Unit 3 The Renaissance – Review

Factors for change in the Renaissance

Renaissance means ‘re-birth’. It describes the period of great change in which took place in Europe from about 1400 until the mid 18th century. The 4 main factors for change in the Renaissance were:

1. **The invention of the printing press** - ideas could be spread quickly and cheaply.
2. **The revival of classical learning** - scholars went back to the original Greek and Roman texts. These reminded scientists to observe nature closely and make theories that explained the world.
3. **The Church was criticised for the first time** - people challenged old ideas and established authorities. In the Reformation the Catholic Church lost its hold over many countries, as well as universities and education. People became less willing to accept the Church’s rulings about issues such as dissection.
4. **Voyages of exploration** - people travelled more and had greater contact with other societies. New ideas and attitudes were brought into Europe. New drugs were introduced, such as quinine, which could be used against malaria.
**Vesalius**

Vesalius was born in Brussels and completed his medical training in Paris. He became Professor of Anatomy at Padua University in Italy, an important centre for medical training during the Renaissance. He had met artists who were studying skeletons and dissecting bodies to make their paintings more life-like. He said it was vital for doctors to dissect human bodies to find out about the human structure and how it works. As the Catholic Church did not allow this, Vesalius had to remove bones from graves. He even stole a body from the gallows so that he could explore the anatomy of the human body. He published his great book 'The Fabric of the Human Body' in 1543. Vesalius's book was a complete anatomy. The famous artist Titian produced over 200 anatomical illustrations for it that showed the human body in greater detail then ever before. It was printed and soon available in every medical school in Europe.

**How did he change medical ideas?**

He was able to prove that some of Galen's theories were wrong. Galen had only been able to dissect animals and assumed that humans had the same anatomy.

Vesalius studied the human heart. He found that Galen's idea that the blood moved from one side to the heart to the other through holes in a thick membrane, called the septum, was wrong.

**How important was Vesalius?**

He helped establish surgery as a separate medical profession. Before Vesalius, physicians believed Galen and all the ancient doctors were completely accurate. Vesalius showed Galen's work could be wrong. This encouraged other scientists to become more questioning. After Vesalius it became more important to study anatomy.

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**William Harvey**

Harvey was a doctor at St. Bartholomew's hospital in London and a Fellow of the Royal College of Physicians. He was the physician to James I and Charles I.

Harvey studied in Italy at the University of Padua where he became interested in anatomy and in particular, the work of Vesalius.

**What were his important discoveries?**

In 1615 Harvey began to work on the idea that blood circulated around the body. He experimented on live animals and dissected the bodies of executed criminals. He proved that the heart was a pump that forced blood around the body through arteries. Veins then returned the blood to the heart where it was recycled.
Harvey's work was helped by the discovery that veins contained valves. He realised that these valves stopped the blood from travelling back the wrong way to the heart. Galen's theory (that the body made new blood as its supplies were used up) was proved wrong.

In 1628, Harvey published details of his work in his book 'An Anatomical Disquisition on the Movement of the Heart and Blood.'

**How important was Harvey?**

After his work was published, Harvey actually lost patients. His ideas were considered eccentric and his work made little difference to general medical practice at the time.

Harvey's work did encourage others to investigate blood circulation, e.g. the blood's role in carrying air from the lungs. His discovery of blood circulation was central to a proper understanding of the workings of the body.

**Summary**

*How real was progress in medicine in the Renaissance?*

- Great discoveries were made but had little effect on how sick people were treated. Vesalius and Harvey said little about causes of illness or treatments
- Doctors still based treatment on the Four Humours, Hippocrates and Galen
- Apothecaries supplied medicine from their shops. Although they were not trained, they had practical experience.
- Poor people had to use 'quacks', who were not qualified, or 'wise women'.

**Exam tips**

These typical exam questions show how you may be asked about individuals during the Renaissance or about developments during that time. Think about how you might tackle them before looking at some tips we have given you.

**Explain why Vesalius and William Harvey were important in the history of medicine.**

To get the most marks for a question like this you need to show how the work or discoveries of Harvey and Vesalius could improve medical treatment or knowledge. Try to avoid just writing a description of their work, no matter how detailed it is as this won't gain you more than 2 marks.

For the highest marks you must explain how people reacted to the new ideas of these two scientists. You need to include details in your answers and don't leave it to the examiner to work out what you are trying to say. Take time in your exam to explain what you might think is obvious - the trick of getting good marks is to make it clear how these facts prove whatever you are saying.
Was the Renaissance period a turning point in the history of medicine? For really good marks you have to include details from several examples and you also need to focus on the idea of a turning point - did everything change or did some things stay the same? To get the full 10 marks you will need to include quite a few details, but don't get carried away with too much description, stick to answering the question you've been asked! For the highest marks you need to look at both sides and weigh them up before you decide whether things changed enough for this period to be called a turning point.