



#### Cauterising irons

These steel instruments with wood handles were used to stop wounds from bleeding.

Irons were put into the fire until they were glowing hot before being placed onto or into a wound, which was then sealed with hot tar oil. Surgeons had many different sized and shaped irons to treat all sorts of wounds and in battle, where many injuries were expected, may have had them all in the fire at once, to be ready for anything. This may be the origin of the phrase 'having plenty of irons in the fire'.

Tudor people believed that their bodies contained 4 humours; yellow bile, black bile, blood and phlegm. They thought having a bad humour, or having too much or too little of a humour, made them ill. Cauterising tools were used to raise blisters as part of a cure called a 'counter irritant', and the blister was then lanced (cut) to let out the clear fluid containing the bad humour.



#### How do we know about cauterising irons?

Cauterising irons are described in medical texts and illustrated in manuscripts, and examples found during archaeological excavations are on display in museums.



#### Elevator

Made from steel, this instrument had many uses in lifting parts of the body out of the surgeon's way during operations.

Elevators were also used to lever teeth out of the jawbone during tooth removals, by pushing the sharp point into the tooth socket under the tooth.



#### How do we know about elevators?

Elevators are described in medical texts and illustrated in manuscripts. Examples found during archaeological excavations are on display in museums, and surgeons still use elevators today.



## **Forceps**

Made from steel, this scissor-like instrument was used to remove dirt and debris, such as bits of cloth or bone, from a wound. The ribbed area inside the beak of the forceps gave the surgeon a firm grip on an object even if it was slippery and covered in blood.

Tudor people didn't know about germs, or the importance of keeping surgical instruments sterile to prevent infection, but they knew that steel instruments were easier to keep clean than instruments made from other materials.



#### How do we know about forceps?

Forceps are described and illustrated in medical texts. Examples found during archaeological excavations are on display in museums, and surgeons still use forceps today.



#### Lancet

Made from steel with a folding wooden handle, the lancet was a small, very sharp, knife.

Tudor people believed that their bodies contained 4 humours; yellow bile, black bile, blood and phlegm. They thought having a bad humour, or having too much or too little of a humour, made them ill. One remedy for bad humours or having too much of a humour was to cut open a vein with the lancet, so that the excess humour came out in the blood.

Lances were also used to lance (cut) boils and blisters to release the pus or fluids, and to perform delicate surgical operations.



#### How do we know about lancets?

Lancets are described and illustrated in Tudor medical texts. Lancets found during archaeological excavations are on display in museums.



#### Trepan

This steel and wood surgical instrument was used to treat people with life threatening head injuries, which caused bleeding or swelling in the skull. People died of these injuries unless the pressure caused by the bleeding or swelling was released.

Trepans were used to saw circles of bone from the skull. The spike in the centre stopped the trepan slipping while the bone was being cut. The surgeon removed the blood clots, blood or fluid causing the pressure, then put the bone circles back in place. Finally, the surgeon stitched the scalp with linen thread, and covered the wound with honey, before bandaging it.

Very rich patients had the holes in their skulls covered by silver or gold coins, as surgeons knew this helped the bone to heal more quickly.

Modern scientists have discovered that silver and honey have antiseptic properties which promote healing.



#### How do we know about trepans?

Trepans are described in Tudor medical texts, illustrated in manuscripts, and the surgical procedure is described in battlefield accounts. Archaeologists have discovered skulls with trepanning holes in them, some dating back to prehistoric times, where bone re-growth shows that people survived the operation.



#### Uroscopy Jordan

This glass jar was used to collect urine samples, so that doctors could examine the urine and diagnose patient illnesses.

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To diagnose illnesses, or imbalances in humours, Tudor physicians looked at the colour of the urine, then smelt it, and even tasted it. They had charts showing as many as twenty different colours of urine, and they compared the urine samples to these to decide what was wrong. Very light yellow urine was normal, but if the urine was dark yellow or even brown the patient was dehydrated and needed to drink more. Red or green urine meant that there was something seriously wrong.

Doctors still analyse urine today to help diagnose illness, but it's done by testing it in a laboratory, rather than by looking at the colour, smelling or tasting it!



How do we know about uroscopy jordans? Jordans are described and illustrated in medical texts. A few uroscopy charts also exist and several jordans are on display in museums.



## Wool and egg

Clean sheep's wool was soaked in egg white and used to cover a graze or small wound. The wool was held in place by tying a piece of cloth over it, just like a modern bandage.

The egg white helped stop the wound bleeding, and as it dried out, it formed a skin over the wound to keep it clean while it healed.



How do we know about wool and eggs?
This technique is described in medieval medical texts.



