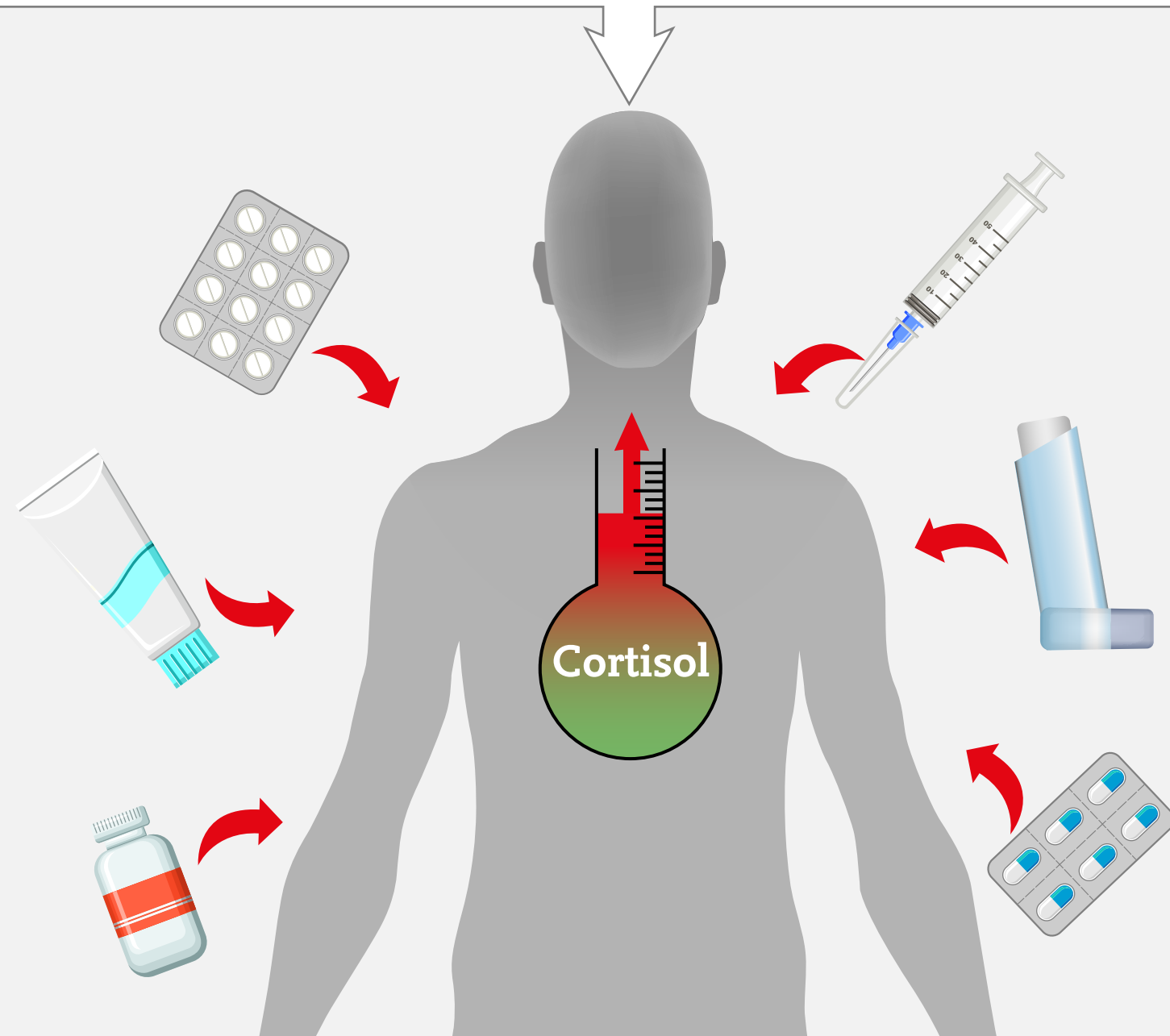


What is Cushing's syndrome?

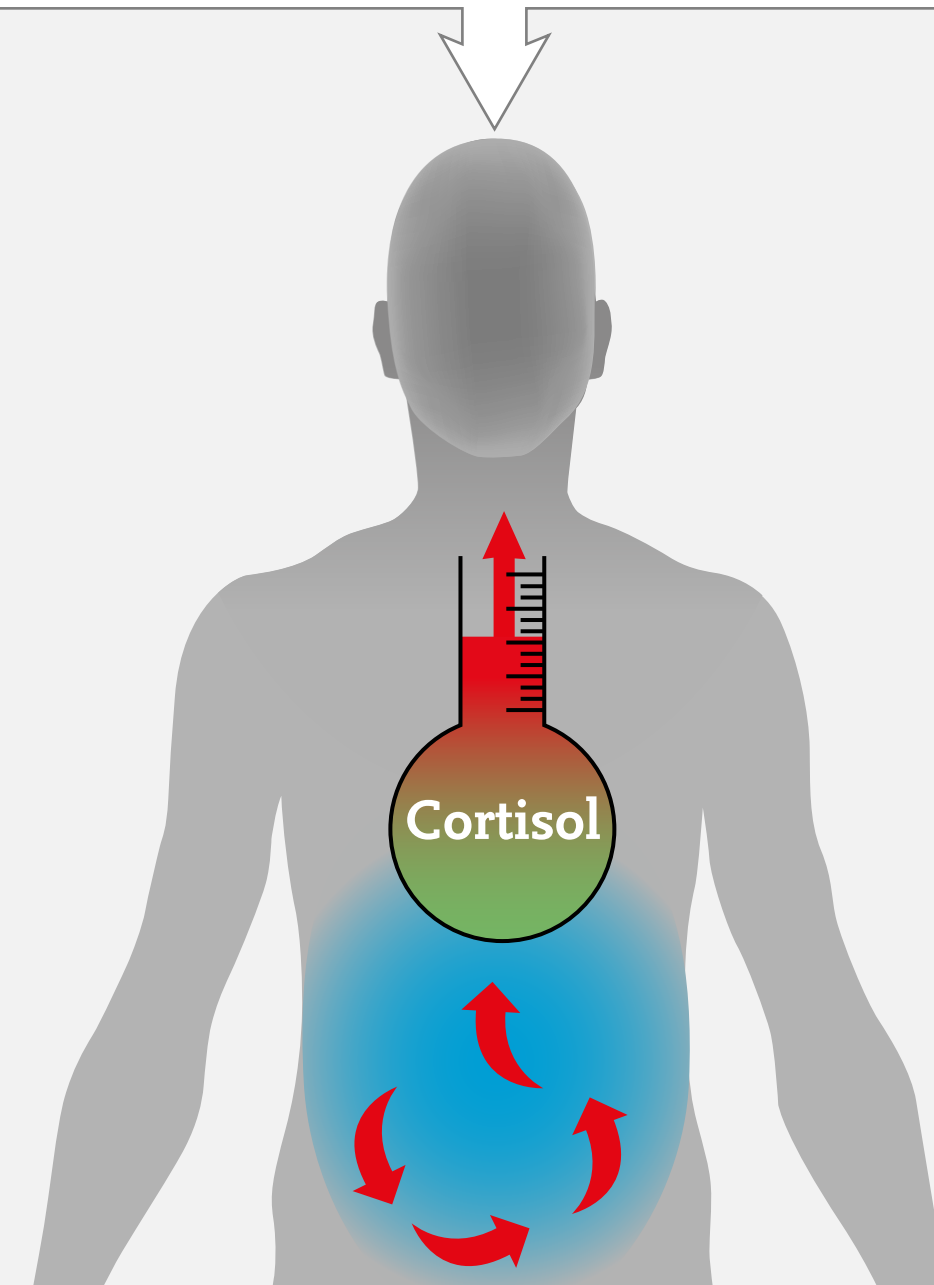
Cushing's syndrome is a collection of signs and symptoms that indicate that an excessive amount of the adrenal gland hormone 'cortisol' is present in the body.

There are two forms of Cushing



Exogenous or iatrogenic Cushing

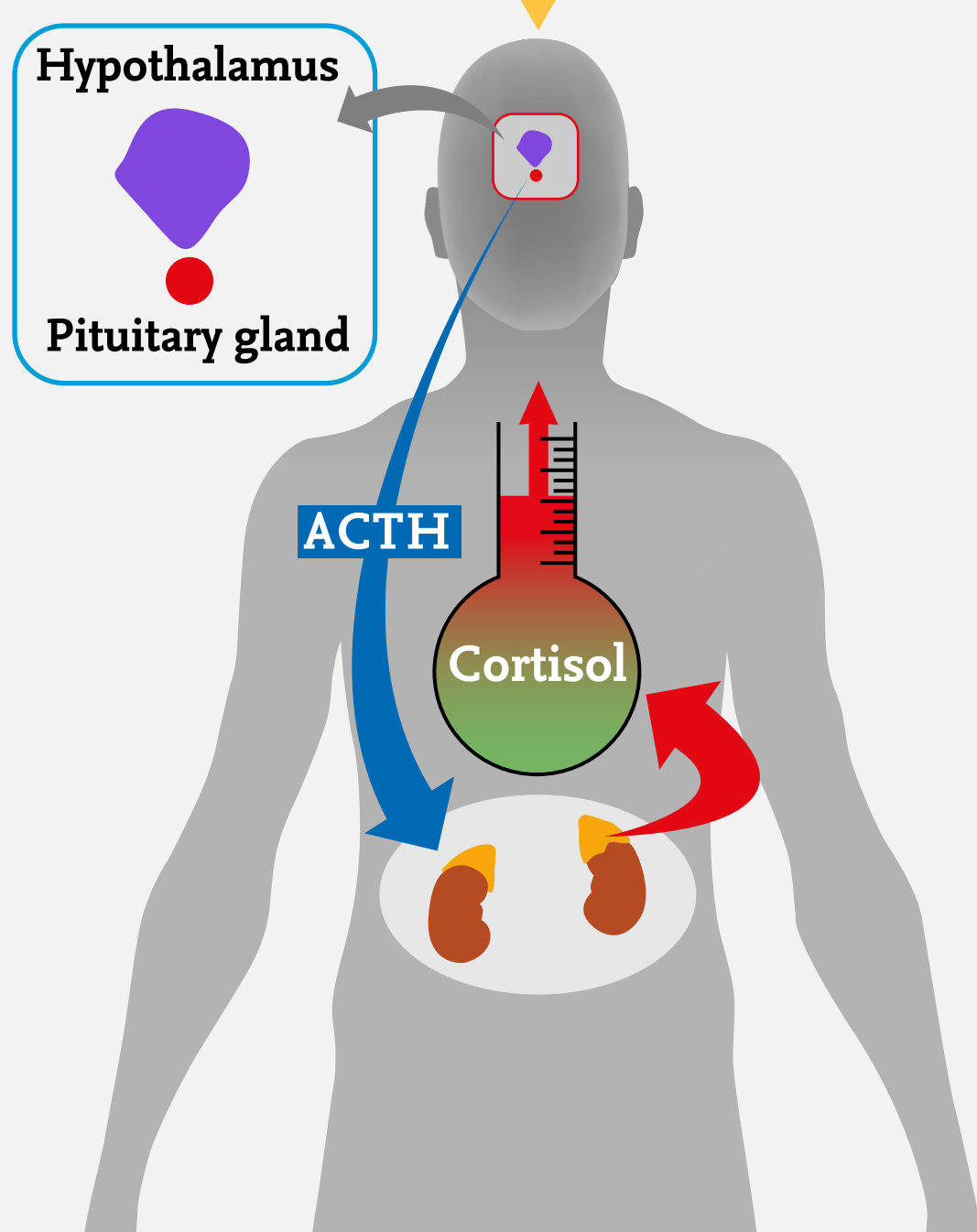
The symptoms of Cushing are caused by taking medication that contains substances that resemble cortisol.



Endogenous Cushing

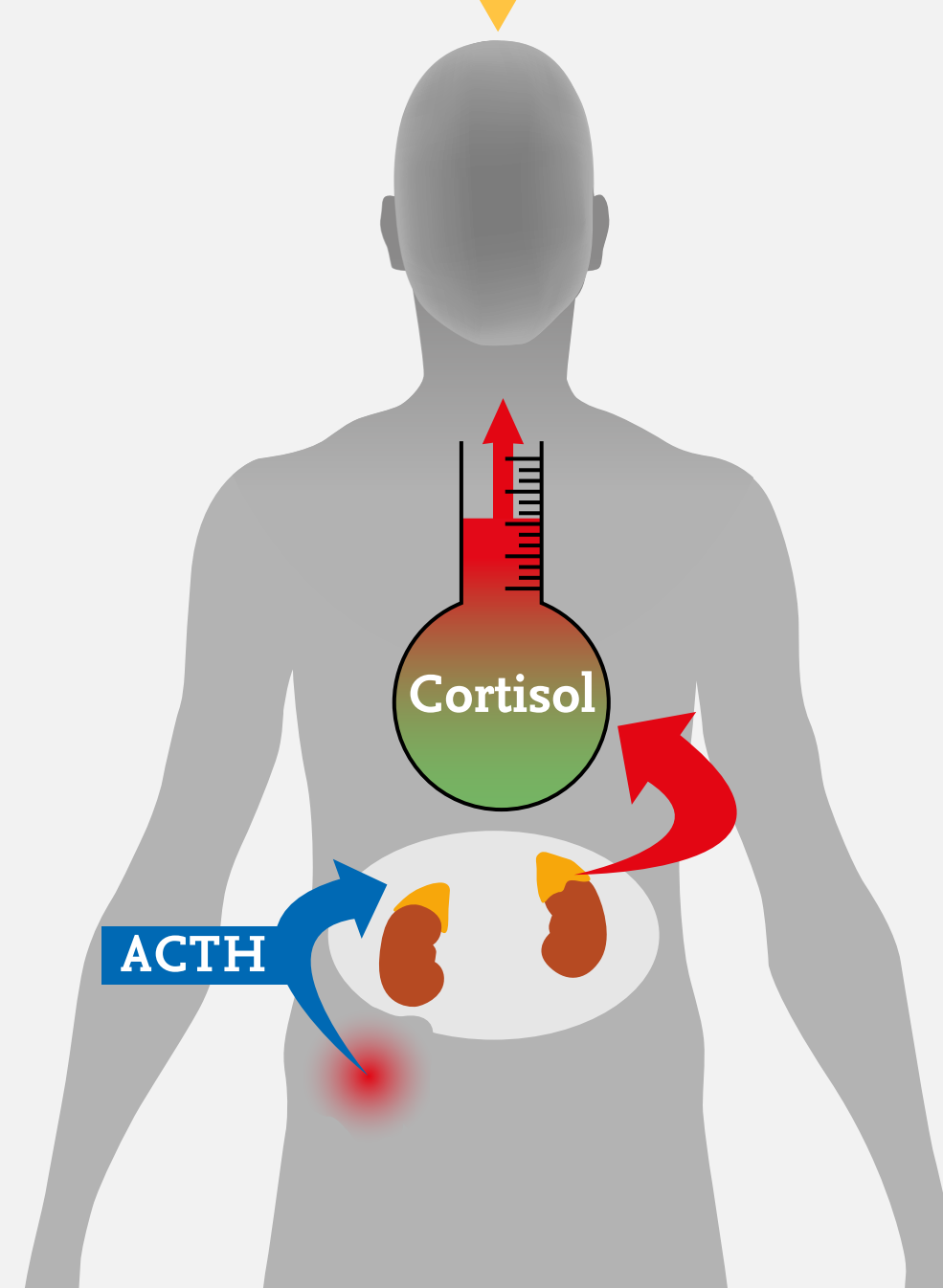
The symptoms of Cushing are caused by the body itself producing too much cortisol

There are three forms of Endogenous Cushing



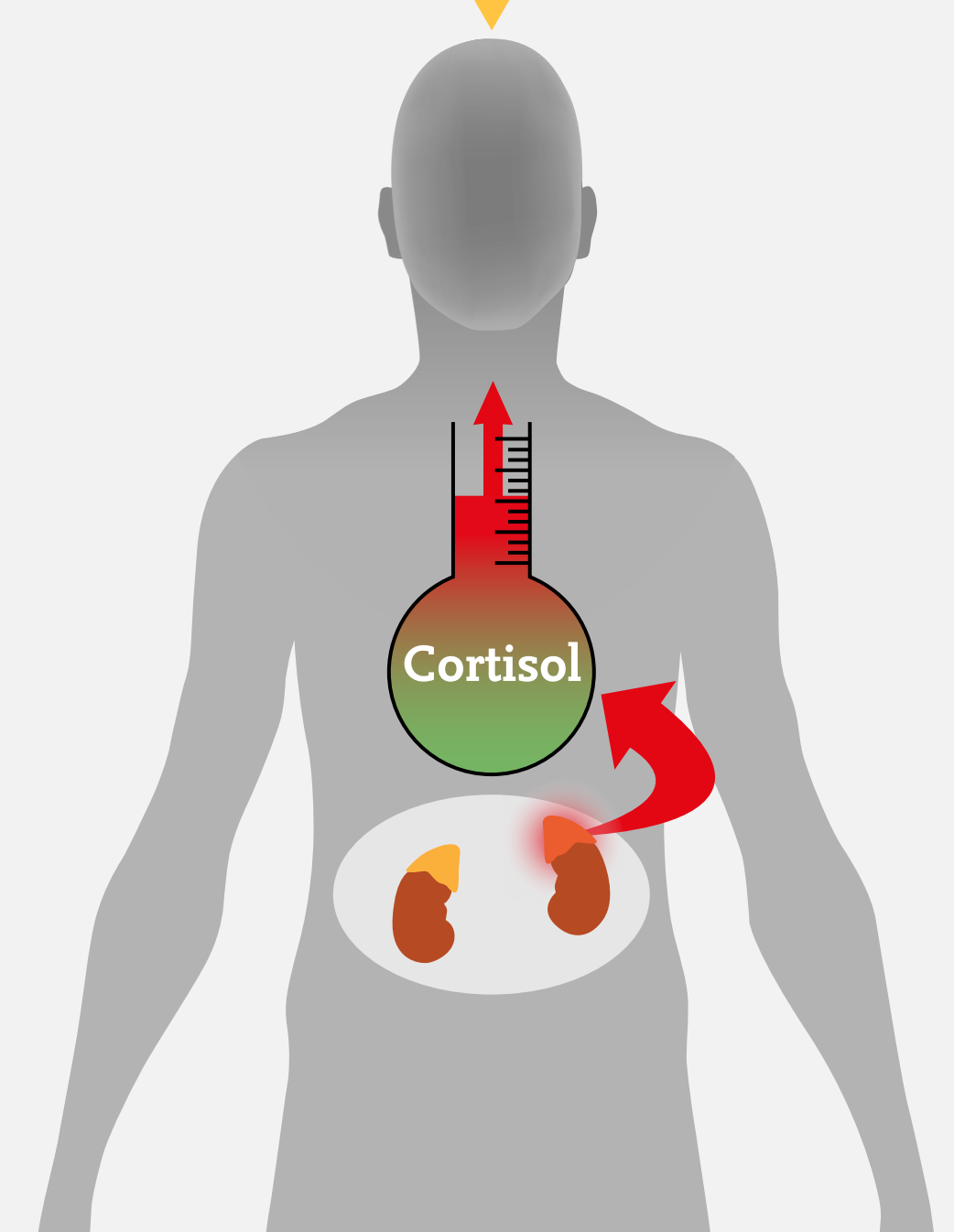
Cushing's disease

There is a tumour in the pituitary gland (pituitary adenoma) which causes excess levels of ACTH hormone.



Ectopic Cushing

The body produces too much ACTH, as a result - for example - of a tumour in the lungs or the pancreas.



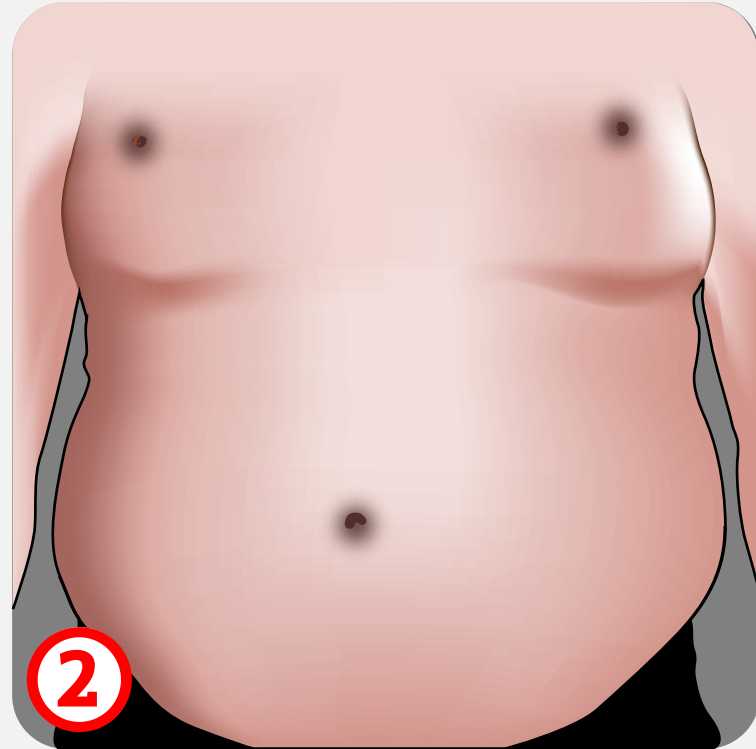
Adrenal gland Cushing

The excess cortisol production is caused by a tumour in the adrenal gland.

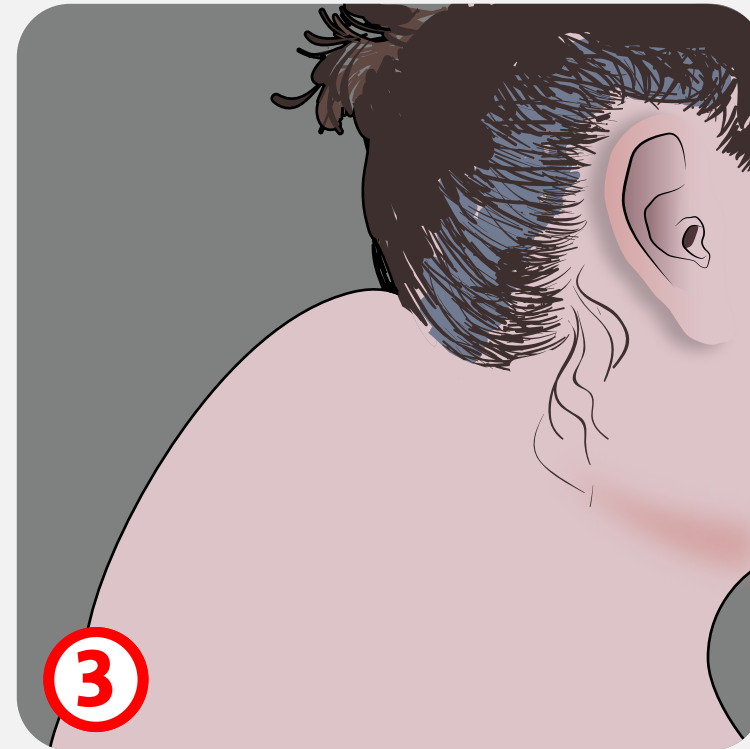
What are the consequences of Cushing's syndrome?



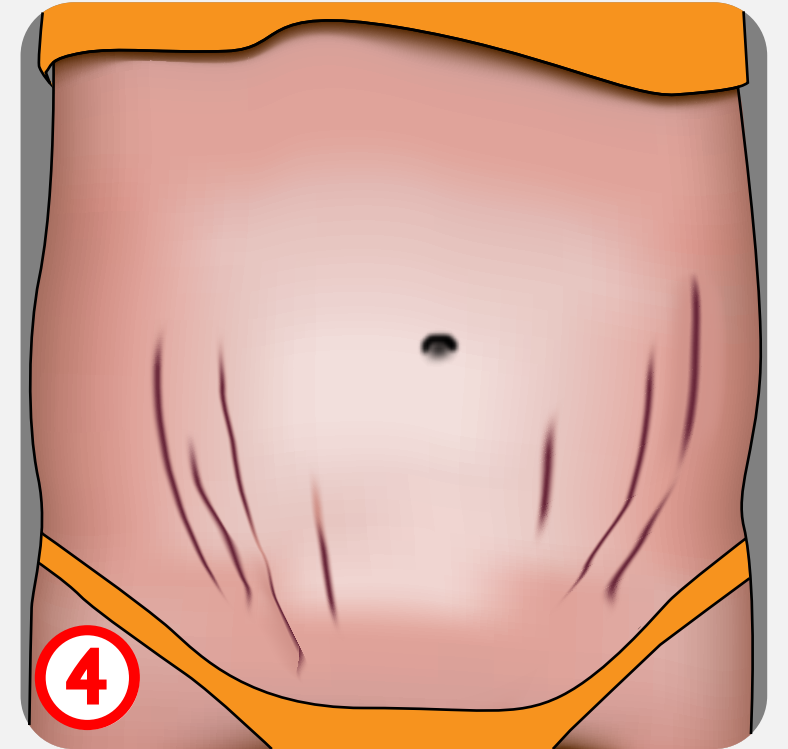
A round and bloated face (moonface).



Build-up of fatty tissue around the abdomen (central obesity).



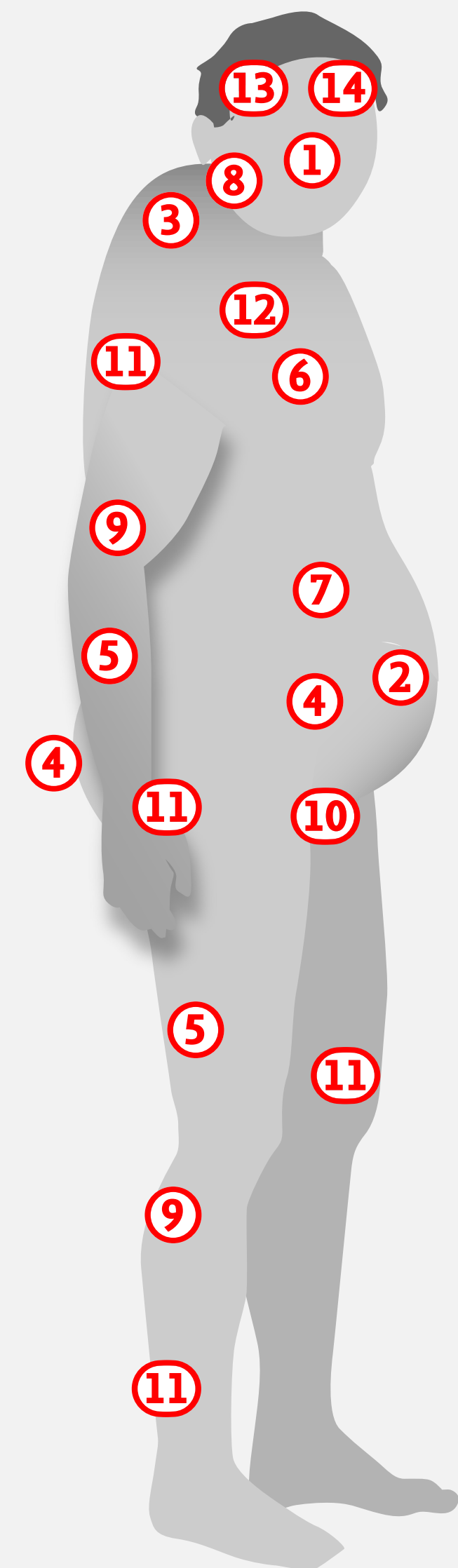
Build-up of fatty tissue around the neck (buffalo hump).



'Stretch marks' (striae) across the abdomen and buttocks.



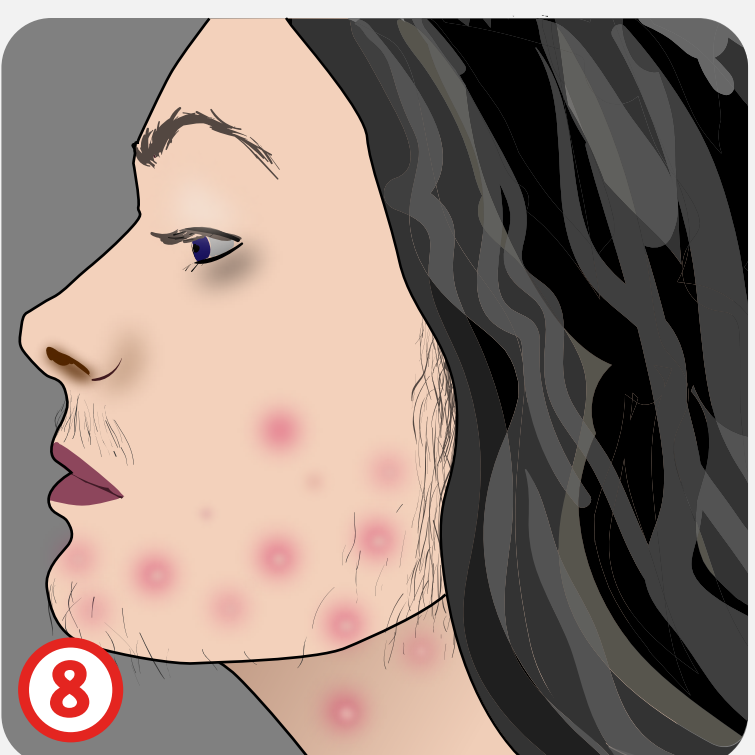
Loss of muscle tone, resulting in thin arms and legs and reduced muscle power.



High blood pressure.



Excess blood-sugar levels (diabetes).



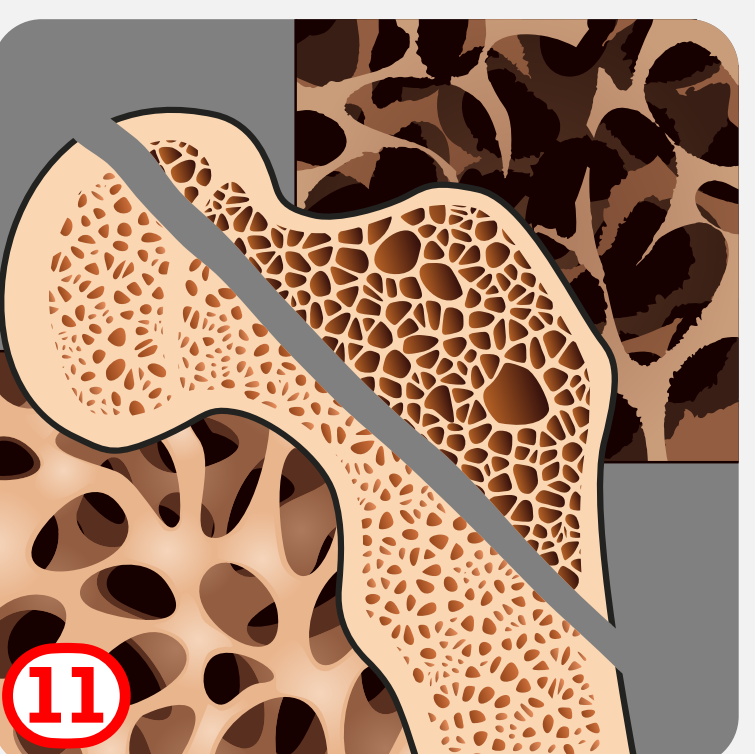
Acne.
Excessive hair growth (hirsutism).



Thin and fragile skin, easy bruising.



Menstruation problems.
Reduced fertility.



Brittle bones (reduced bone density).



Tiredness and sleeping problems.



Memory and concentration problems.



Mood problems, such as depression, euphoria, or a psychosis.

How is Cushing diagnosed?

Symptoms

- ▶ Moonface.
- ▶ Central obesity.
- ▶ Buffalo hump.
- ▶ Striae.
- ▶ See: consequences of Cushing's syndrome.

Physiotherapist

Psychologist

Dietician

Family doctor

No Cushing.

The family doctor carries out tests and, depending on the results of the tests, may decide to refer the patient to a specialist.

Possible Cushing

Outpatient clinic

- 1** Intake interview
 - ▶ Are you taking medication that contains steroids?
 - [LIST OF POSSIBLE MEDICATION](#)
 - ▶ physical examination.
- 2** Possible tests to diagnose hypercortisolism = too much cortisol.
 - ▶ 1 mg dexamethasone suppression test.
 - ▶ 2 x 24 hr urine collection.
 - ▶ 2 x saliva collection (at 11 pm or midnight).
- 3** Possible tests after hypercortisolism has been diagnosed.
 - ▶ blood test.
 - ▶ scan.
 - ▶ further tests in hospital.
 - ▶ petrosal sinus sampling.

Endocrinologist

1

2

If Cushing is not diagnosed, other causes will be investigated. If no abnormalities are found, the patient is referred back to the family doctor.

Specialist in internal medicine

1

2

A specialist in internal medicine carries out the same tests as an endocrinologist.

Cushing is diagnosed. The patient is referred to an endocrinologist and further tests will be carried out.

If Cushing is not diagnosed. Further tests will be carried out to find the cause of the symptoms.

Treatment

The excess cortisol comes from taking medication that contains substances that resemble cortisol. This is known as **exogenous or iatrogenic Cushing**.

Test positive

Endogenous Cushing.
Cushing's disease.
Ectopic Cushing.
Cyclical Cushing.
Adrenal gland Cushing.

Further tests will be carried out to determine underlying cause of **endogenous Cushing**.

3

How is Cushing's syndrome treated?

