENTS AND SIBLINGS.

ALL PERSONS ARE DIFFERENT. PEOPLE WITH DOWN SYNDROME VARY AS MUCH AS ALL OTHER PERSONS.



NOT EVERY PERSON WITH DOWN SYNDROME WILL HAVE EVERY CHARACTERISTIC, BUT ALL PERSONS WILL HAVE SOME OF THESE CHARACTERISTICS.

### WHAT ARE THE PHYSICAL CHARACTERISTICS OF A PERSON WITH DOWN SYNDROME?



BEYOND THESE PHYSICAL, IT IS IMPORTANT TO PAY ATTENTION TO CERTAIN DISEASES AND CHANGES IN YOUR BODY.

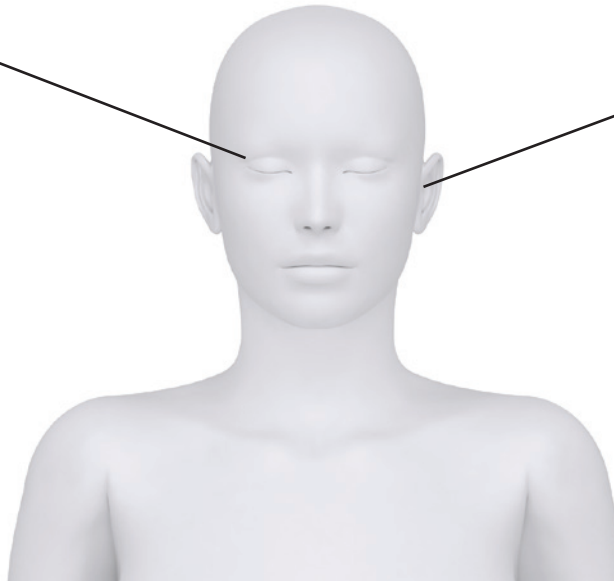
## EYES

### PROBLEM:

HARD TO SEE  
(CATARACT, MYOPIA, HYPERTROPIA)

### CHANCES OF HAPPENING TO YOU:

HIGH CHANCE



## EARS

### PROBLEM 1:

HEARING LOSS

### CHANCES OF HAPPENING TO YOU:

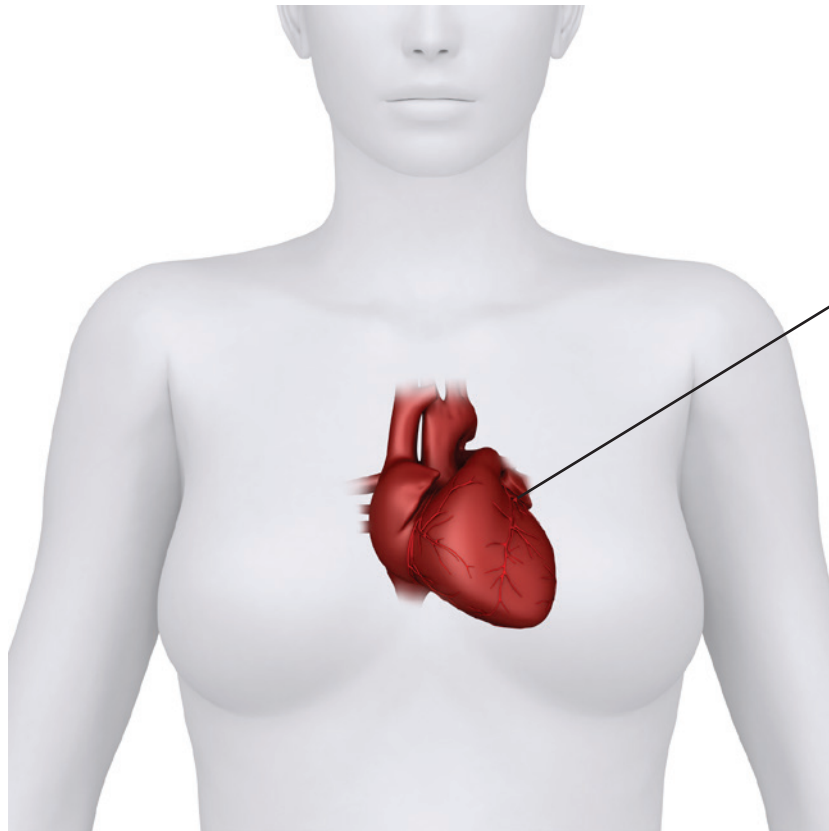
HIGH CHANCE

### PROBLEM 2:

INFECTIONS

### CHANCES OF HAPPENING TO YOU:

HIGH CHANCE



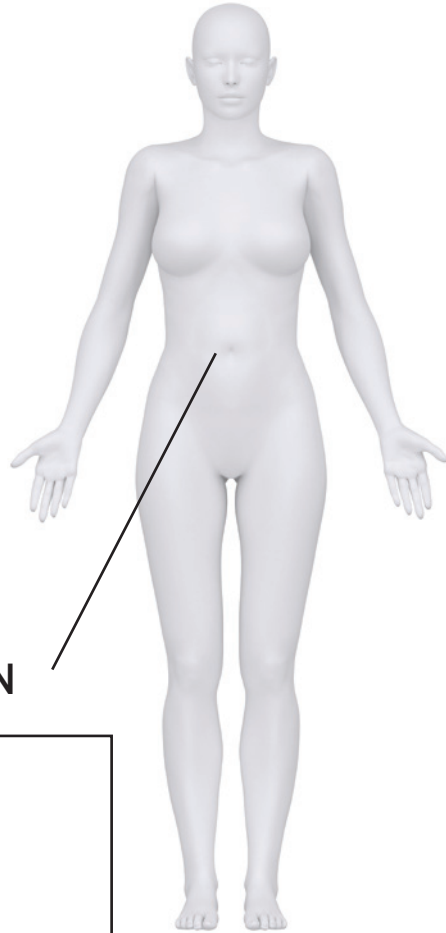
## HEART

**PROBLEM:**

IRREGULAR HEART SHAPE

**CHANCES OF HAPPENING TO YOU:**

HIGH CHANCE



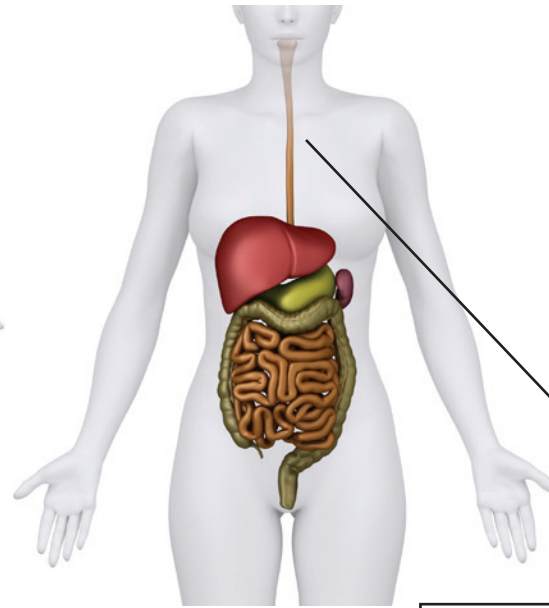
**ABDOMEN**

**PROBLEM:**

HERNIA IN ABDOMEN NAVEL

**CHANCES OF HAPPENING TO YOU:**

HIGH CHANCE



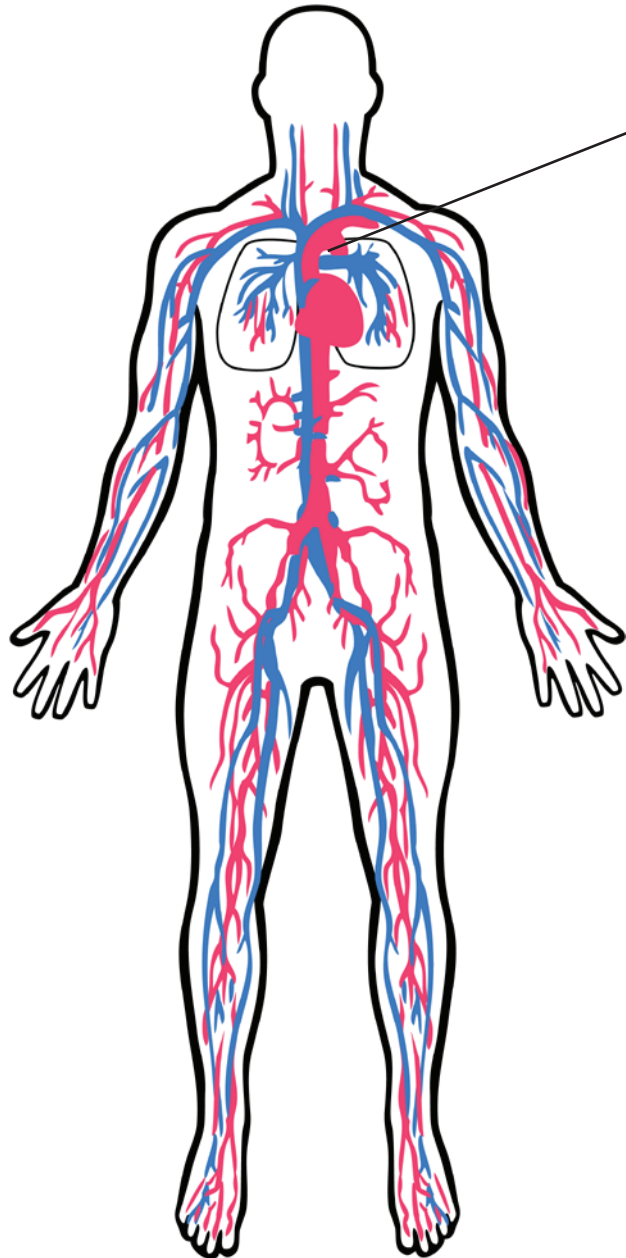
**DIGESTIVE SYSTEM**

**PROBLEM:**

ESOPHAGUS AND/OR SMALLER DUODENUM

**CHANCES OF HAPPENING TO YOU:**

LITTLE CHANCE



## BLOOD

### PROBLEM 1:

LEUKEMIA (BLOOD CANCER)

CHANCES OF HAPPENING TO YOU:

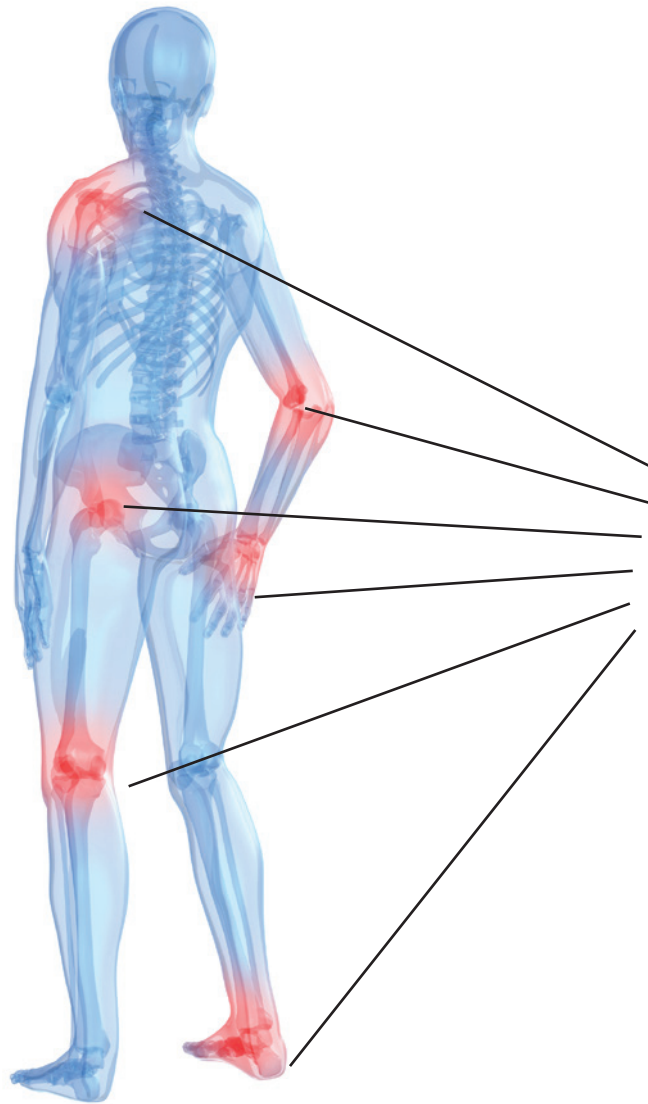
LITTLE CHANCE

### PROBLEM 2:

ANEMIA

CHANCES OF HAPPENING TO YOU:

LITTLE CHANCE



## LOCOMOTOR SYSTEM

**PROBLEM:**

WEAK JOINTS

**CHANCES OF HAPPENING TO YOU:**

HIGH CHANCE





## NERVOUS SYSTEM

### PROBLEM 1:

INTELLECTUAL DISABILITY

CHANCES OF HAPPENING TO YOU:

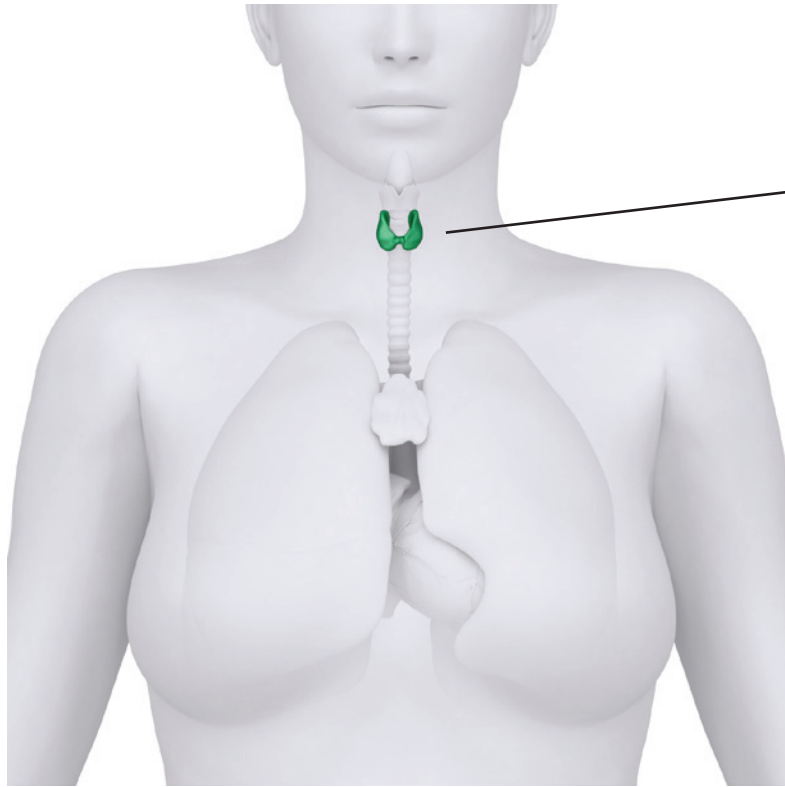
HIGH CHANCE

### PROBLEM 2:

SEIZURES

CHANCES OF HAPPENING TO YOU:

LITTLE CHANCE



## ENDOCRINE SYSTEM

### PROBLEM:

THYROID GLAND FUNCTIONS BADLY

### CHANCES OF HAPPENING TO YOU:

LITTLE CHANCE

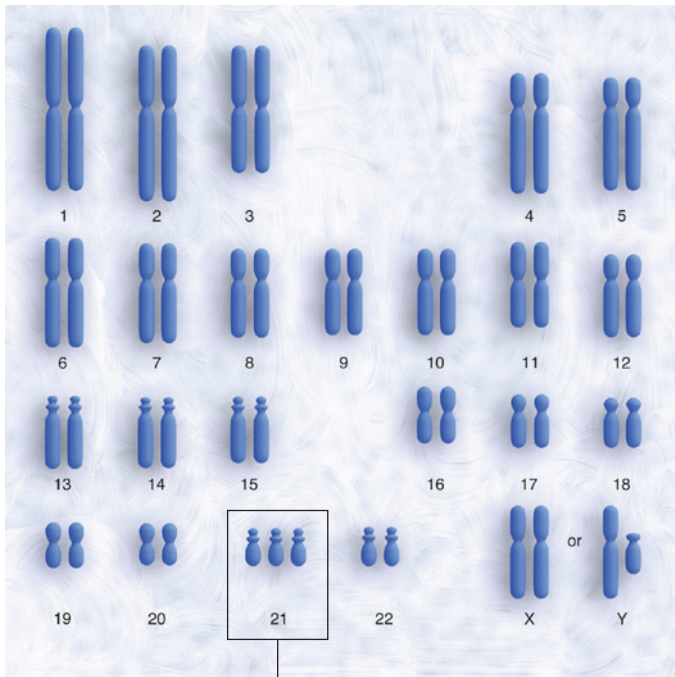
## KARYOTYPE - DIAGNOSTIC LABORATORY

TO CONFIRM IF YOU HAVE DOWN SYNDROME IT IS NECESSARY TO MAKE A BLOOD TEST CALLED KARYOTYPE.

THE KARYOTYPE SHOWS THE CHROMOSOMES OF YOUR CELL, SO WE CAN SEE HOW MANY CHROMOSOMES YOU HAVE.

IF KARYOTYPE SHOWS THREE CHROMOSOMES IN PAIR 21, WE CAN SAY THAT YOU HAVE DOWN SYNDROME.

### KARYOTYPE



PERSON WITH THREE CHROMOSOMES 21

### 3. DOUBTS ABOUT THE FUTURE...



#### PEOPLE WITH DOWN SYNDROME MAY HAVE CHILDREN?

IF YOU ARE A **WOMAN** AND HAVE DOWN SYNDROME, YOU CAN GET PREGNANT AND HAVE BABIES.

IF YOU ARE A **MAN** AND HAVE DOWN SYNDROME, THE CHANCES OF YOU GETTING A WOMAN PREGNANT IS VERY SMALL.

THIS HAPPENS BECAUSE MANY MEN WITH DOWN SYNDROME ARE STERILE. BABIES CANNOT HAPPEN EVEN IF YOU HAVE SEX.



#### CHILDREN FROM PEOPLE WITH DOWN SYNDROME ALSO HAVE DOWN SYNDROME?

THIS COULD HAPPEN.

THE CHANCES ARE GREAT.

## 4. TAKE CARE!

YOU NEED TO TAKE CARE OF YOUR HEALTH TO BE HEALTHY, WORK, HAVE FRIENDS, GO ON A DATE.



TO CARE FOR YOUR HEALTH, YOU NEED TO TALK WITH VARIOUS PROFESSIONALS.

## WHO ARE THEY?

**MEDICAL** → TO TALK ABOUT YOUR HEALTH.

**SPEECH THERAPIST** → TO HELP YOU TALK BETTER.

**PSYCHOLOGIST** → TO HELP YOU AND YOUR FAMILY DEAL WITH EMOTIONS.

**PEDAGOGUE** → TO HELP YOU STUDY AND LEARN.

**PHYSICAL EDUCATION TEACHER OR PHYSIOTHERAPIST** → TO HELP YOUR BODY TO KEEP FIT AND HEALTHY.

**NUTRITIONIST** → TO TALK ABOUT WHAT DO YOU CAN EAT.



## 5. CARE FOR YOU?

### BABY

AGE: 0 -1 YEAR



#### EXAMS:

- TEST FOR THYROID FUNCTION;
- CBC, TO SEE BLOOD CELLS;
- KARYOTYPE, TO SEE THE CHROMOSOMES;
- ECHOCARDIOGRAM, IMAGE TO SEE THE HEART;
- EYE EXAM;
- EXAMINATION OF HEARING.

#### GUIDELINES:

- STIMULATE THE BODY MOVEMENTS;
- CARE FOR THE POSITION OF NECK;
- BE BREASTFED;
- TAKE VACCINES.

## CHILD

AGE: 1 -11 YEARS



### EXAMS:

- TEST FOR THYROID FUNCTION;
- CBC, TO SEE BLOOD CELLS;
- IF NECESSARY TO SEE IMAGE DO ECHOCARDIOGRAM OF THE HEART;
- EYE EXAM;
- EXAMINATION OF HEARING;
- SPINAL COLUMN.

### GUIDELINES:

- CARE FOR THE POSITION OF NECK;
- DO PHYSICAL ACTIVITY;
- EAT HEALTHY FOODS;
- STUDY AND LEARN;
- TAKE VACCINES;
- BE IN CONTACT WITH OTHERS;
- TRY TO DO THINGS ON YOUR OWN. BE INDEPENDENT.



## TEEN

AGE: 12 -18 YEARS



### EXAMS:

- TEST FOR THYROID FUNCTION;
- CBC, TO SEE BLOOD CELLS;
- IF NECESSARY TO SEE IMAGE DO ECHOCARDIOGRAM OF THE HEART;
- EYE EXAM;
- EXAMINATION OF HEARING;
- IF NECESSARY, THE SPINAL COLUMN;
- TESTS TO SEE THE AMOUNT OF BLOOD SUGAR AND FATS;
- IF WOMEN, TAKE GYNECOLOGICAL EXAM.

### GUIDELINES:

- CARE FOR THE POSITION OF NECK;
- DO PHYSICAL ACTIVITY;
- EAT HEALTHY FOODS;
- STUDY AND LEARN;
- TRY TO DO THINGS ON YOUR OWN. BE INDEPENDENT;
- LOOK TO SEE IF SLEEPING WELL. MAY BE STOPPING OF BREATHING DURING SLEEP - SLEEP APNEA;
- TAKE CARE NOT TO GET PREGNANT OR DISEASES THAT ARE TRANSMITTED TO DO SEX;
- BE AWARE OF SEXUAL ABUSE.

**ADULT**

**AGE: 19 -40 YEARS**



**EXAMS:**

- TEST FOR THYROID FUNCTION;
- CBC, TO SEE BLOOD CELLS;
- IF NECESSARY TO SEE IMAGE DO ECHOCARDIOGRAM OF THE HEART;
- EYE EXAM;
- EXAMINATION OF HEARING;
- IF NECESSARY, THE SPINAL COLUMN;
- TESTS TO SEE THE AMOUNT OF BLOOD SUGAR AND FATS;
- IF WOMEN, TAKE GYNECOLOGICAL EXAM.

**GUIDELINES:**

- CARE FOR THE POSITION OF NECK;
- DO PHYSICAL ACTIVITY;
- EAT HEALTHY FOODS;
- WORK;
- TRY TO DO THINGS ON YOUR OWN. BE INDEPENDENT;
- LOOK TO SEE IF SLEEPING WELL. MAY BE STOPPING OF BREATHING DURING SLEEP - SLEEP APNEA;
- TAKE CARE NOT TO GET PREGNANT OR DISEASES THAT ARE TRANSMITTED TO DO SEX.

## ELDERLY

AGE: 40 YEARS AND OLDER



### EXAMS:

- TEST FOR THYROID FUNCTION;
- CBC, TO SEE BLOOD CELLS;
- IF NECESSARY TO SEE IMAGE DO ECHOCARDIOGRAM OF THE HEART;
- EYE EXAM;
- EXAMINATION OF HEARING;
- IF NECESSARY, THE SPINAL COLUMN;
- TESTS TO SEE THE AMOUNT OF BLOOD SUGAR AND FATS.

### GUIDELINES:

- CARE FOR THE POSITION OF NECK;
- DO PHYSICAL ACTIVITY;
- EAT HEALTHY FOODS;
- WORK;
- TRY TO DO THINGS ON YOUR OWN. BE INDEPENDENT;
- LOOK TO SEE IF SLEEPING WELL. MAY BE STOPPING OF BREATHING DURING SLEEP - SLEEP APNEA;
- LOOK IF YOU ARE FORGETTING MANY THINGS.

## 6. FINAL MESSAGE

HOPE YOU TAKE CARE OF YOUR PHYSICAL AND MENTAL HEALTH VERY WELL.

WE WANT YOU, WHO HAS DOWN SYNDROME, TO HAVE A HEALTHY LIFE, INDEPENDENT AND HAPPY.



## REFERENCES

THIS BOOK WAS INSPIRED BY THE GUIDELINES OF ATTENTION TO PEOPLE WITH DOWN SYNDROME AND THE MINISTRY OF HEALTH IN MATERIALS AVAILABLE FROM THE COLLECTION MOVE DOWN.