

# A history of blood: from antiquity to the present day

Across history, humankind has, in equal measure, exhibited both a fascination with, and a fear of, blood. It has been a source of both apprehension and succour, and proved invaluable not only to life itself but also to the study of disease.

## The Saving and Healing Power of Blood in the Ancient World

- Ancient cave paintings reveal images of the sick or the dead using red pigment to restore life or to cure the sick and identify the hearts of animals as the source of life and the blood.
- Blood became a symbol of life and death among ancient civilisations as it was only seen issuing from a wound or during childbirth, miscarriage and menstruation.
- In some civilisations ritual sacrifices gave pride of place to the blood, liver and heart.
- Menstruating women were regarded as unclean and had to undergo cleansing rituals when their menstrual cycle ended.

### Egypt

- The Ebers papyrus (ca. 1550 BCE) ascribes to blood special properties. Blood of birds and some animals was prescribed for various medical conditions.
- The saving power of blood is described in the Bible. The Hebrews spread lambs' blood on the posts and lintels of doorways to prevent their first born from dying as the Angel of Death passed over the country.

### Rome

- Epilepsy was thought to be cured by drinking human blood. Those with epilepsy attended gladiatorial combats in the hope of drinking blood from fallen gladiators as a cure for their sickness.
- Galen of Pergamon (129-c216 CE) was the first physician to study the physiology of the body. He believed that veins originated in the liver and the arteries originated in the heart. Blood was prepared in the liver, moved to the periphery and finally consumed by the organs, suggesting the "regeneration" of blood.

### Greece

- The ancient Greeks believed that the blood of the Gods ("Ichor") was poisonous to mortals but had special powers.
- The Gorgon Medusa was said to possess two types of blood. Her left sided blood was lethal; blood from her right side was life giving.
- In Hippocratic medicine (400-300 BCE) blood was defined as one of the four "humours". It has been suggested that the four "humours" were derived from the separation of blood components when blood was left to clot in a clear vessel. Clear serum = yellow bile, white cell layer = phlegm, red layer = blood, clot at the bottom = black bile.
- Germanic tribes made sacrifices to their Gods as blood was considered to have the power of its originator.
- Mesoamerican cultures drenched the earth with ritualistic blood shedding in the hope of fertilising the ground.
- New Zealand Maoris used red ribbons and flowers as a substitute for blood to ward off evil.

The Four Humours of Hippocratic medicine

Theoretical biology suggests the development of the vascular system and blood cells occurred between 600 and 400 million years ago (Table 1).

History	Theoretical biology
400 million years ago	Ionic composition of human plasma closely comparable to sea water
500 million years ago	Analogous forms of blood cells evolved from marine or polychaete annelid worms
600 million years ago	Blood vascular system first appears to overcome slow diffusion transport

Table 1. Comparative biology studies

## Blood In The Mediaeval World

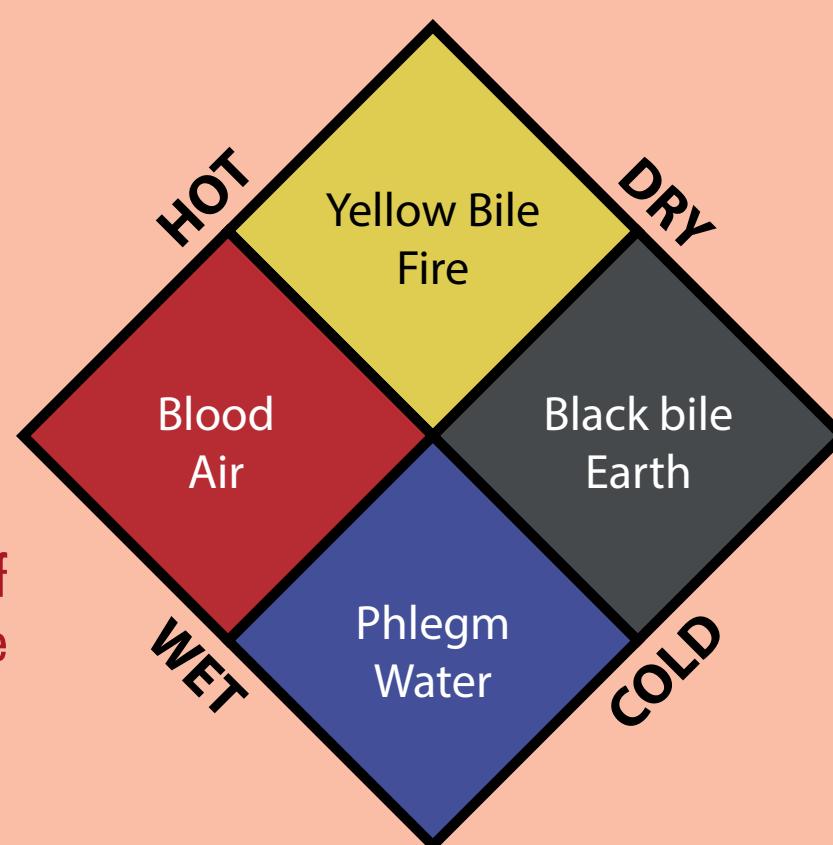
- Viking sagas tell of "Wotan's finger" whereby the blood of sacrificial animals was used to speed up the healing process of wounds.
- Drinking of blood was used by mediaeval doctors to cure convulsions and seizures.

## Relics In The Western World

- Blood taken from Christ at the crucifixion and blood and body parts from Saints became instruments of healing and led to pilgrimages to the sites containing the relics. Water used to wash the blood-stained garments of St Thomas Becket was attributed with healing powers.
- The Muslim scholar Ibn an-Nafis (1213-1288 CE) became the first to challenge Galen's theories. He believed blood circulated through the body, and subsequently described the pulmonary circulation.
- Alchemists used blood for treatment of certain conditions because it contained air (treatment for epilepsy and migraines), water (a tonic for cardiac and neurological disorders) and fire (which had revival powers from death).

## Vampires and Vampirism

- Vampire legends (where the undead are required to imbibe the blood of the living to maintain immortality) was based on the legend of Vlad III (Vlad the Impaler or Vlad Dracula) the Voivode of Wallachia from 1448 to 1477. This became the basis of the Victorian author Bram Stoker's famous novel *Dracula* and was depicted in art by the Norwegian painter Edvard Munch.



Blood Sculpture by Marc Quinn

## The Modern Era

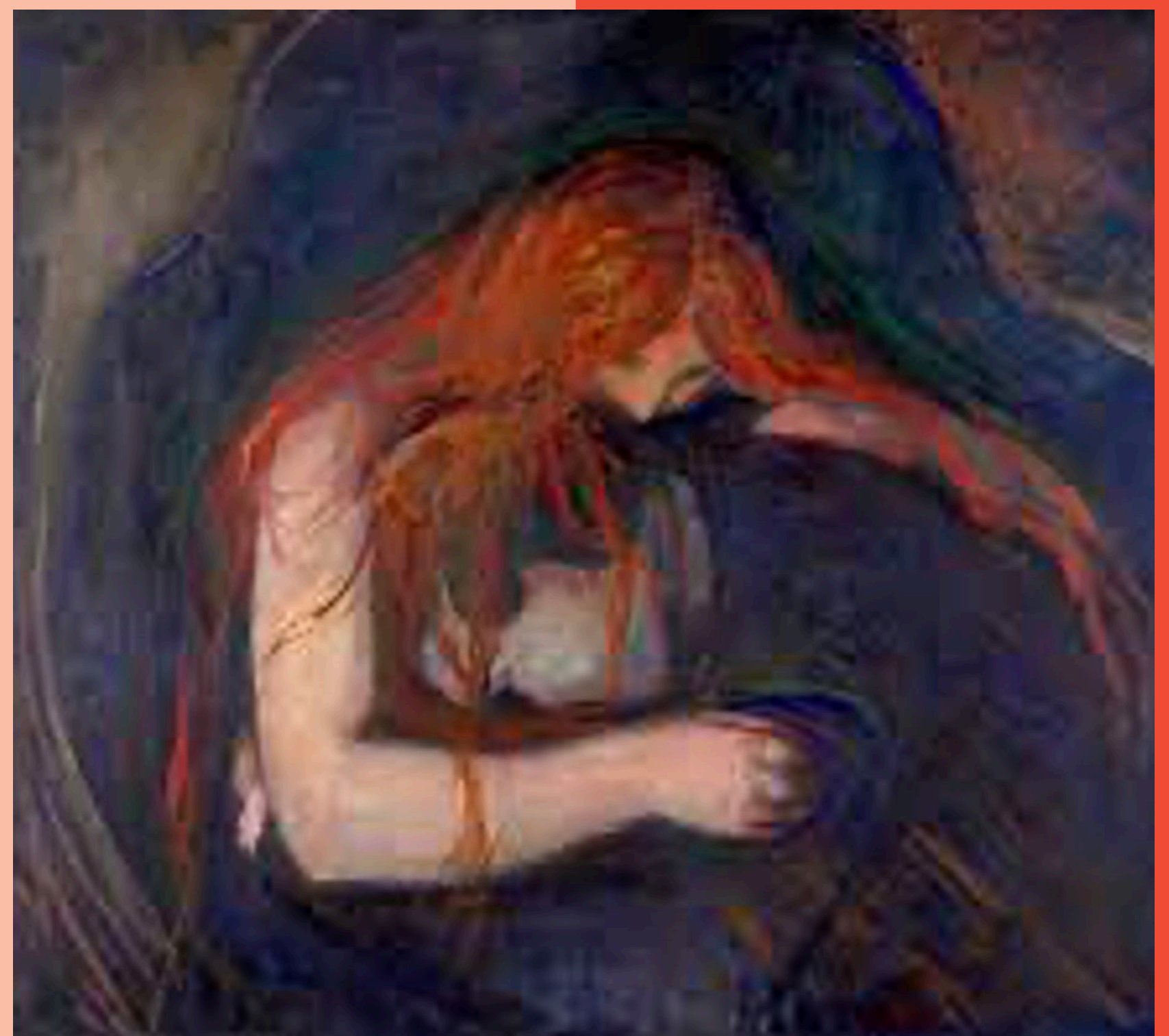
The study of blood takes on a truly scientific basis including the circulation, the components of blood and the basis for blood transfusion. Masai warriors drank the blood of their first lion kill so they could acquire the courage and strength of the lion.

## Discovery of the cellular components of blood

- 1658: Red blood cells were described by Jan Swammerdam.
- 1843: White blood cells were described simultaneously by Gabriel Andral and William Addison
- 1882: Platelets were described by Giulio Bizzozero.

## The use of blood in art

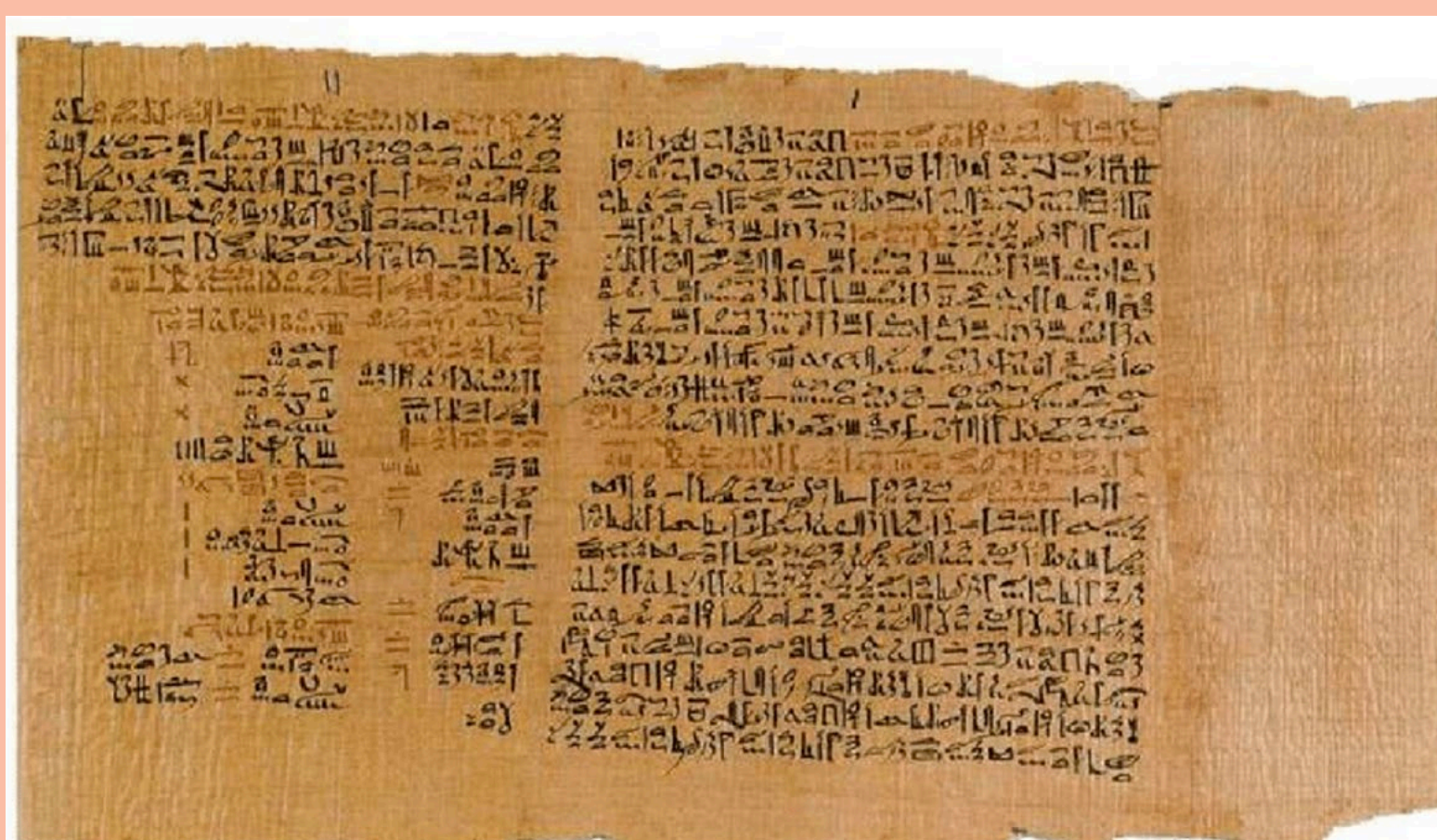
- Human and animal blood has been used in art from painting to performance art.
- Body fluids as well as blood and faeces are regarded by such artists as "potent materials".
- Examples include paintings by Lennie Lee, performance art by Kira O'Reilly and blood sculptures by Marc Quinn.



Vampire by Edvard Munch



Relic of The Holy Blood



The Ebers papyrus

**Blood Lines:  
A Resource Not To  
Be Taken In Vein**

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