



# Bloodletting and Blood Donation an Integrative Approach

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### Short Communication

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## Short Communication

Rakta visravan- Bloodletting is a minimal invasive parasurgical measure. The process of *Raktamokshana* can be traced back to the Vedic period only and not beyond that. In the Koushika sutra of Athravaveda, [3] references of bloodletting (*Raktamokshana*) by leech application are available. Atrideva Vidyalkara Ayurveda Brihat Itihas. 1<sup>st</sup> Edn Varanasi; Bhargava Bhushana Press; 1960, P.127. In Shalya tantra the bloodletting is considered a half treatment like basti=enemata in Kaychikitsa. Bloodletting is the part of Panchakarma=Bio-Cleansing.

Rakta=Blood is an important Dhatu=Tissue in the body stands second in sequence but the Rasa=Nutrient fluid and Rakta are flowing together. Rasa does Prinan=nourishing the body tissues and Rakta provides life=Pran vayu=Oxygen to body.

“देहस्य रुधिरं मूलं रुधिरिणैव धार्यते  
तस्मादयत्नेन संरक्ष्यं रक्तं जीव इति स्थितिः” सुश्रुत सूत्र १४/४४

Blood is considered Jivan=life, without blood there cannot be life. One has to secure the blood by all means. Blood is observed in only the live body and not in the dead body.

जीवरक्तमिति जीवतुल्यं रक्तं । जीवशरीरे रक्तदर्शनात् मृतशरीरे च अदर्शनात् ॥ डल्हण

Properties of Rakta:

शोणतिं तु आग्नेयम् । पांचभौतिकम्  
वसिरता द्रवता रागःस्पंदनं लघुता सु. सु. १४/७-९

शोणतिं तु आग्नेयम् । Blood is of hot in nature.

पांचभौतिकम् । Blood consist of five universal elements

वसिरता Blood is having foul smelling  
द्रवता It is fluid in nature hence it flows in channels

रागःIt is red in color

स्पंदनं It is pulsatile

लघुता It is light in nature hence with the impulse of vata it flows in all directions.

अनुष्णशीतं It is neither hot or cold in nature.

मधुरं It is sweet in nature

स्निग्धं sticky, viscous or viscid, glutinous, unctuous, slippery, smooth etc.

रक्तं च वर्णतः।

मधुरं

लवणं Blood is salty in nature....अ. ह. २७/१

सरि व्यथ चकितिसारदधम शल्यतंत्रे प्रकीर्ततिः । यथा प्रणहितिः  
समम्यगबस्ती कायचकितिसते । सु. श. ८ /२२-२३

In pre-operative procedure of bloodletting snehan- external oleation and steaming is advised, this facilitates smooth flowing of blood.

Raktamokshan kal: Bloodletting time:

### ➤ Most Favorable Season for Raktamokshan

Raktamokshan therapy should be done when it is neither too warm nor too cold. Sharad ritu (autumn season) is most suitable for this therapy 21 September to 20 December

व्यभरे वर्षासु वधियेतु ग्रीष्मकाले तु शीतले । हेमन्तकाले मध्यान्हे ।  
व. सु. २७/४४-४५

व्यभरे वर्षासु- In the monsoon- rainy season when the sky is clear devoid of clouds, bloodletting can be done. (Mid-July to mid-September)

ग्रीष्मकाले तु शीतले - In summer season the bloodletting is to

be done in the evening when the atmosphere is cool. (Mid-May to mid-July)

हेमन्तकाले मध्याह्ने- In the Hemant season the bloodletting is to be done in the afternoon. (Mid-November to mid-January)

Raktamokshan procedure can be performed by Physical instruments and by Bio-instrument- Jalauka-Leeches

*Raktamokshana*, in other words bloodletting, is a kind of Para surgery directed for the treatment of specifically *Raktaja roga* (blood-borne) diseases, along with other many surgical diseases.

1. Anushastra Visravan Horn application (*Sringa avacharana*), which means bloodletting by applying the cow horn. This is mainly used in treating Vata disorders. Leech application (*Jalauka avacharana*), means applying leeches on affected parts. This is mainly done for those suffering from pitta doshaj disorders. Gourd application (*Alabu avacharana*), means creating vacuum and extracting blood using a vegetable called Alabu. This is mainly done to treat kaphaj disorders. Shastra Visravan Scraping (*Prachana Karma*): it means letting the blood pass through several incisions using surgical instruments. Needle application (*Suchi avacharana*) Venesection (*Sira vedhan*)
2. To expel out the vitiated blood, seven procedures are advocated: Venesection (*Sira Vedhan*), horn application (*Sringa Avacharana*), gourd application (*Alabu Aavacharana*), leech application (*Jalauka Avacharana*), scraping (*Pracchanna Karma*), cupping glass application (*Ghati Yantra Avacharana*), and needle application (*Suchi Avacharana*).

#### ➤ Recent Research on Blood Donation Health Benefits

परोपकाराय पुण्यं, परपीडाय पापं || वेद व्यास.

#### ➤ Benefits of Donating Blood

##### • Lower Risk of Heart Disease

A 2013 found that blood donation significantly lowered the mean total cholesterol and low-density lipoprotein cholesterol, protecting against cardiovascular disease. Researchers note this is consistent with findings in other studies which found that blood donors had a lower risk of heart disease and heart attack. Donating blood regularly may also reduce iron stores. This may actually be the primary mechanism by which bloodletting reduces the risk of heart attack. High iron levels encourage the formation of a free-radical form of cholesterol (via lipid peroxidation) that can damage arteries. As a side note, I'm not convinced that reducing total cholesterol or LDL themselves protect against heart disease, but high body iron stores are definitely linked to increased risk of heart attack. By the way, this is

likely the reason that actively menstruating women have a lower incidence of and lower mortality from coronary heart disease compared

With men of the same age or with postmenopausal women. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3663474/> / Blood donation is good for your health. It reduces the amount of iron in the body and reduces the risk of heart disease. According to studies published in the American Journal of Epidemiology, blood donors are 88% less likely to suffer a heart attack. This is simply because when someone gives blood, iron is being removed from their system, which can significantly cut the risk of heart disease.

#### ➤ Lower Incidence of Cancer and Lower Overall Mortality

A 2013 study found a small decrease in the risk of certain cancers in people who donated blood. These included cancers that are linked to high iron levels, including subtypes of the following:

- Liver cancer
- Colon cancer
- Lung cancer
- Esophageal cancer
- Stomach cancer
- 

<https://www.hindawi.com/journals/jce/2013/814842/>

#### ➤ Lower Inflammatory Markers and Increased Antioxidant Capacity

A 2016 study found statistically significant lower pentraxin-3 and highly-sensitive C-reactive protein levels and higher superoxide dismutase activity and nitric oxide level 24 h after blood donation in serum of blood donor when compared with before blood donation.

<https://www.degruyter.com/view/j/jbcpp.2016.27.issue-6/jbcpp-2015-0111/jbcpp-2015-0111.xml> Treatment of Metabolic Syndrome (METS) Metabolic syndrome (METS) is a common but poorly understood clinical condition characterized by insulin resistance, glucose intolerance, dyslipidemia, hypertension, and obesity associated with increased oxidative stress catalyzed by excess iron stores. A randomized controlled 2012 study showed that bloodletting and reduction of iron stores significantly lowered BP and resulted in improvements in markers of cardiovascular risk and serum blood sugar in METS patients. <https://bmcmmedicine.biomedcentral.com/articles/10.1186/1741-7015-10-54> Activation of Immune Cell Production From Bone Marrow Hematopoietic Stem Cells Normal, healthy immune function depends on the life-long production of all the different types of blood cell lineages, i.e., red cells, platelets, and white cells, the latter including both myeloid and lymphoid cells. Recent research reveals that blood loss stimulates hematopoietic stem cells in the bone marrow to increase production of all cell lines through an intricate and finely balanced homeo-

static signaling feedback mechanism.

[https://www.cell.com/cell-stem-cell/fulltext/S1934-5909\(18\)30221-2?returnURL=https%3A%2F%2Flinkinghub.elsevier.com%2Fretrieve%2Fpii%2FS1934590918302212%3Fshowall%3Dtrue](https://www.cell.com/cell-stem-cell/fulltext/S1934-5909(18)30221-2?returnURL=https%3A%2F%2Flinkinghub.elsevier.com%2Fretrieve%2Fpii%2FS1934590918302212%3Fshowall%3Dtrue)

This is just a very small sampling of the emerging knowledge regarding the health benefits of blood donation and bloodletting. Although this current research is compelling, the association between donating blood and

reduced risk of disease needs to be confirmed with more prospective research studies. In the end, modern science will eventually prove to its satisfaction what the ancient Ayurvedic physicians have known for centuries.

सर्वदा सर्वभावनाम सामान्यं वृद्धिकारणम् । च. १/४४  
सामान्यमेकत्वकरम्, वशिषस्तु पृथक्त्वकृत । तुल्यार्थता हि  
सामान्यं, वशिषस्तु वपिर्ययः ॥ च.सु.1/४५

आपत्काले मर्यादा नास्ति

