

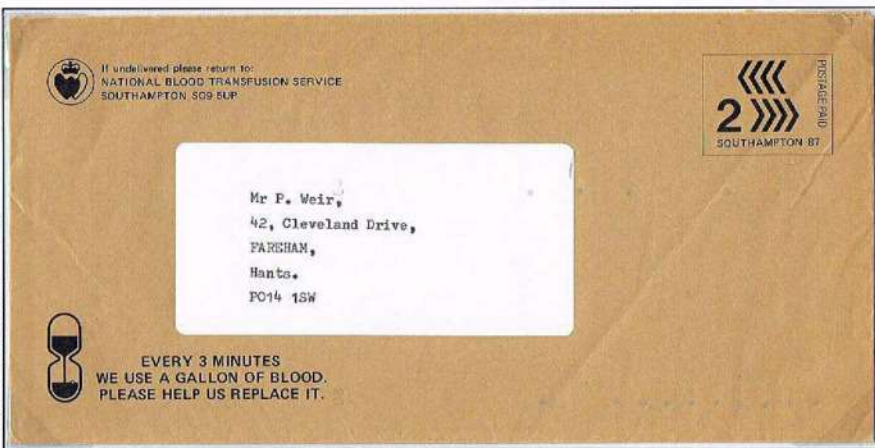
7. A GIFT OF LIFE
7.1. MAINTAINING SUPPLIES

Vast quantities of blood are used, this must somehow be replaced.

The Southampton BTS covering the southern counties of England uses 4½ litres in 3 minutes that's 9 donations of blood.

2nd class pre-printed postage paid impression envelope, with applied postcode phosphor dots

The postcode is converted to 2 rows of blue phosphor dots. Bottom row is the 1st part (PO14) of postcode and upper row the final part (1SW). The black vertical markings are called idents. They identify either the coding desk or the operator at which the envelope was coded. After 1987 optical recognition machines read the postcode and applied the phosphor dots automatically.



◀ 1SW code

◀ PO14 code

▲ faint black ident markings

donating and receiving the gift of life
how much is needed?

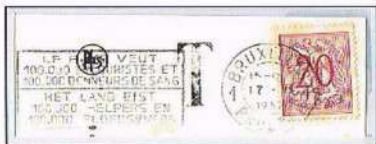


Meter: Pimey-Bowes, R series



400,000 people donate blood in the Netherlands, under the auspices of the Sanquin Blood Supply Foundation

Sanquin ▶



With these rates of blood usage, even in developed countries, only about 4% of the population are blood donors

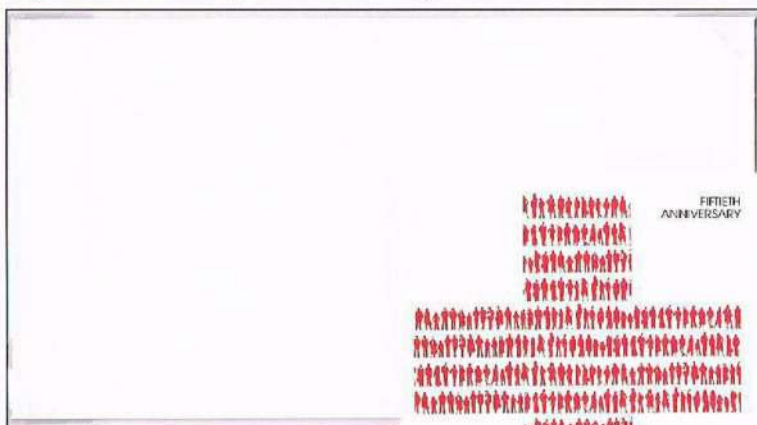


▲ 400,000 donations

7.1. MAINTAINING SUPPLIES

how many blood donors are needed?

Large numbers of blood donors are required to maintain this rate of usage of blood



From virtually nothing in 1929 the Australian Blood Transfusion Service in 1979 collected 454,000 litres of blood annually

1979 20c Red Cross PSE with all missing colours except the phosphor heleon bars



Section from reverse

The foundations of the Australian Blood Transfusion Services were laid in 1929 and the first hospital blood bank was established in 1937. During World War II, the Red Cross assisted the Army Armed Forces, and has continued to administer Blood Transfusion Services throughout Australia. Australian blood donors contribute almost 454,000 litres of blood annually.
Designer: Australia Post, Graphic Design Section.
Pre-stamped envelope No.014

Australia Post

The 50 million stamp was issued on the 26th October 1923 for a foreign registered letter under 20 grams between 26th and 31st October for either 1. added advice of receipt service or 2. surcharge for airmail. Stamp rarely used as a single on cover.



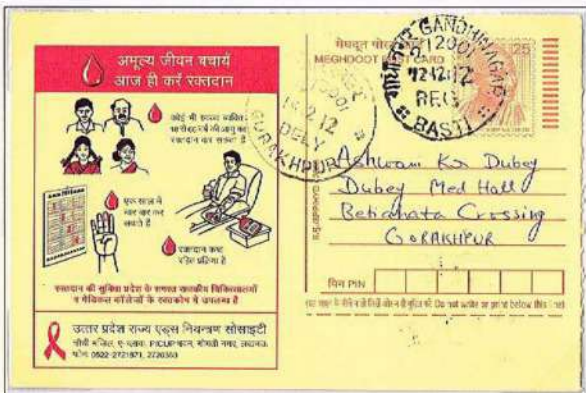
There are estimated to be between 45 million and 50 million blood donors worldwide. Ref: NBTS, www.blood.co.uk/

45 million marks (5 million x 9) rate for a foreign 2nd weight letter (20 to 40 grams), between 20th to 31st October 1923.

International Reply Coupon, 1912, Rome type IV (not redeemed)



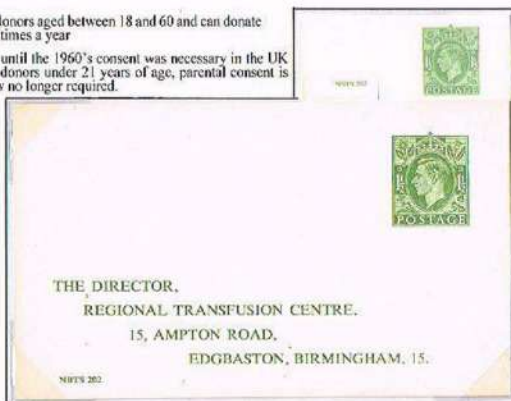
A simple painless procedure for all ages



So roll up your sleeve and blood is collected painlessly from the arm.

Blood donors aged between 18 and 60 and can donate up to 4 times a year

Up until the 1960's consent was necessary in the UK for donors under 21 years of age, parental consent is now no longer required.



Meter: neopast

Postmaster franker: inserting and Mailing Machine Company - applied the stamp but did not keep track of the amount of postage generated. Postage was determined by the post office after weighing and counting the franked mail originally taken into glass bottles, however, since the late 1960s plastic containers/bags were introduced for blood storage



Missing date in margin text error ▲

It is improbable that the scenario portrayed on this stamp of South Africa, 1986 is genuine. It is unlikely glass bottles were still in use then, plastic bags for blood collection were introduced in South Africa in 1973, and blood could not be sucked into the bottle against gravity, if all stamps had been issued with the missing date then who would have known? (see also page 93)



The plasma can be removed directly from the donor by a process known as plasmapheresis, in which the red cells are returned to the donor. Note the yellow plasma container attached to the Plasma Collection System ▶



An alternative is to take the donor team to the people, with a mobile blood donor unit



Italian Voluntary Blood Donor (AVIS) mobile blood donor unit



specimen overprint



Interior of a mobile blood donor unit Postcard signed by stamp designer, Decaris

Chinese postal stationery card incorporating lottery ticket number sponsored by The China Post

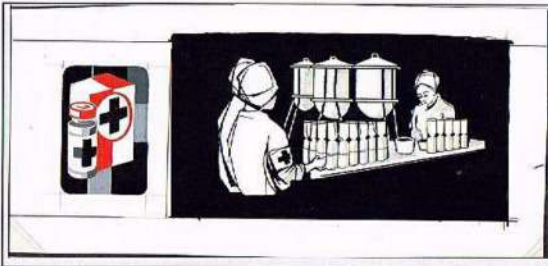


Blood camps are also utilised



7.3. BLOOD PREPARATION

Once collected the gift of blood is taken to the transfusion centre for testing and preparation, both red cells and plasma can be transfused



▲ Original artwork by artist Isabel. In ink and acrylic on art paper mounted on black card with issued stamp



Red Cross workers processing donated blood



The liquid plasma is separated from the cells and plasma fractions such as fibrinogen, albumin and SPPS (Stable Plasma Protein Solution), anti D (Rh), and other useful medicines



This process of plasma fractionation is undertaken in specialised centres.

◀ Fieldpost letter from serum conservation laboratory, Kipsdorf to serum conservation laboratory at Leipzig



The plasma fractions are prepared by freeze drying or desiccation

◀ Meter: Sator SR



Meter: Postalia MS4/5 ▶



and how this gift is prepared

7.3. BLOOD PREPARATION

blood groups

The donated blood is grouped or typed, the most important blood groups in transfusion medicine are the ABO and Rh blood group systems



The incidence of the ABO groups varies in different countries:

In Japan and PNG group O > A > B > AB



◀ Design error - group A is shown as more common than O



But in Thailand O > B > A > AB



The rhesus (Rh) group is divided into positive (-) or negative (-)

The ABO blood group substances are not only found in the blood but also in other body fluids such as urine and tears



1935 weeping princess error, probable caused by an indentation of the plate. (top L of block of 4) Enlarged section x4



Bromalin an enzyme extracted from the pineapple has been used in blood grouping procedures.



Jamaica pineapple watermark. Photocopy of stamp face on left not reduced



Red cells from different ABO blood groups form unique patterns of agglutination when mixed with different antibodies on a glass slide.



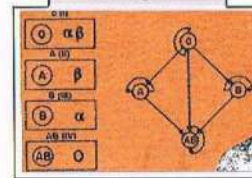
▲ Design error B and O are transposed

It is essential that the groups are correct, the design error shown on the stamp if occurring in reality such as if the person on this Army Blood Transfusion identity card was mistyped as group O, then she as a blood donor, her group B blood could be given to an O group person which could be potentially life threatening.

Donor Registration Department, Army Blood Transfusion Service, OHS postage paid.

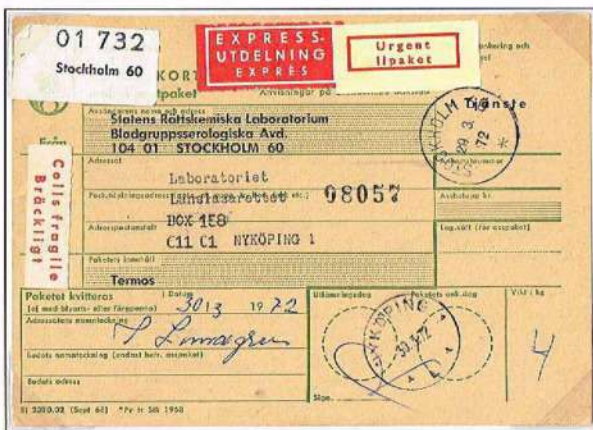


Group O is regarded as the universal donor and can be given to all other groups as this enlarged diagram explains



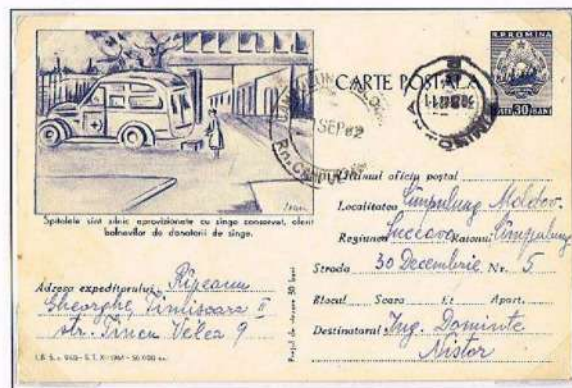
7.4. WHY AND HOW A TRANSFUSION IS GIVEN.

After blood grouping the precious liquid is now distributed to local blood banks and hospitals,



Official parcel service card for 4Kg package. Dianste postage privilege label

Hospitals are stocked daily with donated blood (spitalele sint zilnic aprovizionate cu sange) and is delivered in refrigerated vehicles



7.4. WHY AND HOW A TRANSFUSION IS GIVEN

distributing the blood

Specialised blood group laboratories undertake the blood grouping procedures.

The blood is classified into its ABO and Rh groups eg group O+ or O-



Meter: Pitney-Bowes, R series



The correctly labeled blood bags are stored until required



And are now ready to be sent to the hospital blood bank.

Great care must be taken to ensure the blood is kept free of any contamination with chemicals such as acid which can denature the blood.



Blood's Penny Post private post, 1856, part of the Philadelphia Despatch Post, in use between 1853 and 1860. The stamp is tied to cover by acid, note lighter stain on stamp.

7.4. WHY AND HOW A TRANSFUSION IS GIVEN

finally receiving the precious liquid

Giving a blood transfusion



...occasionally the blood is required to be warmed first, through a warming coil before it is transfused into the patient...



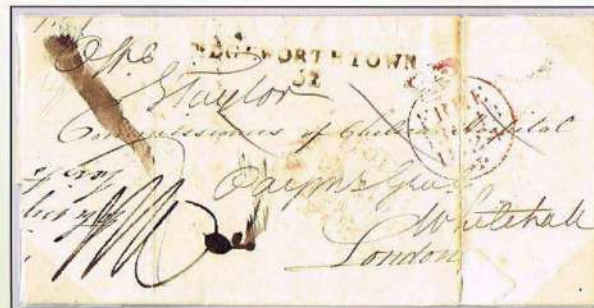
China postal stationery card incorporating lottery ticket number sponsored by The China Post

...then the blood is transfused into the arm of the recipient



As we have seen the demand for blood is great, so for the treatment to be effective in saving lives, blood must always be available...

...to all hospitals, regardless of distance, and at any time...morning, day or night!



Posted at Edgeworthstown (Ireland) 9th Aug 1824., with Edgeworthstown 52 millage mark, to Dublin in Irish miles. Free postage handstamp applied for use by Royal Hospital Chelsea. 'Crown circle frees' with single morning duty ring. Arriving 13 Aug. Noon & night time/date stamp applied by General Post on reverse

7.4. WHY AND HOW A TRANSFUSION IS GIVEN

who requires a transfusion

The sick need blood, what do you expect? (des malades ont besoin de sang qu'attendez-vous?)



...the chronically ill...



...patients undergoing surgery and depending on the type of surgery, will have varying degrees of blood transfusion requirements...



...major surgery such as heart surgery - may require large quantities of blood, 6 or more donations



Cardiac centre, King Hussein Medical City



The use of a cardiopulmonary bypass machine or 'heart-lung machine' shown above, usually requires more blood



On left Prof. Yi Shan Wang performing open heart surgery under acupuncture anaesthesia, on a 15 year old girl with congenital septal defect, aided by anaesthetist Prof. Liang-fu Quin



During childbirth, bleeding complications may necessitate the mother needing a transfusion...

children are therefore an important group of blood recipients...

Domestic use postal stationery envelope



Kate Campbell collaborated with medical scientists, in Melbourne Red Cross Blood Bank, into Rh incompatibility of mother and child, the treatment of consequent haemolytic disease of the newborn and the development of exchange blood transfusion, and transfusion of the unborn child within the womb



...and newborn premature babies also frequently require a blood transfusion

It is improbable that the scenario portrayed on this stamp is genuine. It is unlikely glass bottles were still in use in South Africa in 1980, also blood would not have been given to a premature baby by this method (see also sheet No 37)



7.4. WHY AND HOW A TRANSFUSION IS GIVEN

who may need a transfusion

Treatment of anaemia and bleeding as a result of blood disorders such as leukaemia, haemophilia, and thalassaemia,



Postage due SIT Vajna overprint (Yugoslavia Military Administration, Free Territory of Trieste.)



Meter: Havas, K

These disorders often affect children, and thus they are often recipients of a blood transfusion



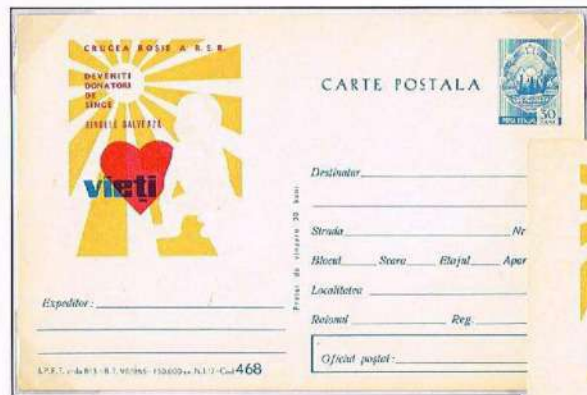
Leukaemia treatment, especially after stem cell transplants (DKMS - German Stem Cell Donor Registry) matches donors to leukaemia patients.



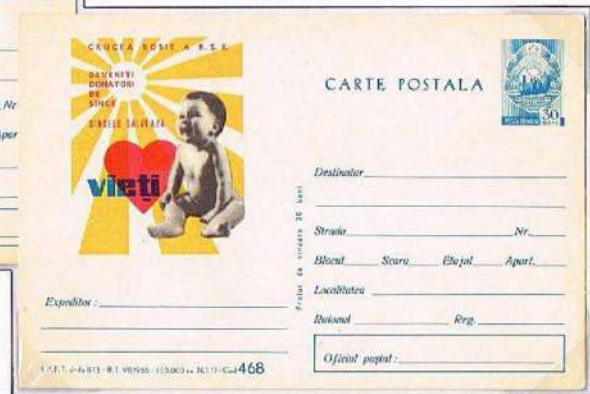
haemophilia treatment



thalassaemia



Domestic use postal stationery with black colour and child omitted.



"single salvea vieti" - blood saves lives, and has saved the life of this child, who without blood would not exist!

Emergency blood transfusions are often required for the treatment of road traffic accidents and other casualties...



A single road traffic accident victim may require over 20 units of blood and other blood components



... some of the 8 survivors of this plane crash - almost certainly received blood transfusions as part of their emergency treatment in hospital
Salvaged mail from BOAC Boeing 377 which crashed on landing at Prestwick Airport on 25th Dec 1954. Most of the 250 mail bags were salvaged in a badly burned state - and returned to London where the cachet was applied and forwarded on.

Blood can now be given before the casualty is transported from the battlefield



War casualties are another major reason for requiring blood or plasma - since the pioneering transfusions during World War I,



From the ancient myth of the pelican...



... feeding its young on its own blood...

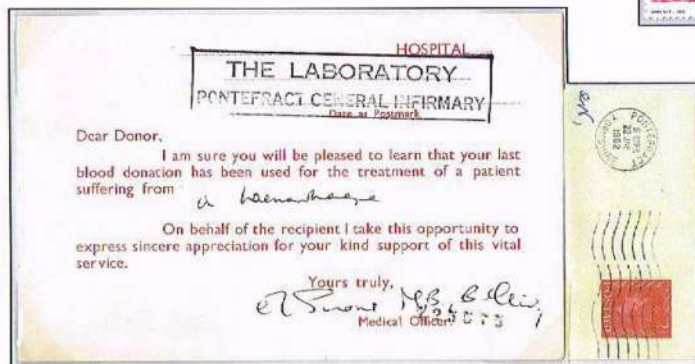


Meter: Pitney-Bowes, R series

...the development of blood transfusion as a modern medicine by organisations such as the Wadley Research Institute & Blood Bank formed in 1951 in Dallas, Texas, in 1968 it became the Wadley Institute of Molecular Medicine, and research into molecular biology would then lead to advances in future medicines such as bone marrow stem cell transfusion, pioneered by De Bellis.



The life saving gift of a blood transfusion is always appreciated. Blood donors are regarded by many as heroes (Cada donante de sangre es un héroe)



Pre-printed insurance questionnaire with postage paid handstamp of the Metropolitan Life Assurance Co. and post office paid handstamp dated 1839, with a faint 2 manuscript denoting 24 postage. The form was completed by the surgeon, and returned.

... and the assurance that the lives of potential recipients of a blood transfusion, may be saved by the goodwill of blood donors, - a truly exceptional form of 'life assurance', then undeniable...

BLOOD = LIFE!

Meter: Satus

