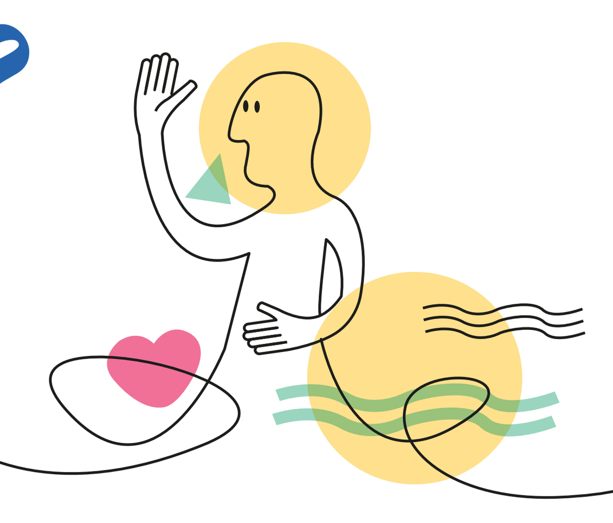
What is haemophilia A?

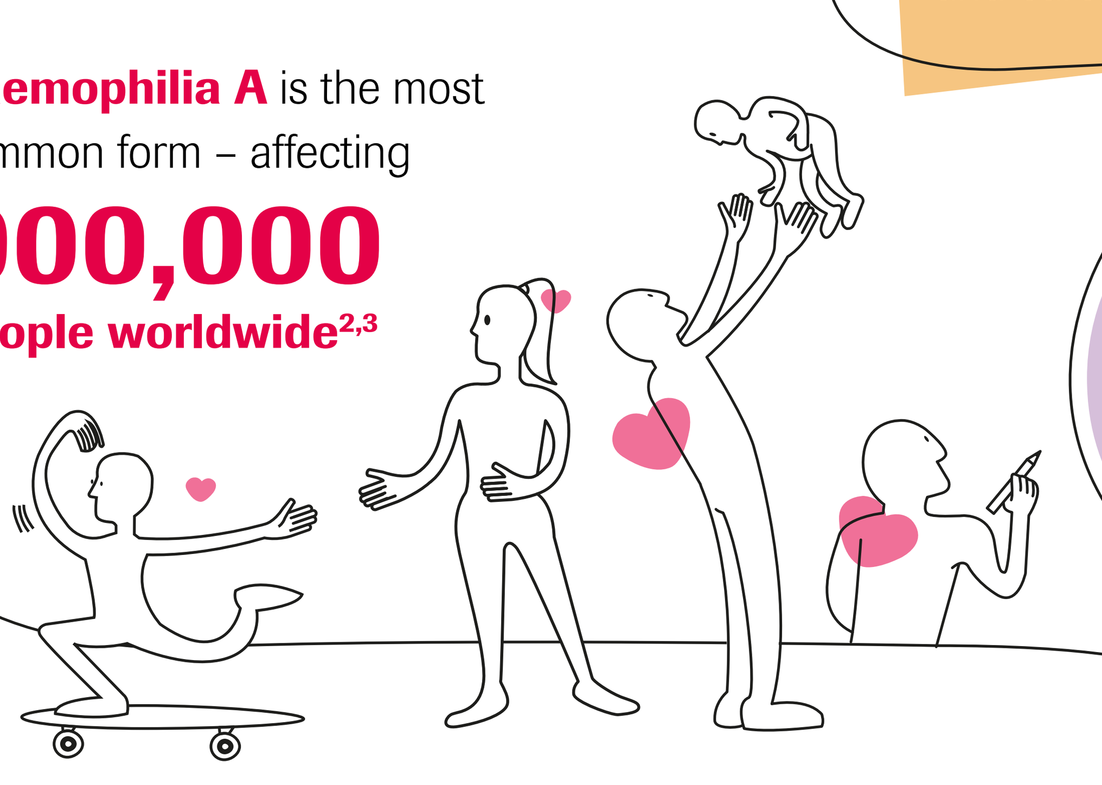


Haemophilia is an inherited, **serious bleeding disorder** where a person's **blood does not clot properly,** leading to uncontrolled bleeding which can occur spontaneously or after trauma.

It can **dramatically reduce the quality of life** of people affected, as well as their family and caregivers.[1]

Haemophilia A is the most common form – affecting

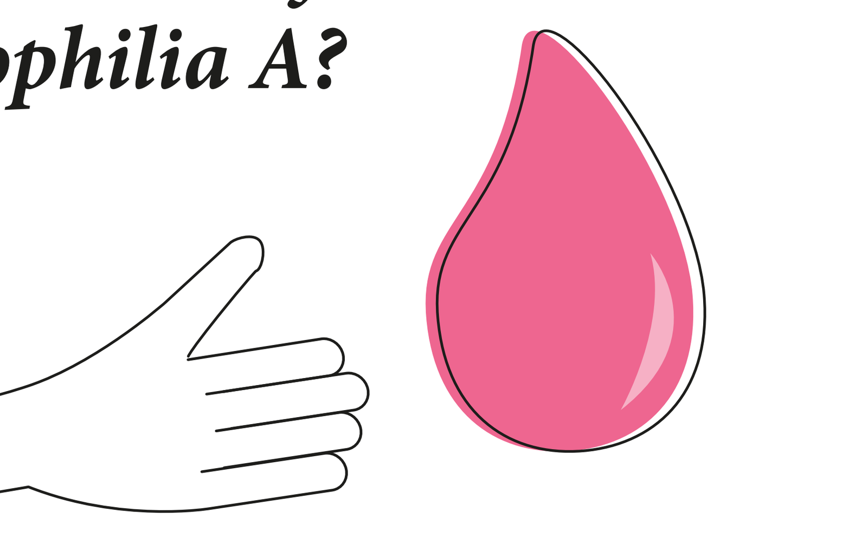
900,000 people worldwide[2,3]



35–39% of whom have severe haemophilia.[3]

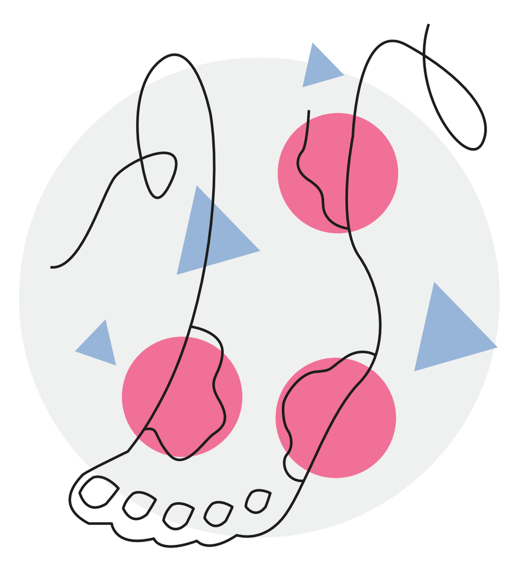
What happens in the blood of a person with haemophilia A?

In a healthy person, proteins called **clotting factors** work together to form a blood clot and help stop bleeding.

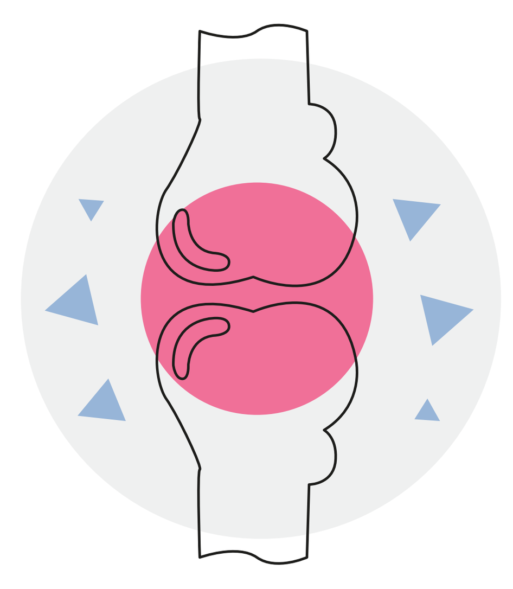


People with haemophilia A either **lack or do not have enough** of a clotting factor called **factor VIII** which leads to their blood not being able to clot properly.

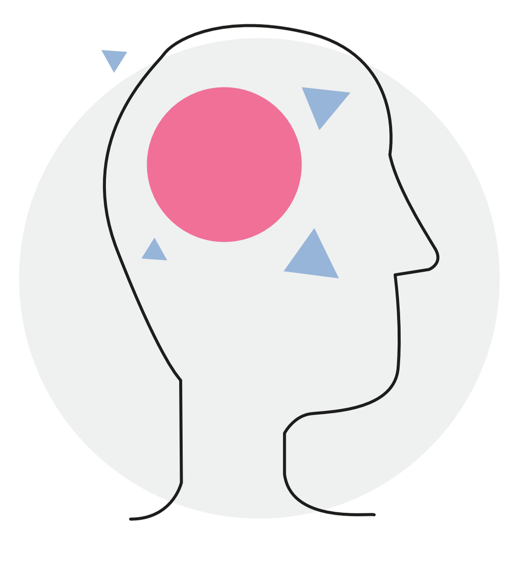
Without treatment, people with haemophilia can suffer:



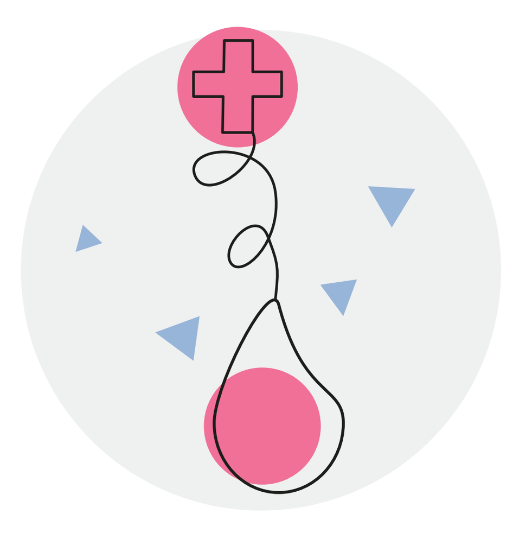
Bruising



Repeated bleeding into muscles and joints, which can lead to long term disability or joint disease[4,5]

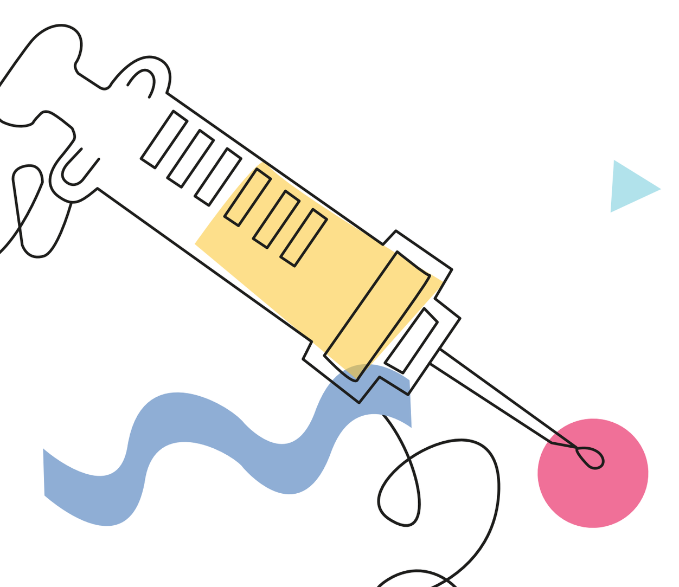


Spontaneous bleeding, which can be life threatening if it occurs in vital organs, such as the brain[6]



Prolonged and uncontrolled bleeding following injury or surgery[2]

There are many types of haemophilia treatment:



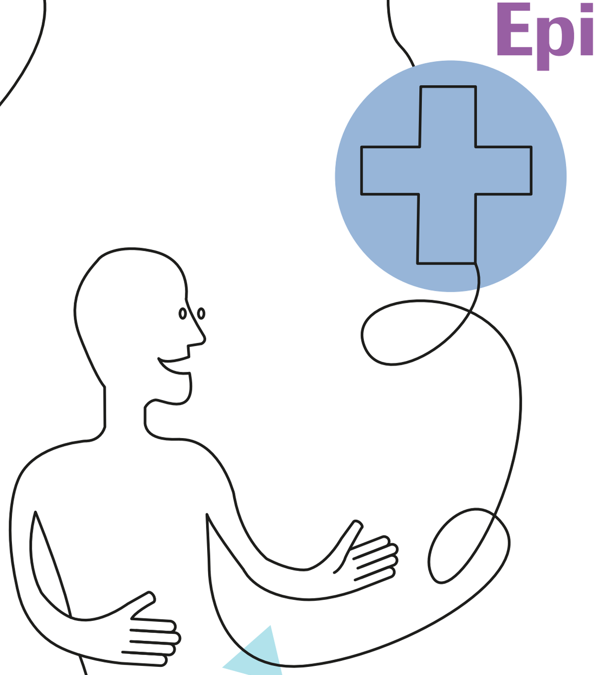
Prophylaxis

Prophylaxis is a preventative, regular treatment involving either factor VIII replacement therapies or non-factor therapies, with the goal to **prevent bleeds** and allow people with haemophilia to **lead active lives and achieve quality of life** comparable to non-haemophilic individuals.[2] It is the **standard of care** for people with severe haemophilia A and some people with moderate haemophilia.[2]

Prophylaxis treatment can be administered intravenously or subcutaneously.[2] Treatment with non-factor therapies can be administered at home **as infrequently as once every two or four weeks**. This makes it easier for people with haemophilia to stick to their treatment, and to live relatively normal lives.[2]

Finding a vein for intravenous treatment administration of factor VIII therapies can be difficult for some, especially children.[7]

Episodic factor VIII replacement



Episodic factor VIII replacement therapy can be **taken on-demand** (as needed to treat bleeds) when prophylaxis is not feasible.

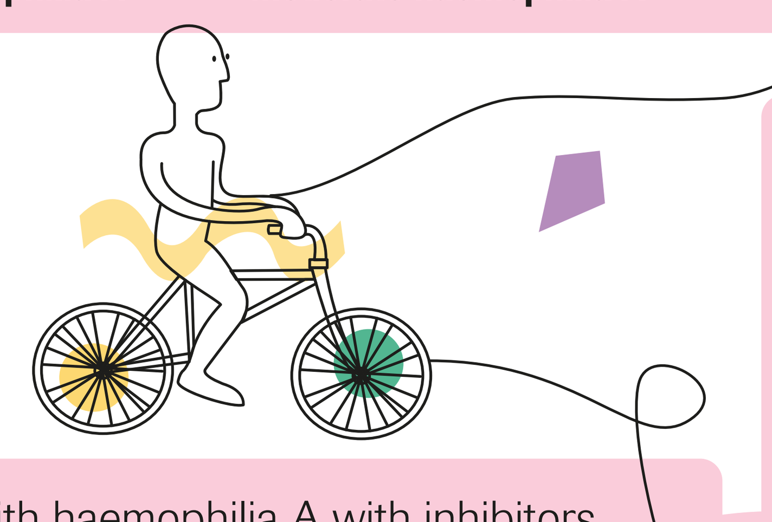
It needs to be administered intravenously[2] by the patient or a caregiver.

Treating inhibitors: ITI and bypassing agents

Around one in four... and one in 20... ... develop 'inhibitors' to factor VIII replacement therapies respectively.[2,8]

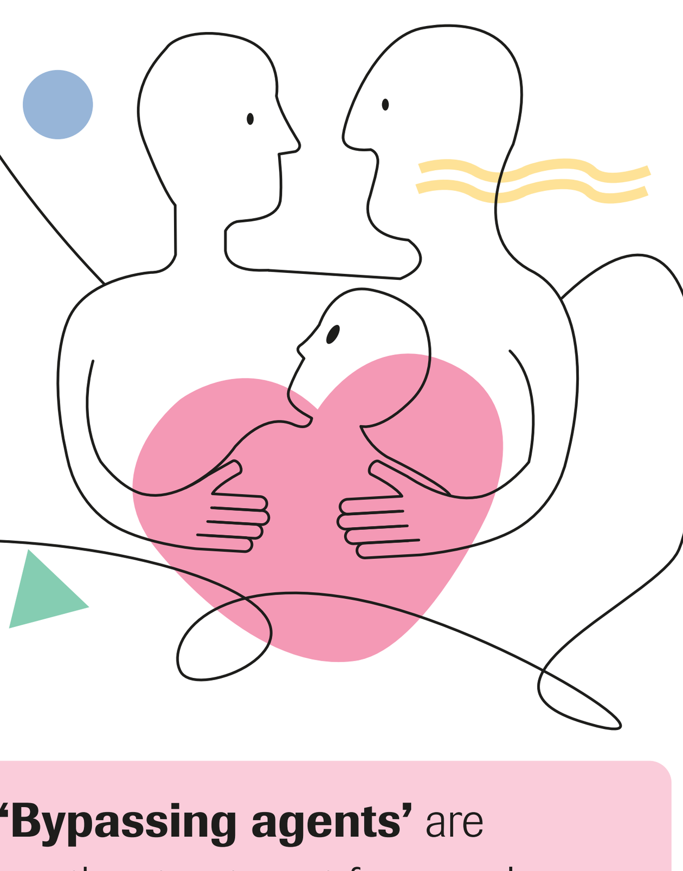
25–30% people with severe haemophilia A

5–10% people with mild to moderate haemophilia A



Inhibitors are antibodies that attack and destroy the replaced factor VIII, because it is recognised as foreign.[9] As a serious complication of treatment,[10] **many people with haemophilia A live in fear of developing inhibitors.**

People with haemophilia A with inhibitors can be **treated with non-factor therapy prophylaxis.**[2] When non-factor therapy prophylaxis is not available, or for breakthrough bleeds (bleeds which occur during prophylaxis), **treatment infusions of factor VIII replacement** may be needed, as well as a trial of **'immune tolerance induction' (ITI)**, where the patient is given very high doses of factor VIII over a long period of time.[2]



ITI can take many years, is very costly and is ineffective in **~30%** of people.[11,12]

'Bypassing agents' are another treatment for people with inhibitors, often used after ITI fails. However, these are short-acting, need to be taken often and give variable bleeding control.[13]

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M-XX-00004042