1 Did prehistoric people get ill?

What is prehistory?

For historians, a prehistoric society is one without writing. Although the prehistoric period does not have a definitive beginning and end, historians usually say that it started about 500,000 years ago. All of the evidence we are studying, however, comes from the last 20,000 years of the period.

Prehistoric people lived throughout the world. Not all peoples in the world left the prehistoric period at the same time. Once writing developed in a society, that society was no longer prehistoric. Britain remained prehistoric for longer than Egypt and the Middle East, where writing developed much earlier.

The earliest prehistoric peoples had the following features in common.

- They were nomads.
- They were hunter-gatherers, so they got all their food without farming.
- They lived in small groups without complicated political arrangements. There were no separate countries.
- They had a very simple level of technology. Spears, bows and arrows, axes, knives and scrapers were their main tools. All of these were made from wood, bone and stone.
- They had no system of writing.

Over thousands of years things changed slowly. The most important changes were the development of farming (which led people to stay in one place) and of metal tools.

GETTING STARTED

Compare Sources A and B.

- Is this all you need to answer the question whether prehistoric people got ill?
- How could you improve the answer?

ACTIVITIES

1 Explain which features of prehistoric peoples:
   a might have affected their ability to develop medicine
   b might affect our ability to find out about their medicine.

TIMELINE

18000 BC  15000 BC  12000 BC  9000 BC  6000 BC  3000 BC  0 AD 2000

Old Stone Age  New Stone Age  Bronze Age  Iron Age
Did prehistoric people get diseases?

Because we don’t have any writing from prehistoric times, the evidence we use presents special problems. There are two main sources of evidence: the remains of the people themselves, and the remains of things they made.

Prehistoric skeletons can tell us quite a lot. Archaeologists and doctors have studied them and found traces of diseases that still affect people today. Many diseases would only show in the body organs or flesh, which don’t survive, but some diseases can be seen in the bones. For example, Source B shows a bone cancer. Other prehistoric bones show evidence of diseases that are caused by poor nutrition, such as anaemia. Also, prehistoric skeletons show evidence of injuries familiar to us now – broken bones and damaged joints and backs.

Fact file

Cave paintings

In some parts of the world prehistoric paintings have survived. The paintings show things we think were important to prehistoric people – usually the animals they hunted, and sometimes a hunt itself. Some paintings, such as Source C, are of other things. Source C is one of several prehistoric paintings that show a man with antlers on his head. In some, the man is standing in a circle with 12 other men. Some historians think this shows a religious ritual. Others think that the paintings might be of a medicine man.

Examining the evidence

Enquiry

Using the evidence in part 1.1 of this chapter, say whether each of the following statements is definitely true, possibly true or definitely not true, and give reasons for your answer.

1 Some prehistoric people suffered from disease.
2 All prehistoric people suffered from disease.
3 Prehistoric people who got diseases were treated by a medicine man who wore an antler mask.

Examiner’s tip

This exercise is about the way sources can be used as evidence to back up a statement. There are three main possibilities:

• The source does not back up the statement.
• The source supports the statement, but is not enough to prove it.
• The source proves that the statement must be true.

It is always important to be clear whether a source supports or proves an idea.
1.1 Prehistoric surgery

LEARNING OBJECTIVES

In this lesson you will:

• study the evidence that prehistoric people did surgery
• sharpen your skills on how sources might prove or support an idea.

Trephining is a way of operating on a person’s skull, using a saw to cut out a round piece of bone. It is an operation still used by surgeons today. Archaeologists have found trephined skulls, as shown in Sources D and E, in almost every part of the world where prehistoric people lived. Historians of medicine have then been able to study individual skulls, like those shown here, and the whole range of skulls that have been found, to see if they can make any generalisations about them. Historians who have studied the range of trephined skulls found so far have come to the following conclusions.

• Both men’s and women’s skulls have been found with trephine holes.
• No trephined skulls of children have been found.
• Trephined skulls are found in burial sites with the complete body of the person.
• Often the piece of bone cut out of the skull has been found in the grave with the body.
• Sometimes this piece of skull has had one or two holes made in it, perhaps so that it could be threaded on a thong and worn round the neck.
• Many of the skulls have bone growth around the hole made by the operation. This shows that the person lived on, probably for many years.

Historians have to work out why the operation, which must have been painful and dangerous, was done. Four main theories have been put forward since the skulls were first found in the 1860s.

Theory 1: Dr Prunieres (1865) suggested that the holes were made in the skulls so that they could be used as drinking vessels.

Theory 2: Professor Paul Broca (1876) suggested that the operation was performed on children, and that those who survived were thought to have great magic power. When the person died, the skull and the piece taken out were used as powerful charms.

Theory 3: E. Guiard (1930) suggested that trephining operations were performed originally on people with skull injuries, and later on people with other problems, perhaps such as epilepsy or severe headaches.

Theory 4: Douglas Guthrie (1945) suggested that the operation may have been performed to let evil spirits out of the body.

SOURCE D

This skull of a Bronze Age man was found near Jericho in the Middle East. It was buried about 2000 BC.
Historians divide the prehistoric period into four eras:

- **Old Stone Age (Palæolithic)** when people were nomadic hunter-gatherers.
- **New Stone Age (Neolithic)** when farming and living in one place became common.
- **Bronze Age** when metal tools were first used.
- **Iron Age** when the new metal (iron) greatly improved the tools and weapons that could be made.

The prehistoric period overlapped with some other historical periods, described in Chapters 2–4. During the height of the ancient Egyptian civilisation, most of Europe was in the New Stone Age. The Minoan civilisation flourished at the time as the Bronze Age in other places, and during the Greek and early Roman periods Britain was in the Iron Age.

---

**Source E**

This skull of a prehistoric adult was found in 1938, at Crichel Down in Dorset. The piece of removed skull was buried with the body.

**Fact file**

**The prehistoric period**

Historians divide the prehistoric period into four eras:

- **Old Stone Age (Palæolithic)** when people were nomadic hunter-gatherers.
- **New Stone Age (Neolithic)** when farming and living in one place became common.
- **Bronze Age** when metal tools were first used.
- **Iron Age** when the new metal (iron) greatly improved the tools and weapons that could be made.

The prehistoric period overlapped with some other historical periods, described in Chapters 2–4. During the height of the ancient Egyptian civilisation, most of Europe was in the New Stone Age. The Minoan civilisation flourished at the time as the Bronze Age in other places, and during the Greek and early Roman periods Britain was in the Iron Age.

---

**Grade Studio**

**Enquiry**

1. a What was Dr Prunieres’ theory about the trephined skulls?  
   b From the evidence here, do you think this theory was definitely right, possibly right, probably wrong or definitely wrong? Give reasons for your answer.

2. a What was Professor Broca’s theory about the trephined skulls?  
   b From the evidence here, do you think this theory was definitely right, possibly right, probably wrong or definitely wrong? Give reasons for your answer.

3. a What was Guiard’s theory about the trephined skulls?  
   b From the evidence here, do you think this theory was definitely right, possibly right, probably wrong or definitely wrong? Give reasons for your answer.

4. a What was Douglas Guthrie’s theory about the trephined skulls?  
   b From the evidence here, do you think this theory was definitely right, possibly right, probably wrong or definitely wrong? Give reasons for your answer.

5. a Which has been more useful in answering questions 1–4: Sources D and E, or the historians’ conclusions from the range of skulls found?  
   b Looking back over parts 1.1 and 1.2 of this chapter, what problems do sources such as B, C, D and E give historians?
1.2 A clue: Aboriginal medicine

**LEARNING OBJECTIVES**

In this lesson you will:
- learn about the medicine of the Aborigines
- practise empathy – in this case understanding that people try to cure a disease according to what they believe was its cause.

**Historians and evidence**

Historians have a real problem interpreting the evidence about prehistoric medicine. We know some facts. There was illness. Some people’s skulls were trephined. But we do not know what people thought about illness, and we do not know why trephining was done. To help provide explanations, historians have looked at the medical beliefs of various groups around the world whose technology and lifestyle are similar to those of prehistoric people.

**The Australian Aborigines**

Until the late 19th century, Aborigines in South and Central Australia lived in very similar ways to prehistoric people.
- They got their food by hunting and gathering. They did not farm.
- They had no domesticated animals, apart from dogs.
- All their weapons and tools were made from wood and stone.
- They did not have permanent homes. They moved from one place with water to another.
- They had many spoken languages but no written language. They made paintings of the animals they hunted and of their ideas about the spirit world.

This Aborigine way of life disappeared as contact increased with white settlers in Australia. However, anthropologists who visited the Aborigines in the 19th century wrote down what they learned about the people’s ideas and beliefs at that time.

Aborigines believed that Spirit Ancestors made the world in ‘the Dreamtime’. This explained many things for them. For example, why was a water hole

**SOURCE**

An Aboriginal healing amulet. Amulets were tied over painful parts of the body. This one is made of shrub fibres and emu feathers.

**KEY WORDS**

**Empathy** – the skill of looking at something from another person’s point of view. It is important in history because we need to understand why people did things, and to properly understand we need to know what their beliefs and values were.

**ACTIVITIES**

1. In what ways were 19th-century Aborigines like prehistoric people?
   b. Why do you think the Aborigines did not use a spirit cure in place of this treatment?
The person was sick because an evil spirit had entered their body. A medicine man was needed to drive the spirit out.

This gives us an important insight into the history of medicine. The cures that people used were related to what they thought had caused the disease. If the disease was thought to have a spiritual cause, then only a spiritual cure would make sense. It would also make sense to use charms to help healing, or to keep away evil spirits.

Conclusions

The 19th-century Aboriginal way of life was very similar to what we know about the way of life of prehistoric people. The ideas of the Aborigines may therefore help us to understand the ideas of prehistoric people. So, like the Aborigines, prehistoric people might have used both common sense and a belief in spirits in their medicine. The man shown in Source C (page 3) may have been a medicine man. The medicine man’s (or woman’s) explanation for many illnesses may have been that they were caused by evil spirits. Trephining may have been performed to let out evil spirits through the hole in the skull. The pieces of skull removed in the operation may have been worn as a charm to keep evil spirits away. This is the view of prehistoric medicine that historians think is most likely. However, it is only a theory. Because we have no written records from prehistoric times, we cannot be sure what people really thought.

Aboriginal medicine

Aborigines made a distinction between two types of medical problems. Some, mainly physical, problems had obvious causes and could be cured in practical, common-sense ways. So, for example, a broken arm was covered in clay. This set hard in the sun, like a modern plaster cast. Cuts were covered with clay or animal fat and bandaged with bark or animal skin.

On the other hand there were medical problems with no obvious cause. Aborigines explained an illness like this in two ways connected with the person’s spirit.

1. The person was sick because their spirit had left their body. This might be because an enemy had captured the spirit with a special ‘pointing bone’ with gum on the end. The spirit got stuck on the gum, and the enemy hid or buried the bone. In this case, a medicine man asked the sick person and their friends and family if they knew of any enemies who might have done this. The cure was to find the pointing bone and free the sick person’s spirit.

2. The person was sick because an evil spirit had entered their body. A medicine man was needed to drive the spirit out.

This gives us an important insight into the history of medicine. The cures that people used were related to what they thought had caused the disease. If the disease was thought to have a spiritual cause, then only a spiritual cure would make sense. It would also make sense to use charms to help healing, or to keep away evil spirits.

Conclusions

The 19th-century Aboriginal way of life was very similar to what we know about the way of life of prehistoric people. The ideas of the Aborigines may therefore help us to understand the ideas of prehistoric people. So, like the Aborigines, prehistoric people might have used both common sense and a belief in spirits in their medicine. The man shown in Source C (page 3) may have been a medicine man. The medicine man’s (or woman’s) explanation for many illnesses may have been that they were caused by evil spirits. Trephining may have been performed to let out evil spirits through the hole in the skull. The pieces of skull removed in the operation may have been worn as a charm to keep evil spirits away. This is the view of prehistoric medicine that historians think is most likely. However, it is only a theory. Because we have no written records from prehistoric times, we cannot be sure what people really thought.

Aboriginal medicine

Aborigines made a distinction between two types of medical problems. Some, mainly physical, problems had obvious causes and could be cured in practical, common-sense ways. So, for example, a broken arm was covered in clay. This set hard in the sun, like a modern plaster cast. Cuts were covered with clay or animal fat and bandaged with bark or animal skin.

On the other hand there were medical problems with no obvious cause. Aborigines explained an illness like this in two ways connected with the person’s spirit.

1. The person was sick because their spirit had left their body. This might be because an enemy had captured the spirit with a special ‘pointing bone’ with gum on the end. The spirit got stuck on the gum, and the enemy hid or buried the bone. In this case, a medicine man asked the sick person and their friends and family if they knew of any enemies who might have done this. The cure was to find the pointing bone and free the sick person’s spirit.
**BRAIN BOOST  MEDICINE IN PREHISTORIC TIMES**

When you look back over your work on prehistoric medicine, ask yourself these questions to help you complete your summary chart.

- What factors caused things to stay the same or to change?
- What evidence can you find for prehistoric people’s ideas that supernatural causes led to illness and disease?
- How did the hunter-gatherer lifestyle affect prehistoric health?
- What evidence is there that medicine men and women were active in treating prehistoric patients?

- What types of illness did prehistoric and Aboriginal people treat using clay?
- What evidence can you find that prehistoric people believed in the use of magical cures?

The summary chart for you to complete can be found on the *Active Book CD-ROM* or will be provided by your teacher. You may find it helpful to look at the notes about the charts on page 00.
content to follow
Ancient Egypt – what was new?

LEARNING OBJECTIVES

In this lesson you will:

• find out about the key features of ancient Egypt
• practise your skills in making inferences from sources

The ancient Egyptian civilisation lasted approximately 3000 years, from around 3000 BC to about 30 BC. Egypt was a well-organised and hierarchical society, from the pharaoh and the vizier at the top, down to the peasants who worked the land. Most of Egypt is desert, and the only places people can live are the banks of the Nile, which gave them water for drinking and for agriculture. As the Nile flooded once a year, the surrounding land was very fertile. Farming of this land was relatively easy, and so the Egyptians had time to do other things as well. A specialised society developed, with different people working as priests, scribes, lawyers and doctors, as well as craft workers like the stonemasons and painters who created the great buildings. Fathers trained their sons in their line of work, from an early age. In some professions, including medicine, a father might train his daughter, if he had no sons.

The most important difference between the ancient Egyptians and prehistoric people was that the Egyptians had developed writing. The development of writing affected their medicine. They could write about illnesses and treatments, and so keep a record of treatments that worked and those that did not. This enabled them to develop treatments by trial and error.

Getting Started

Study Sources A and B, which are things that have survived from ancient Egypt.

• Using just these sources, how many differences can you find between ancient Egypt and prehistoric societies?
• In what way are these two sources similar?

SOURCE A

The pyramids at Giza. They were built as tombs for three pharaohs – Menkaura, the nearest to the camera, (finished in 2503 BC), then Khafra (2532 BC), then Khufu (2566 BC).

SOURCE

In this lesson you will:

find out about the key features of ancient Egypt
practise your skills in making inferences from sources

TIMELINE

Age of pyramid building

3500 BC 3000 BC 2500 BC 2000 BC

Papyrus Edwin Smith written

OCR GCSE History A: Medicine Through Time
Egyptian religion

Religious beliefs were very important in ancient Egypt. People believed that there were many gods and that these gods made everything happen, from the rising of the sun to the flooding of the Nile each year, without which the Egyptians would not have been able to grow crops. Some gods were thought to cause and cure disease. The goddess of war, Sekhmet, was also thought to cause and cure epidemics. A medical book known as the Papyrus Ebers, said that the god Thoth ‘gives physicians the skill to cure’.

Inference – a conclusion reached by studying and judging evidence.

ACTIVITIES

1. Draw a timeline from 3000 BC to 30 BC. Mark on it the dates of all the sources mentioned in Chapter 2, as you meet them.

2. What were the main differences between life in ancient Egypt and life in a prehistoric society?

3. Explain the connection between the following pairs. (Express your answer like this: The connection between the River Nile and the settlement pattern in Egypt is that people lived on the banks of the Nile because they needed its water.)

a. The flooding of the Nile and specialised jobs such as priest and lawyer.

b. The god Thoth and medicine.

A painting from the tomb of Roy, an ancient Egyptian noble, c. 1290 BC. The wife of the dead nobleman kneels by the case for his mummified body. The case is held by a priest wearing a mask of the god Anubis. The texts are extracts from ancient Egyptian religious writings known as the Book of the Dead.

SOURCE B

KeY W ords

1. Draw a timeline from 3000 BC to 30 BC. Mark on it the dates of all the sources mentioned in Chapter 2, as you meet them.

2. What were the main differences between life in ancient Egypt and life in a prehistoric society?

3. Explain the connection between the following pairs. (Express your answer like this: The connection between the River Nile and the settlement pattern in Egypt is that people lived on the banks of the Nile because they needed its water.)

a. The flooding of the Nile and specialised jobs such as priest and lawyer.

b. The god Thoth and medicine.
2.1 Spiritual causes and cures

LEARNING OBJECTIVES

In this lesson you will:
• study the evidence for spiritual causes and cures
• practise your ability to use evidence to support conclusions.

Written records left by the ancient Egyptians tell us what they thought caused illnesses and how they treated them. The Egyptians believed that many diseases were caused by an evil spirit entering the body. People often wore charms to keep such evil spirits away. If they became ill despite the charms, they turned to magic and the gods to make them well.

Egyptian medical books

The most important early Egyptian medical books were the Books of Thoth. They were kept in the temple of Thoth, god of writing and wisdom, by his priests. None of the Books of Thoth have survived, but a medical book from about 1550 BC which has survived – the Papyrus Ebers – was probably based on them. Books of this kind give clear instructions about how to treat illness. The instructions include the exact words to speak as a spell or prayer to the gods, as well as any medicine or other treatment to give. Doctors were supposed to follow the instructions precisely. If a doctor did so and the patient still died, then the doctor was not blamed. If, however, a doctor did not follow the book precisely and the patient died, the doctor was thought to be at fault, and was often executed.

Treatments and cures

Some cures and drugs were made from minerals, herbs and animal parts. They were probably given as part of the magical cure, not as an alternative to magic. They were intended to drive the evil spirit away, perhaps by their smell or bitter taste. Drug ingredients were either boiled and strained, or pounded into a fine powder. They were then mixed and given with wine, water or beer. They were sometimes mixed with dough to make pills, or mixed with honey. Chest diseases were often treated by

Fact file

Egyptian medical books

Only a few medical books have survived from ancient Egypt. They were written on papyrus, a kind of paper made from reeds. The books we know about have been found by archaeologists, and are known by the name of the modern owner, or the museum where they are kept. The Papyrus Edwin Smith was bought by Smith, an American Egyptologist, in 1862. It was written about 1600 BC and considers wounds and the work of surgeons, as well as treatments and drugs. The Papyrus Ebers, written about 1550 BC, contains over 700 remedies. It is named after a German Egyptologist, Maurice Ebers, who acquired it in 1873. The Papyrus Berlin, owned by the Berlin Museum, was written about 1450 BC, and concentrates on the treatment and protection of mothers and babies.

ACTIVITIES

1 What does Source C tell us about what the Egyptians thought caused medical problems?
2 Why are ancient Egyptian medical books important to historians of medicine?
3 What do the Books of Thoth and the Papyrus Ebers tell us about what the Egyptians thought caused disease?

SOURCE C

An amulet of the goddess Taweret, c. 900 BC. Taweret, shown as a pregnant hippopotamus, was the goddess of childbirth. Her face is shown looking fierce, to drive away evil spirits which might affect either the mother or the baby. Amulets like this were worn by pregnant women to keep themselves safe during pregnancy and childbirth. In those days, childbirth was a dangerous time.
making the patient inhale steam. Wounds and skin conditions were treated with ointments. The records the Egyptians kept show that, if a remedy worked, they carried on using it. Their faith in the remedies would probably have been as much to do with their belief in magic as with their trust in a particular drug. But many of their drugs are still used, in a different form, in medicines today.

**Empirical medicine**

Many of the treatments that Egyptian doctors used were empirical medicine. Because people had written down symptoms and treatments over hundreds of years, there was good empirical evidence that some treatments worked, although the Egyptians did not have our modern scientific knowledge of how and why they worked. For example, the Egyptians thought that workers on big projects like building the pyramids could be kept healthy if they were given radishes to eat, to scare away evil spirits. Doctors now know that some elements of radishes help prevent dysentery, which is easily caught and passed on when many people live and work close together.

**Source D**

*Here is the great remedy. Come! You who drive evil things from my stomach and my limbs. He who drinks this shall be cured just as the gods above were cured.*

A spell from the Papyrus Ebers

This spell was for a doctor to chant while giving medicine to a patient. An Egyptian doctor who used the papyrus had written next to the spell, ‘This spell is really excellent – successful many times.’

**Source E**

A page from the *Papyrus Ebers*, in hieratic writing, an Egyptian form of writing which was quicker than hieroglyphs. Made about 1550 BC, this papyrus was probably a copy of much older books. It has 110 pages, including over 700 treatments, and covers intestinal disease, ophthalmology, dermatology, gynaecology, obstetrics, pregnancy, contraception, dentistry, and the surgical treatment of abscesses, tumours, fractures and burns.

**Source F**

*If you examine someone mortally ill, his body shrunken with disease, and you do not find disease in his body except for the surface of the ribs, the members of which protrude like pills, you should then recite a spell against this disease in your house. You should then prepare for him these ingredients for treating it: ground blood stone of Elephantine; red grain; carob; cook in oil (and) honey. This should be eaten by him over four mornings for the suppression of his thirst and for curing his mortal illness.*

A treatment from the *Papyrus Ebers*

**Activities**

4 Why can some aspects of Egyptian medicine be described as ‘empirical’? Explain your answer.

5 Where there was no obvious physical cause for disease, some Egyptian doctors thought disease was caused by spirits and gods.

   Copy this statement and underline it.

   a Give some evidence to support the statement and explain why this evidence supports it.

   b Explain whether the statement describes a new or an old idea in the history of medicine.
2.2 Religion, anatomy and surgery

**LEARNING OBJECTIVES**

In this lesson you will:

- find out about the effect of religion on ancient Egyptian medicine
- practise your ability to use evidence to support conclusions.

Anatomy is the study of the structure of the body. Knowing how the human body is made up, and how it works, is an important part of medicine. The Egyptians learned some human anatomy as an unintended consequence of their religious beliefs. They believed that after a person died, his or her soul left the body. Later the soul returned to the body and the person began an afterlife, very like the life they had led before they died. It was important, therefore, to keep dead bodies in good condition for their souls to use when they returned.

The Egyptians devoted much time to finding ways of preserving dead bodies. They soaked the bodies in various liquids, including salts and bitumen. They covered them in oils and wrapped them in bandages. This process was called embalming, and the embalmed bodies were called mummies. Embalming included cutting open the body to take out some of the main organs (the lungs, liver, stomach and intestines), because these would rot inside the dead body. The organs

**SOURCE G**

In the best treatment, first of all they draw out the brains through the nostrils with an iron hook. When they have removed what they can in this way they flush out the remainder with drugs. Next they make a cut in the side, with an obsidian knife, through which they take out all the internal organs. They clean out the body cavity, rinsing it with palm wine and powdered spices, and then they stitch it up again. When they have done this, they cover the corpse in natron for 70 days and so mummify it. Then they wash the corpse and wrap it from head to toe in linen bandages smeared with the finest gum. Finally the relatives put it in a man-shaped wooden coffin and store it in a burial chamber, where it is propped upright against the wall. This is the most costly method of preparing the dead.

A description of one method of mummification from *The Histories*, a book by Herodotus, a Greek traveller and historian who visited Egypt about 450 BC

**SOURCE H**

Parts of the mummification process are shown in this painting on a coffin from around 600 BC. The lower section shows the body (darker than the living people) being washed in a solution of natron (sodium chloride). The middle section shows the body covered with natron crystals during the 40-day drying-out stage. At the top, on the left, the mummy has been placed in its tomb with the canopic jars underneath. These held the liver, lungs, stomach and intestines. On the right the god Anubis is attending to the mummy.
were left whole and stored in canopic jars, which were kept with the mummy. See Sources G and H. The process of embalming gave the Egyptians a good understanding of some parts of human anatomy. Removing the major organs meant that they knew where these were in the body. However, their belief in the afterlife, which led them to finding out this much, also prevented them from doing any further research into the structure of the body. Because they believed that bodies were needed for the afterlife, they would not dissect them any further – but dissection of human bodies is essential to gain a full knowledge of human anatomy.

Surgery
As for all crafts in Egypt, the skill of surgery was passed from father to son (or sometimes daughter). The Papyrus Edwin Smith, written in about 1600 BC, describes some simple surgical procedures, including ways of treating dislocated arms and legs. None of the existing written records discuss major operations, and the mummies that have been examined so far do not show any signs of major surgery. On the other hand, as we have seen, the Egyptians had a reasonable grasp of human anatomy. The written evidence shows that they performed minor surgery, like the removal of cysts and tumours. Because so much surgery was done, it is likely that it was one of the medical skills in which people specialised. The minor operations probably had quite a good recovery rate, because the wounds that were left after operating were treated with willow. We now know that willow leaves and bark produce a form of antiseptic, which would have protected the wound against infection.

SOURCE

Forty-six vessels go from the heart to every limb. If a doctor, surgeon or exorcist places his hands or fingers on the back of the head, hands, stomach, arms or feet, then he hears the heart. The heart speaks out of every limb.

From the Papyrus Ebers, about 1550 BC

SOURCE

If you examine a man with a dislocation of his jaw where his mouth is open and he cannot close it, you should put your two thumbs on the ends of the two rami of the mandible [lower jawbone] inside the mouth. Put your fingers under his chin and make them fall back into the correct position.

From the Papyrus Edwin Smith, about 1600 BC

ACTIVITY

- Egyptian doctors knew something about anatomy. They were aware of the heart, lungs and brain.
- Egyptian doctors did surgical operations.

Copy the two statements above, about Egyptian medicine, and underline them. Underneath each statement:
a Give some evidence to support it and explain why the evidence supports it.
b Explain whether it is a new or an old idea in the history of medicine.

VOICE YOUR OPINION!

In what ways did religion help or hinder Egyptian medicine? Try to think of examples for each.

SOURCE

When you come across a swelling of the flesh in any part of the body of the patient and your patient is clammy and the swelling comes and goes under your finger unless the finger is still, then you must say to your patient, ‘It is a tumour of the flesh. I will treat the disease. I will try to heal it with fire since cautery heals.’ When you come across a swelling that has attacked a vessel, then it has formed a tumour in the body. If, when you examine it with your fingers, it is like a hard stone, then you should say, ‘It is a tumour of the vessels. I shall treat the disease with a knife.’

From the Papyrus Ebers, about 1550 BC

SOURCE

A carving of Egyptian surgical instruments from the temple of Kom Ombo, made c.100 BC. The instruments include probes, saws, forceps, flasks, scalpels, scissors and even plants (presumably medicinal herbs to put on the wound after surgery to help it heal). Surgical instruments were mostly made from bronze, and some have been found looking just like these.

From the Papyrus Ebers, about 1550 BC
The River Nile was vital to Egyptian life. Every year the river flooded. The Egyptians dammed and channelled its waters into irrigation ditches to keep their crops growing. This control of the flood waters by damming gave some doctors an analogy which helped them to think about the body and disease. They thought the human body might be full of channels, rather like the irrigation system. They knew that there were many vessels inside the body, through which blood and other fluids flowed. If an irrigation channel was blocked, the life-giving water would not flow into the fields. Perhaps the same thing happened inside the human body? If one of the vessels became blocked, would the person become ill?

This was a very different idea about the causes of disease from those held earlier. Now the disease was believed to have a physical as well as a spiritual cause. Therefore part of the treatment should be physical as well. Egyptian doctors who thought in this way used a variety of treatments:

- Vomiting was thought to be good for some patients. It might clear blockages in some parts of the body.
- Purges (medicines that worked as laxatives) were often used. They might clear some blockages from the stomach and bowel.
- Bleeding was also used. A doctor would deliberately cut a vein so that the patient would lose a certain amount of blood. It was thought that this might clear any blockages in the blood vessels.

These methods were not accepted by everyone, and the doctors who used them did not reject spiritual explanations for disease. The treatments mentioned in the Papyrus Ebers show both natural and supernatural theories about the causes of disease.

**Egyptian public health**

The ancient Egyptians believed in keeping clean. It seems that their concern with cleanliness (see Source P) was more to do with religion and comfort than with health. The fact that priests washed more...
often than other people suggests a religious connection to their washing practices. The Egyptian development of mosquito nets was more to do with comfort than the knowledge of the illnesses that mosquitoes can carry. But, whatever their reasons, their attitude to cleanliness helped them to keep healthy. Shaven heads were normal, for both men and women. Clothes were changed regularly. Despite their sophisticated water drainage system for growing crops, the Egyptians do not seem to have developed a drainage system for their toilets. Only well-off people had bathrooms and the baths were just shallow troughs with a drainage pipe leading to a large jar. Toilets were more common, but these were just stone seats over a large removable jar. Perhaps this shows that water was too valuable to be wasted in deep baths or in sluicing away sewage, which could be carried to the fields by slaves and used as manure.

**SOURCE N**

_Aother remedy for the belly: colocynth 8 ro, senna 8 ro, s’m 8 ro, sweet beer 15 to, are mixed together, boiled, strained and taken in 1 day. It causes the man to evacuate all accumulations that are in his belly._

_Treatment from the _Papyrus Ebers_, about 1550 BC._

Ro and to were units of measurement. Senna is still used in laxatives today.

**SOURCE O**

_A wall painting showing irrigation and farming scenes from the tomb of Sennedjem, c. 1310 BC._

**SOURCE Q**

_An Egyptian toilet seat, made from limestone. Underneath it there would have been a pot which could be emptied._

**ACTIVITIES**

For this activity you will need to look back over the whole chapter on ancient Egypt.

5 Copy each of the statements below, about Egyptian medicine, and underline it. Underneath each statement:

a Give some evidence to support it and explain why the evidence supports it.

b Explain whether it is a new or an old idea in the history of medicine.

- Egyptian doctors used treatments based on herbs, plants and animal parts.
- Some Egyptian doctors thought the body was like the River Nile, with channels running through it. If the channels got blocked, a person would become ill.
- Many Egyptians thought the best way to stay healthy was to scare away the evil spirits that might cause disease, and so they wore charms to help them do this.
- Egyptians were very concerned about their personal hygiene and this helped to protect their health.
- Some Egyptian doctors gave their patients careful physical examinations.
- Egyptian doctors treated wounds, dislocations and tumours.

**SOURCE P**

_The Egyptians drink from cups of bronze which they clean daily – everyone, without exception. They wear linen clothes which they make a special point of continually washing. Their priests shave their whole bodies every third day, to guard against lice, or anything else equally unpleasant while they do their religious duties. Twice a day and every night these priests wash in cold water._

_From _The Histories_ by the Greek historian Herodotus, about 450 BC_.

**SOURCE R**

_A wall painting showing irrigation and farming scenes from the tomb of Sennedjem, c. 1310 BC._

**SOURCE S**

_An Egyptian toilet seat, made from limestone. Underneath it there would have been a pot which could be emptied._

**SOURCE T**

_A wall painting showing irrigation and farming scenes from the tomb of Sennedjem, c. 1310 BC._

**SOURCE U**

_An Egyptian toilet seat, made from limestone. Underneath it there would have been a pot which could be emptied._

**SOURCE V**

_An Egyptian toilet seat, made from limestone. Underneath it there would have been a pot which could be emptied._

**SOURCE W**

_An Egyptian toilet seat, made from limestone. Underneath it there would have been a pot which could be emptied._

**SOURCE X**

_An Egyptian toilet seat, made from limestone. Underneath it there would have been a pot which could be emptied._

**SOURCE Y**

_An Egyptian toilet seat, made from limestone. Underneath it there would have been a pot which could be emptied._

**SOURCE Z**

_An Egyptian toilet seat, made from limestone. Underneath it there would have been a pot which could be emptied._
2.4 Medicine in a workmen’s village – case study

Although a lot survives from ancient Egypt, it is mainly from the lives of rich and powerful people. An exception is the village of Deir el-Medina, which was home to the workmen who built the royal tombs from about 1500 to 1050 BC. What does Deir tell us about medicine and health for people who were not rich?

**SOURCE R**

<table>
<thead>
<tr>
<th>Year 29, Month 4 of the inundation [1155 BC]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total given to the Doctor by Weser-hat [a workman]:</td>
</tr>
<tr>
<td>bronze jug worth 4 deben</td>
</tr>
<tr>
<td>fine basket worth 5 deben</td>
</tr>
<tr>
<td>sandals, two pairs worth 4 deben</td>
</tr>
<tr>
<td>...</td>
</tr>
<tr>
<td>total 22 deben</td>
</tr>
</tbody>
</table>

From a papyrus which records details of life in the village of Deir el-Medina.

The papyrus from which this extract is taken is also called the ‘Turin Strike Papyrus’, because it records details of a strike by the workmen. A deben was a weight of copper which was used to fix value when goods were used to pay for services.

**SOURCE S**

Some of the ration lists for the village record a small payment to ‘the doctor’. He seems therefore to be paid by the state.

From A.G. McDowell, Village Life in Ancient Egypt, 1999

**SOURCE T**

In this source some words in the original were unreadable and they are shown as xxx.

*Work given to the washerman Baki:*

*House of xxx:*
- kilts, 2; underpants, 2; tunics, xxx; sleeve, 1; xxx; bands, 3.

*House of Iny:*
- kilts, xxx; loincloth, 1;

*House of Amen:*
- kilt, 1; loincloth, 2; sleeve, 1; handkerchiefs, xxx

*House of Khonsu:*
- kilt, 1; loincloth, 1; shawl, 1; underpants, 1; sleeve, 1; rags, xxx

*House of Pen-dua:*
- kilts, 2; loincloths, xxx

*From an ostracon found in Deir el-Medina*

An ostracon is a piece of broken pottery used to write on, in the way we would use notepaper. So far 1675 ostracons have been found in Deir.

**ACTIVITIES**

1. What does the evidence from Deir el-Medina tell you about health and hygiene for workmen?
When you look back over your work on medicine in ancient Egypt, ask yourself these questions to help you complete your summary chart.

- What factors allowed people to concentrate on other pursuits, including medicine? Did this mean that things stayed the same or changed?
- What evidence can you find for new features found in Egyptian medicine, such as hygiene and knowledge of anatomy?
- What cause of disease led Egyptian people to believe that amulets of goddesses and spells could help cure or avert illness?

- What evidence can you find that trained doctors provided medical care for the rich? What about for workmen?
- What kind of illnesses did the Papyrus Ebers offer treatments for?
- What evidence can you find that the Egyptians used empirical reasoning when coming up with treatments?

The summary chart for you to complete can be found on the Active Book CD-ROM or will be provided by your teacher. You may find it helpful to look at the notes about the charts on page 12.
Examiner’s tip

Some questions require you to use sources. In these questions you will need to use your knowledge of the topic to interpret and evaluate the sources. When you are asked to use specific sources you must do so, but you may also use any other sources within the question if they are relevant.

a Study Source U. Why is Source U evidence of surgery during prehistoric times? Use the source and your knowledge to explain your answer.  
[5 marks]

b Study Source V. What sorts of illnesses would ancient Egyptian doctors have treated with the instruments shown in Source V? Use the source and your knowledge to explain your answer.  
[5 marks]

c Study both sources. Do these sources prove that surgery improved between the prehistoric period and the ancient Egyptian period? Use the sources and your knowledge to explain your answer.  
[5 marks]
In the ancient world Greece was a culture, not a country. The people we call the ancient Greeks lived not only in modern Greece and the Greek islands, but also in cities built on the shores of the Mediterranean, in modern Albania, Turkey, Italy, Spain and Africa. They shared a language and religious beliefs.

The Greeks started building their first cities, in mainland Greece, from about 1000 BC. By about 750 BC these cities had developed into independent states. Each city-state ruled over the surrounding countryside and began to colonise land around the shores of the Mediterranean, building trading settlements there.

At this time the Greeks explained many of the mysteries of nature by the actions of their gods. So, for example, volcanoes were caused by Hephaestos, the god of fire. He was a blacksmith. The smoke and flames of a volcano were said to be created by him as he worked at his forge. The changes in the seasons were explained by the myth of the goddess Demeter and her daughter Persephone. For six months of every year Persephone was forced to live in Hades, the world of the dead. This made Demeter so angry that, during this time, she would not allow plants to grow. Every spring, however, Persephone was released from Hades and Demeter, happy again, allowed the plants to grow.

**The Greek world around 450 BC**

Greek civilisation was at its height between 600 BC and 300 BC. The individual city-states developed and became more powerful. This was very different from Egypt, where there was a strong central state. While the Greek city-states were all different, each had a leisured upper class or classes who had plenty of time to spend on their interests. Science, philosophy and mathematics were important to many Greeks.

**Source**

Alcmaeon of Croton suggested that the brain not the heart was the part of the body that understood the senses. This had a basis in observation. Examination of the eyeball led him to see the optic nerve leading into the skull. He gave similar explanations for hearing and smelling because the ears and nostrils suggested passages leading to the brain.

the old supernatural explanations for events with new rational ones produced by philosophers. One philosopher, Thales of Miletus, predicted an eclipse of the Sun in 585 BC because he understood some of the movements of the Sun, Moon and planets. He also thought that water was the basis of all life. In about 560 BC, Anaximander developed a theory that all things were made of four elements – earth, fire, air and water. Pythagoras, who died about 500 BC, was fascinated by mathematics. He put forward the idea that life was concerned with the balance between opposites.

Medicine developed too. Our first knowledge of Greek medicine comes from the poems of Homer. Historians believe that these were written about 750 BC, and based on earlier poems that had been passed down by word of mouth. They tell of the siege of Troy, and of the soldiers who fought in the Trojan war. Doctors are described giving common-sense treatment to wounded warriors, while treating other illnesses and diseases as having supernatural causes. It is the gods who send plagues, in Homer’s work called the Illiad.

Two different medical traditions developed – rational and supernatural. The rational tradition was associated with Hippocrates, who was born about 460 BC. The medical books linked with him were written from about 430 BC onwards. The supernatural tradition was associated with the cult of the god Asclepius. It was said that Asclepius’ sons had fought in the siege of Troy, and stories about him were common in Homer’s time. However, the real growth of the cult of Asclepius came much later and the great temples that were the home of the cult were built after 400 BC. It is important to keep these dates in mind. What happened in Greece was not that a primitive supernatural system of medicine was replaced by a more advanced natural or rational medicine. Both traditions developed and flourished at the same time.

**KEY WORDS**

*Change – a break with the past, when something is completely new.*

*Development – something that has developed from a previous idea. It is based on what went before.*

*Philosophy – the name the Greeks gave to the study of wisdom and knowledge. Philosophers tried to find out the causes for things and to explain the world.*

**ACTIVITIES**

1. When was ‘the time of Homer’?
2. Was the Greeks’ explanation for the changes in the seasons rational or supernatural? Give reasons for your answer.
3. Was the Greeks’ explanation for volcanoes natural or supernatural? Give reasons for your answer.

4. Describe a change in ideas in the Greek period.
5. Describe a development in ideas in the Greek period.
6. Was Hippocratic medicine a development from the work of the philosophers?
7. Was Hippocratic medicine a development from the supernatural medicine of the cult of Asclepius?
8. Was it possible for the Greeks to have any contact with the civilisation of Egypt?
9. How was the political organisation of Greece different from the political organisation of Egypt?
Asclepius was the Greek god of healing. The temples that were built to worship him were called ‘asclepions’ and used for treating the sick. The cult of Asclepius became more important during the 5th century BC and the three most important asclepions – in Epidaurus, Pergamum and Cos – were all built or rebuilt around 350 BC. Asclepius had two daughters, Panacea and Hygieia.

As you can see from Source C, the asclepions were large and complicated sites. People who were ill would go to an asclepion and spend at least one night there, praying to Asclepius and being treated. They would usually go through the following processes:

- make an offering or sacrifice to Asclepius
- bathe in the sea to cleanse and purify themselves
- sleep for at least one night in the abaton, a long, narrow building open to the air on each side.

While sleeping in the abaton, patients expected to be visited by the god. Some had dreams. Others were probably treated by the priests.

The snake was Asclepius’ sacred animal. In Greek carvings, he is usually shown holding a staff with a snake wound round it. The priests used snakes as part of the treatment in the abaton. Ointments were often rubbed into the part of the body where symptoms occurred. Sometimes the snakes licked the sick part as well. The patients were supposed to wake up cured the next morning, and some did. Others did not.

One of our most important sources about what happened in an asclepion is an account written by Aristides, a philosopher from Athens, about his treatment in AD 150. Aristides had spent years visiting different asclepions. The information above is based on the evidence in his account. Another source we have is the story of a visit to an asclepion in a comic play, Plutus, by Aristophanes, a Greek playwright who died in 388 BC. See Source B.
The cult of Asclepius flourished until the end of the Roman period (about AD 400). The practice of taking sick people to a religious site, in the hope that they would be cured, lasted even longer. This is what happened in many medieval pilgrimages. Until the middle of the 20th century, in some Greek islands, and in parts of southern Italy and Sicily, sick people spent the night in church hoping to be cured. Cures were regularly reported. This is an example of continuity (an idea or practice that stays the same for a long time). When studying the history of medicine we tend to concentrate on change, but continuity is also an important part of the overall picture.

Translations of some stone inscriptions set into a wall of the asclepion at Epidaurus

Archaeologists have found and translated many inscriptions like these, recording cures that were said to have happened in the temple. The inscriptions are called ‘lamata’.

SOURCE E

Ambrosia of Athens became blind in one eye. She had laughed at being told of cures to the lame and the blind. But she dreamed that Asclepius was standing beside her, saying he would cure her if she would dedicate a silver pig as a memorial to her ignorance. He seemed to cut into her diseased eyeball and pour in medicine. When she woke in the morning she was cured.

Euhippus had had a spear point fixed in his jaw for 6 years. As he was sleeping in the temple Asclepius pulled out the spear point and gave it to him. When day came he left, cured and holding the spear point.

A man had his toe healed by a serpent. While he slept a snake crawled out of the shrine and licked his diseased toe. He woke cured, saying he had dreamed that a beautiful young man had put a drug on his toe.

SOURCE D

A carving made about 350 BC, showing Asclepius treating a boy called Archinos.

ACTIVITIES

2 We have a number of sources of evidence about the cult of Asclepius. For each of Sources B, C, D and E, study the source and answer the following questions about it.
   a When was it made?
   b How useful is it? (What does it tell us?)
   c How reliable is it? (Should we believe it?)
3 Asclepios were both popular and successful. What evidence can you find to support this statement?

Examiner’s tip

Being able to distinguish how useful a source can be, and whether it is reliable or not, is very important, especially in Paper Two. It is a good habit always to ask yourself both questions about any source you use.
3.2 Hippocrates and the four humours

**LEARNING OBJECTIVES**

In this lesson you will:

- find out about the new medical ideas associated with Hippocrates
- practise describing and explaining.

We know very little about Hippocrates, who probably lived from about 460 BC to about 375 BC. He is associated with a collection of medical books known as the 'Hippocratic books'. He may not have written any of the books himself; if not, they were written by his followers. The books show a new type of Greek medicine, concentrating not on the illness but on the patient. Hippocrates insisted that all diseases had physical causes. He firmly rejected magical and supernatural cures. He wanted doctors to observe each patient and the progress of their illness carefully. This system of observing the patient, which the Egyptians had also adopted, has developed into what we now call ‘clinical observation’.

The Hippocratic books benefited from the ideas of two earlier Greek thinkers. Pythagoras (c. 580–500 BC) had taught that a healthy body was one in perfect balance. Alcmaeon of Croton (about 500 BC), a pupil of Pythagoras, had argued that a healthy body had the right balance of hot and cold, and wet and dry, within it. Any obvious imbalance (a high temperature or shivering) was a sign of ill health. The correct treatment would put the body back in balance.

Hippocrates emphasised the careful noting of symptoms. This was to help predict what would happen if another patient had the same disease. If there was a pattern in the development of a disease, the doctor would know what would happen next. Hippocrates believed it was important to let illness follow its natural course and to provide the patient with a clean and calm environment. A doctor could use natural, herbal remedies, but only once he was sure what was going on. Complete rest was the usual Hippocratic treatment.

Hippocratic medicine tried to avoid surgery, but sometimes surgery was the only option. Surgery in Greek times was dangerous because dissection was not allowed and doctors had only a vague idea about anatomy. The Hippocratic books about surgery dealt mainly with the type of procedures that had the highest success rate – the setting of fractures and the resetting of dislocated bones.

**The four humours**

The Hippocratic books sometimes talked about the body being made of different elements, which needed to be in balance for a person to be healthy. Some years later, the Greek thinker Aristotle...
Ancient Greek Medicine

(384–22 BC) put forward a clear theory about this, and the cause and treatment of disease.

He suggested that the body was made up of four liquids or ‘humours’ – blood, phlegm, yellow bile and black bile. He connected these with the four seasons – yellow bile with summer, black bile with autumn, phlegm with winter, blood with spring – and said that there could therefore be too much of the connected humour in the body in a particular season. This would be a problem because, according to Aristotle, a person needed to keep the humours in perfect balance in order to be healthy.

The careful observations of Greek doctors must have helped to shape the theory. Some illnesses, such as colds and bronchial problems, are more common in winter than summer. These illnesses are likely to produce lots of phlegm. In the theory of the four humours, the presence of too much phlegm was seen as a cause of disease, not a symptom. To treat a patient, doctors sought to restore the balance of humours. If a patient was feverish and hot, it was thought that they probably had too much blood in their body. The solution was to ‘bleed’ the patient – cutting into a vein to take out some blood.

SOURCE

Quinsey has the symptoms of shivering, headache, swelling under the jaw, dry mouth. The patient found it hard to spit, or breathe lying down. He was bled from the first vertebra of the spine. He had to breathe a mixture of vinegar, soda, organy and watercress pounded together then mixed with oil and water and heated. He breathed it through a hollow reed, while hot sponges were applied to his jaw and neck. He gargled with herbs and had his throat cleaned out with a ball of wool on the end of a twig of myrtle.

A description of symptoms and treatment given in a book in the Hippocratic collection, called On Diseases (384–22 BC) put forward a clear theory about this, and the cause and treatment of disease.

The careful observations of Greek doctors must have helped to shape the theory. Some illnesses, such as colds and bronchial problems, are more common in winter than summer. These illnesses are likely to produce lots of phlegm. In the theory of the four humours, the presence of too much phlegm was seen as a cause of disease, not a symptom. To treat a patient, doctors sought to restore the balance of humours. If a patient was feverish and hot, it was thought that they probably had too much blood in their body. The solution was to ‘bleed’ the patient – cutting into a vein to take out some blood.

ACTIVITIES

1. What was Pythagoras’ idea about health?
2. Alcmaeon of Croton developed Pythagoras’ idea.
   a. What was Alcmaeon’s development?
   b. Explain why it was a development.
3. What was new about Hippocrates’ ideas?
4. Describe the four stages of ‘clinical observation’.
5. a. What were the four humours?
   b. How were they connected to the seasons of the year?
   c. According to the theory of the four humours, what caused disease?
   d. What treatments were associated with the theory of the four humours?
6. Compare Source D on page 27 with Source F.
   a. What clues are there in Source D that this is supernatural medicine?
   b. What clues are there in Source F that this is rational medicine?
7. A doctor who accepted the theory of the four humours might bleed a patient. What would this doctor see as the cause of the problem, and in which season of the year would the doctor be happiest doing this treatment?
3.3 Keeping healthy

LEARNING OBJECTIVES

In this lesson you will:

- study public health and Greek medicine from Alexandria
- practise your skills in answering ‘describe and explain’ questions.

‘Regimen’ was a word the Greeks used a lot when they discussed health. It covered all aspects of people’s lives – what they ate or drank, how much they slept, how much exercise they took, what they did as a job, and so on. Everything was taken into account. The modern equivalent word would probably be ‘lifestyle’.

Healthy habits

The idea of a regimen for a healthy life was not new. The Greeks had always believed that eating and drinking well helped people to keep healthy. Exercise and keeping clean were also important parts of Greek life. Many of the Hippocratic books set out exactly what should be eaten, drunk or avoided for perfect health, and when meals should be taken. They also outlined the best forms and amount of exercise to take. Following all the books’ advice about hygiene, eating and exercise would have filled a normal day! Doctors seem to have realised that these were ideal measures which only the rich would be able to take, and they gave more general advice for ordinary working people who had limited time and money to spend on their regimen. (See Source H.)

Preventing disease

Advising people to follow a healthy regimen helped to prevent disease. However, the Greeks did not take more public measures to prevent disease in their populations, such as building sewers or creating clean water supplies for their cities.

SOURCE H

After waking, a man should not get up at once but should wait until the heaviness of sleep has gone. After rising, he should rub his body with oil. He should then wash his hands, face and eyes with pure water. He should rub his teeth inside and out with his fingers, using fine peppermint powder to clean the teeth and remove the remains of food. He should oil his nose and ears, preferably with perfumed oil and rub oil into his hair every day, washing and combing it only at intervals. After such a morning toilet, people who have to work, or choose to work will do so, but people of leisure will first take a walk. Long walks before meals clear out the body, prepare it for receiving food, and give it more power for digesting.

From a book by Diocles, a Greek doctor of the 4th century BC

ACTIVITIES

1 a What was the Greek idea of a healthy lifestyle?
   b In some ways modern ideas about a healthy lifestyle are similar to those of the ancient Greeks. Does this mean that there has been no progress in our understanding of how to keep healthy since that time? Explain your answer.

SOURCE I

A vase painting from about 550 BC, showing women washing.

Grade Studio

Briefly describe public health in ancient Greece. [5 marks]
Alexandria – a great medical centre

Between 334 and 326 BC, Alexander the Great conquered a vast empire which stretched from Greece as far as India. In 332 BC he founded a new capital city, Alexandria, in Egypt, and soon after this, the great library of Alexandria was built. The intention was that all the knowledge of the world should be collected there. The library was stacked with the works of famous doctors, writers and philosophers. The greatest thinkers of the Greek world gathered there to work.

Knowledge of anatomy could only progress when human dissection became acceptable. Philosophers like Plato and Aristotle argued that, once the soul of a person had left the body after death, it was acceptable to cut the body up. Being able to dissect human bodies meant that people could gain a more accurate knowledge of the position of the organs and could examine the veins and arteries, muscles and bones.

Dissection was allowed in Alexandria. For a short time even dissection of the living was carried out. Criminals who had been condemned to die were dissected and consequently the movement of blood around the veins was discovered. The practice of dissecting living bodies was soon stopped, but dissection of the dead was still allowed and advances in anatomy were made. The work carried out at Alexandria stressed accurate observation of what was actually there.

Herophilus (c. 335–280 BC) worked in Alexandria on the comparative anatomy of humans and animals. He also studied the nervous system, and worked out how this connects to the brain. However, he saw the nerves as channels carrying pneuma (the life force), rather than nervous impulses, which we now know to be the case. Erasistratus (c. 250 BC) wrote about anatomy and health. He was a methodical anatomist, noticing the differences between arteries, veins and nerves. He thought at first, like Herophilus, that the nerves carried pneuma, but then rejected this idea when he found that nerves were solid, not hollow.

Because of the advances in anatomy, surgeons had a better idea of how the human body functioned, but this did not make surgery a great deal safer. There were still no anaesthetics or antibiotics, and hygiene was very poor. Unless their problem was simple, patients undergoing surgery were more likely to die than not.

Alexandria was famous for its study of surgery and medicine. Doctors who had studied there went to practise all over the world. But after the first few years, teachers and students split into various groups supporting the theories of the earlier writers. They developed competing theories of medicine and were more concerned with finding evidence to support their favourite theories than with studying what was actually there.
3.4 The legacy of Greek medicine

GETTING STARTED

Study Source K. How can you be sure whether this is rational or supernatural medicine?

Greek doctors practised all over the Mediterranean world, spreading their ideas about the way doctors should behave, about care for the patient, and about prevention of disease through a healthy regimen. In many places the doctors were welcome. Some elements of Greek medicine had a significant impact on later cultures, both on the kinds of medicine they practised and on their ideas about how illness should be treated. Some of these ideas and practices were passed down, lost, then rediscovered.

A code of conduct

One of the most significant legacies handed down by the Greeks was the idea that doctors should follow a set of rules of behaviour. Hippocrates set out the ‘Hippocratic Oath’ for doctors to take, which outlined the way they should behave.

Practice

Clinical observation is used in all hospitals and medical centres today. Doctors always want to see a patient before they prescribe treatment for his or her illness. Records are kept of all the illnesses and treatments that a patient has had. When a patient is in hospital, charts are kept to record progress.

HISTORY DETECTIVE

What did the Hippocratic Oath say? Also what are the Declaration of Geneva (1948) and the Oath of Lasagna (1964)? Internet searches will provide many sources of answers – how will you know which to trust?

SOURCE A

A Greek vase from about 400 BC, showing a doctor treating a patient.

ALTERNATIVE PHOTO TO BE SOURCED

BRAIN BOOST MEDICINE IN ANCIENT GREECE

When you revise medicine in ancient Greece, ask yourself questions like these to help you complete your summary chart.

- What factors allowed centres of medical treatment to develop? Is this an example of things changing or staying the same?
- What evidence can you find that the ancient Greeks believed in supernatural causes of disease?
- What evidence about the treatment of disease in ancient Greece is found in the play by Plutus?
- What evidence is there about the type of people who were treated in an asclepion?
- What evidence is there for the ancient Greek belief that people’s lifestyle had an effect on their health?
- Do you think that the changes in medicine during the ancient Greek period affected everyone? Find some evidence to back up your answer.

The summary chart for you to complete can be found on the Active Book CD-ROM or will be provided by your teacher. You may find the notes to the charts on page 12 helpful.
In Paper One, question 1 part (a) requires you to use sources. You will need to use your knowledge of the topic to interpret and evaluate the sources. When you are asked to use specific sources you must do so, but you may also use any of the other sources within the question if they are relevant.

You are advised to spend about 8 minutes on this question.

**Source A**

Here is the great remedy. Come! You who drive evil things from my stomach and my limbs. He who drinks this shall be cured just as the gods above were cured.

\[\text{A spell from the Papyrus Ebers. The doctor was to chant this spell while giving the patient the medicine. The Egyptian doctor who used the papyrus had written next to the spell, } \text{“This spell is really excellent – successful many times.”}\]

**a** Would Hippocrates have approved of the treatment used in Source A? Use the source and your own knowledge to explain the answer.  

**Answer 1**

Hippocrates would not have approved because he believed that all diseases only had natural causes, but this treatment is a supernatural treatment because it is a spell as well as a medicine. So Hippocrates would have thought this was wrong.

**Answer 2**

I think he would have approved because the doctor who used the source had written down that it was really excellent and had been successful many times.