

## **Blood: It's Role on Maintenance of Life: The Concept Before Thousands of Years**

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Blood is considered as an important component of human body. Many things are invented about this component of the human body. The important facts known about blood till now are

- Blood is the most important component of the human body.
- Blood is composed of a liquid portion "PLASMA" and simply to say a group of solids like – Red Blood Corpuscles, White Blood Corpuscles and Platelets.
- The plasma, with it's liquefying quality helps in circulation of the blood in the whole body. Any reduction in the quality and quantity of plasma may cause disturbance in the process of circulation and the person's life may even be endangered. But it should be kept in mind that, plasma is not a simple liquid. It is a complex diluent.
- Red Blood Corpuscles, with the help of Haemoglobin, carries Oxygen to each and every part of the body. Oxygen is received by each and every cell with the help of Haemoglobin. Any abnormality in the quantitative and qualitative property of Haemoglobin give rise to problem. Reduction of either qualitative or quantitative properties of Haemoglobin after a certain limit may even give fatal result.
- In the accidents, injuries, surgeries utmost care is taken even by a common man who is with the patient to protect the person from blood loss. The concept behind this effort to not to allow more blood loss is "if more blood will go out from the person's body then the person may die immediately or after some time".
- A person who suffers from deficiency of blood commonly complains of weakness, palpitation, tiredness after simple exercise, giddiness, rapid and deep breathing, reduced appetite etc. At a severe state the person may faint.
- Preparedness for blood transfusion at the time of operation indicates the importance of blood in maintenance of life.

In the Indian literatures, in most of the references, the word "RAKTA" is used which indicates the component of the body that has the same quality with blood of present concept. The word RAKTA literally means red or coloured, dyed, painted.

Being a member of the society of ancient Indian system of medicine, Ayurveda, it is felt that, throwing light on the concepts of the ancient Indian authors on the body component that can be correlated with blood is an important duty. It is felt that, a discussion on the concepts of the idea of the great Indian surgeon, Susruta, will be sufficient to prove the depth of their knowledge about blood. A short description of RAKTA which can be closely correlated with blood as mentioned in the Susruta Samhita is given below

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- Susruta has discussed about RAKTA in the “Shonitabarnaniya adhyaya” of Sutrasthana of his famous book “SUSRUTA SAMHITA” (chapter for description of rakta in the section I).
- As mentioned by Susruta Rakta is formed from the initial dhatu (anatomical and physiological component of the body) “RASA”. It contains more proportion of water and providing nutrition to the body is it's principal function.
- RASA is transformed to RAKTA in the Yakrit (Liver) and Pleeha (Spleen). One element “Teja – Ranjaka Pitta” is considered as the responsible factor to transform RASA to RAKTA.
- The properties of RAKTA as described are – (1) a peculiar smell (bistrata-a smell like some crude, uncooked substance ), (2) it is a liquid (dravata- like water), (3) redness (raga), (4) movement (spandana – moves by producing waves), (5) lightness (laghuta).
- RAKTA is the precursor element of Mamsa (flesh, tissues). Some portion of it get converted into Mamsa going through a complex process.
- When RAKTA becomes vitiated it causes some diseases. At this state it shows change in colour, consistency, fluidity, smell and coagulation capacity.
- The common signs and symptoms of impurity of blood are – itching (kandu), swelling (inflammation ) (Sofa), redness (raga), burning sensation (daha), pus formation (paka), pain (bedana) etc.
- RAKTA is designated as the base of the body (dehamoola), holder of the body (dharaka). Therefore advice is given to protect and preserve it with utmost care and caution.
- RAKTA produces colour and lustre of the body (barnaprasada), gives nutrition to the fleshy components (mangsapusti) and keeps the person alive (jivayati).
- A person who suffers from reduction of RAKTA (raktakshaya) then it produces the signs like – roughness of the skin (twakparushya), desire to take sour and cold substances (amla-shita prarthana) and looseness of the blood vessels (sirasaitilya) (probably it indicates weak, low volume pulse).
- Increase of RAKTA produces redness of the eyes and other parts of the body (raktangakshita), and fullness of the blood vessels (sirapurnata) (probably it indicates strong, full volume pulse).

From The References Cited Till Now It Can Be Concluded That, The Indian Physicians Identified The Red Coloured Component Of The Body That Performs And Maintains Some Vital Functions Of The Body Before Thousands Of Years Of Christ And Depending Upon It's Red Colour Gave The Nomenclature “Rakta” And Understanding It's Role In Maintenance Of Life It Was Designated As “Jivana”(Life).

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