



Regione Toscana

Diritti Valori Innovazione Sostenibilità



centro  
regionale  
sangue  
TOSCANA



Servizio  
Sanitario  
della  
Toscana

# Why donate?

plasma  
platelets blood  
platelets platelets blood  
blood platelets  
blood blood platelets platelets  
platelets umbilical platelets plasma platelets  
cord blood *plasma* *blood*  
platelets plasma platelets blood  
platelets platelets platelets blood  
platelets platelets blood blood  
*umbilical* blood platelets blood  
*cord blood* blood  
blood platelets plasma  
platelets platelets plasma  
platelets

# *Donating blood, an indispensable act*

By donating your blood you can help, for example, a woman regain her strength after losing a lot during delivery, improve the health of a person with a tumour that chemotherapy has weakened, to allow the healing of people affected by diseases of the blood.

Contribute to the production of immunoglobulin and other drugs that are part of the immune-defence system and are produced from plasma.

No product exists today that can replace human blood. Blood cannot be produced artificially: the availability of this resource, irreplaceable and indispensable in the treatment of many diseases, depends on the availability and the civic sense of donors.

***Donating blood voluntarily and willingly makes your availability concrete not only to others but also towards yourself, since this creates a collective patrimony which everyone can use in a time of need.***

## **Blood and its components**

Blood, a liquid tissue that circulates in vessels, represents 8% of the body's weight and is constituted by a liquid part, plasma, and by a corpuscular part represented by red blood cells, and platelets.

Donating blood is an act of generosity that allows 1 million sick to be treated every year.

## *What are the different forms of donation?*

**The most frequent form of donation is whole blood.**

It allows the collection at the same time of all the blood components: red blood cells, white cells and platelets that are later separated.

**The aphaeresis donation** allows the collection of a single component of the blood by means of a cell separator, the other components are returned to the donor. It is equally possible to collect 2 components simultaneously; this is called a multi-component donation.

The aphaeresis donation offers the advantage of collecting a greater amount of the components needed by those who are ill. The aphaeresis donation has a longer duration than a whole blood donation.

This type of donation is generally proposed to donors who already have blood donation experience.

**The donors also have the possibility to alternate between whole blood donations and aphaeresis donations.**

# Interval between each donation in days

If I have donated	Entire blood	Plasmapheresis	Multi-component: red blood cells + plasma platelets	Multi-component: plasma + platelets
I can donate				
Whole blood	90 Days	14 Days	90 Days	14 Days
Plasmapheresis	30 Days	14 Days	30 Days	14 Days
Multi-component: red blood cells + plasma platelets	90 Days	14 Days	90 Days	14 Days
Multi-component: plasma + platelets	30 Days	14 Days	30 Days	14 Days

## How to make a donation?

Regardless of the type of donation, it is carried out in 4 stages:



### Registration

The team records your data inserting them in the database of the Transfusion System; your identity is verified through an acknowledgment document and is subject to a pre-donation questionnaire, that you complete in order to prepare for the pre-donation interview.



### Suitability

Before every donation, you will be subject to the withdrawal of some blood samples for pre-donation tests; you will meet a doctor who carries out a confidential interview and medical examination in order to verify your suitability for a donation in respect to the safety of the donor and recipient.



### The drawing of blood

The withdrawal of blood and blood components is carried out by trained medical staff. The procedure for the withdrawal of blood is simple and harmless, the material used is single use, and there is therefore a total lack of risk for the donor.



### Rest and refreshment time

After the donation a snack will be offered to you, this pleasant moment is useful for refreshment and also in order to rest.



# *What happens to your donation?*

Wherever the collection takes place, after the withdrawal of blood an identical procedure follows that brings it safely from the donor to the recipient.



## *1 - Processing of blood components*

The blood collected is separated, by means of centrifuge, in order to obtain the different components (red blood cells, platelets and plasma). The sick only receive the blood component which is needed.



## *2 - The biological qualification of the donations*

Samples are taken from every donation in order to carry out examinations; the units are validated and used by patients only if the search for the main infectious agents which contraindicate the donation (hepatitis B and C, HIV, syphilis) is negative.



## *3 - Distribution*

The blood components, separated and validated, are distributed to the hospital departments that request them, after having carried out recipient/donor compatibility tests. Wherever the collection takes place, after the withdrawal of blood an identical procedure is followed that brings it safely from the donor to the recipient.

### **A key word: safety**

Every bag collected and the corresponding samples are recorded and identified with an unambiguous bar code in order to assure, perfect traceability (for 30 years) from one end to the other of the transfusion process and guarantee safety.

# What are the conditions in order to donate blood?



## **In some situations, you will have to wait in order to donate your blood:**

- At least 7 days after the end of an antibiotic treatment
- 7 days after dental treatments (for cavities 48 hours are sufficient)
- 14 days as minimum after an infectious episode
- 3 months after a trip to zones with endemic tropical diseases
- 6 months after a trip to a country where malaria is present
- 4 months after any situation of risk of transmission of infectious diseases: surgery, endoscopic examination (gastroscopy, colonoscopy, arthroscopy etc...), a tattoo, piercing etc...



## **You can donate your blood if:**

- You are between 18 and 65 years of age
- You are suitable for donations as determined by a doctor
- Your body weight is at least 50 Kg.
- Your haemoglobin rate is sufficient
- You have an identity document

*For any medical  
question,  
do not to hesitate  
to contact a doctor  
of the closest  
Transfusion  
Structure.*

*The directory of the structures is available at  
[www.regione.toscana.it/donareilsangue](http://www.regione.toscana.it/donareilsangue)  
in the section dedicated to the Regional Blood Centre.*

# *What are the ethics for blood donations?*

**Anonymity:** the identity of the donor and recipient is managed according to the provisions governing privacy of the operators of the Sistema Trasfusedonale Toscano (Tuscany Transfusion System).

**Voluntary service:** the gift of blood is a free choice, without any constraints.

**Non-profit:** the blood and blood components cannot be a source of profit; the cost of a unit of blood component is fixed based on the costs supported for the collection, the preparation, the qualification and the distribution of the blood products.

**Hygiene:** the material used for the withdrawal of blood is sterile and single use for every donor.

**Regularity:** donated blood periodically represents a guarantee of reliability and recipient safety as well as the certainty of supplies. The regular donor is examined from the medical point of view, in that there are careful examinations and attentive blood inspections. Moreover the choice to donate is not conditioned by other factors such as emotions.

**Gratuitousness:** the gift of blood is free and cannot be remunerated under any form; the absence of economic consideration is an essential component of transfusion safety. The use of paid blood, beyond the ethical problems, must be refused because it increases transfusion risks; in Italy it is punishable by law based on art. 22 L. 219/2005.

**Safety:** the gratuitousness, the pre-donation examination and diagnostic tests assure the safety of the products transfused to the sick and the protection of the health of the donors.

**Quality:** the respect of good practices and the numerous controls on the materials used guarantee the best quality of transfusion products.

# The whole blood donation

## What is the blood used for?

Red blood cells are used essentially in order to correct anaemia in patients affected by diseases of the blood (haematology) or by tumours (oncology): chemotherapy in fact destroys the cells of the bone marrow (red blood cells, platelets), that then must be transfused. Red blood cells are also transfused in the case of important haemorrhages that can occur as a result of trauma, surgery, such as transplants, or during delivery.

## What is the need?

The need for blood and its components is in steady increase because of the ageing population, innovation and the increasing quality of the care. During the year there are recurring periods of deficiency, above all in the summer periods. Blood doesn't always serve only in emergency situations. In order to respond to the increase in need, an increment of donations, an increase in the number of donors and the donation index is necessary every year (that is the number of per capita donations).

## Who can donate?

All persons recognized suitable by doctors of the transfusion service can donate.



*Federico  
34 years*

After 10 years of illness, is a happy person today and has become father of Rebecca and holder of a gold medal and world record in the 50 meters breaststroke in the XV World Transplant Games 2005. All this because someone generously donated an organ to me and many have donated the blood that has made my transplant possible.

## Did you know?



**quantity:** the average quantity of blood that is collected from every donation is fixed by Ministerial Decree at 450 cubic centimetres  $\pm$  10%



**duration:** the withdrawal of blood takes 10 minutes, approximately 45 minutes will be necessary from your arrival to your exit



**conservation:** red blood cells can be kept for 42 days



**donation interval:** it will be necessary to wait 90 days between whole blood donations; the number of the donations should be no more than 4 per year for men and 2 for fertile women.

# The plasma donation

## What is plasma used for?

You help many sick people by donating your plasma.

Plasma can be used in two forms: that destined for clinical use or in the form of pharmaceutical products after industrial fractionation.

It benefits above all burn victims, haemophiliacs, patients who suffer from disturbances of the coagulation or serious immunity deficits, neurological and hepatic diseases.

## What are the needs?

The need for plasma to send for industrial fractionation is increasing above all because of the increase of immunoglobulin prescriptions (and in a smaller measure albumin) produced from the plasma. At the same time needs are also increasing for plasma destined for clinical use: every day in Tuscany more than 25,000 therapeutic units are necessary.



*Louis Omar*  
24 years

Born in Peru and I came to Italy at the age of 6 in order to be treated for haemophilia. Here I have found the appropriate treatment thanks to the blood derivatives produced with donated plasma; I have thus been able to lead a normal life and I am attending University in order to become prevention technician.

## Did you know?



**amount:** that up to 650 millilitres of plasma can be collected from a single donation.



**duration:** the drawing of blood lasts between 35 and 45 minutes, approximately an hour will be necessary from your arrival to your exit.



**conservation:** the collected plasma is immediately frozen and can be conserved up to 24 months.



**donation interval:** an interval between the plasma donations of 14 days must be respected. The plasma donation is carried out normally on appointment.



# What is the plasma transformed into?



1



**National health service:** takes care of the withdrawal of blood, the processing, the biological qualification and the plasma distribution.

2



**The national health service industry:** Fractionates the plasma for the production of drugs derived from the plasma: albumin, immunoglobulin, coagulation factors and antithrombin III subsequently distributed to hospitals.

2

The plasma for clinical use is transfused to sick people without industrial changes.



3

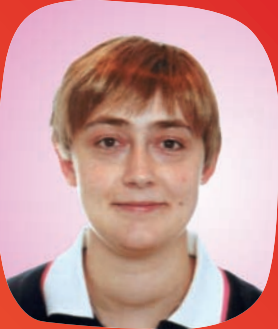
The patient can receive the plasma in the form of pharmaceutical products obtained from the industrial changes to the plasma.

## Who can donate plasma?

All donors can make a plasma donation.

However the subjects of group AB and group B are the best candidates for this type of donation.

# The donation of platelets



*Fulvia 30 years old*

After an infectious disease my marrow has begun to work less and less until arriving at medullary aplasia: I needed many transfusions of platelets for this. The situation has been resolved by making a marrow transplant, however this treatment required blood and platelets for some days. Now I am well and finally I can again look to my future and life with confidence.

## What are platelets used for?

When diseases (leukaemia, medullary aplasia) or intense therapies (chemotherapy, radio-therapy) prevent the production of blood cells by bone marrow, sick people are in a clinical situation defined as aplasia. The transfusion of platelets is indispensable in order to avoid the risk of haemorrhages that endanger the life of the sick person.

## What are the needs?

The requirement for platelets increase with the development of medical techniques. The insufficient duration of the life of platelets (5 days) renders the regularity of the donations indispensable to face needs.

## You should know

The donation of platelets can be carried out by means of aphaeresis, in such case the donation is carried out normally on appointment.

## Who can donate platelets in aphaeresis?

This type of donation is generally proposed to regular donors.

### Did you know?



**duration:** the donation lasts 90 minutes, foresee approximately 2 hours from your arrival to your exit.



**donation interval:** a minimal interval of 30 days between a donation of platelets and the successive one must be respected. However, in the space of a year, there cannot be more than 6 donations made.

# The donation of blood from the umbilical cord

## Blood that can again give life

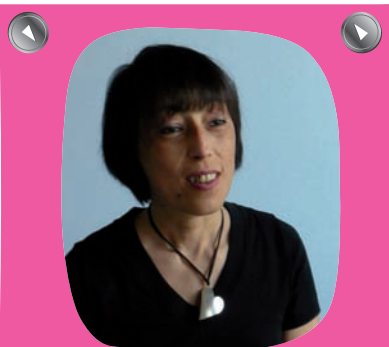
In the umbilical cord blood, habitually eliminated after the delivery, stem cells are present that are able to generate other blood cells that, transplanted, contribute to the treatment of children and adults affected by serious blood diseases like leukaemia, lymphomas, thalassaemia.

## Safety

Blood collection is carried out after the cord is cut and therefore it does not involve any risk for the mother or for the baby. The donated blood units are conserved at the Umbilical cord Bank, according to criteria recognized by the international scientific community. The relevant data are introduced in an International register connected to qualified Transplant Centres.

## Who can donate

All women who are deemed suitable follow a preliminary interview. In order to donate the umbilical cord blood it is necessary to be in good health, in such way as to diminish the risk of transmitting diseases to the recipient. As in blood donations, clinical conditions and risk behaviours preclude its execution. The woman must submit to a withdrawal of peripheral blood at the moment of delivery and she must repeat the examinations after six months from the donation, in order to exclude the presence of transmissible infectious diseases.



Manila 38 years

Affected by acute myeloid leukaemia, treated at the Centro Trapianti di Midollo Osseo di Firenze (The Florence Bone Marrow Transplant Centre) says: "Honestly I was without hope, as an only child without donors in my family or with the International registers. Fortunately you were

## Did you know?



**allogenic:** destined to anyone in need and it represents a true gesture of donation;



**dedicated:** it is carried out for a blood relative in conditions of risk for a defined list of diseases



**autologous:** envisages the collection of umbilical cord blood for oneself. In this case the conservation can only be carried out in foreign structures, as in Italy the institution of private banks of umbilical cord blood is prohibited. Such position is based on the fact that there is no scientific evidence of the usefulness of stem cells of one's own cord blood for the reconstruction of damaged organs and there is no scientific evidence that the conserved cord blood for autologous use does not contain the same malignant cells that have caused the disease.



**where to donate?** At the delivery wards of the Region authorized to carry out the withdrawal umbilical cord blood: [www.salute.toscana.it](http://www.salute.toscana.it)



800 261580

[www.avis.it/toscana](http://www.avis.it/toscana)

Via Borgognissanti, 16 - 50123 Firenze

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Tel. 055 40571 - Fax 055 400699



055 4223746

[www.fratres.org](http://www.fratres.org)

Via Ragazzi del '99, 65 - 50141 Firenze

Tel. e Fax 055 4223746 - e-mail: [info@fratres.org](mailto:info@fratres.org)

For information on where and how  
to donate umbilical cord blood:



0574 540002

[www.adisco.it](http://www.adisco.it)

Via del Lazzaretto 168/15 - 59100 Prato

Cell. 335 1341929 / 335-5925648 - e-mail: [segreteria-toscana@adisco.it](mailto:segreteria-toscana@adisco.it)

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