



Object 47: Plastic blood bag



What is it?

Blood and blood products for transfusion are stored in disposable plastic (PVC) bags, which replaced reusable glass bottles in the 1970s. As well as being more convenient, plastic bags changed the way in which blood products could be separated and used to treat a wide range of haematological conditions.

History

Until 1970 blood was collected and stored in glass bottles. The bottles were bulky and fragile and had to be stored and handled very carefully. They also had to be washed and sterilised for reuse. The introduction of disposable plastic blood bags meant that blood products could be stored and transported much more easily.

It is claimed that American plastic surgeon Frank Gerow had the idea for silicone breast implants after squeezing a plastic blood bag and noticing how similar to a human breast it felt.

Pathology

The introduction of PVC bags in the 1970s made blood transfusion even safer than before. With the glass bottles, separation into platelets, plasma and cryoprecipitate was complex and prone to bacterial contamination and lack of consistency. Plastic bags have made separation of blood much easier, allowing targeted management of conditions such as anaemia and bleeding disorders. Before plastic blood bags were developed, it was not possible to separate platelets from whole blood. The availability of platelets for transfusion has allowed the development of more aggressive chemotherapy and bone marrow transplantation for the treatment of patients with leukaemia and lymphoma, saving many lives.

Find out more

Read about the history of blood transfusion on the [NHS Blood and Transplant website](#).