

History, Medicine through time

Lesson 30 of 30

Worksheet:

**How far did WW1 accelerate
medicine and treatment in the 20th
century?**

Miss Holland



WW1 accelerated medicine and treatment

- **Blood transfusions:** Transfusions became more successful as the war progress. Blood was able to be stored as a result of the discoveries made about **sodium citrate and citrate glucose solution** in preventing blood from clotting quickly. **Blood banks** were set up from 1917 to treat injured soldiers.
- **Methods to treat infection:** New techniques were developed throughout the war. For example it was discovered that cutting away infected flesh and using a salt (**saline**) solution e.g. **Carrel-Dakin** method, would help to treat infection. Although they weren't always successful they did improve the outcomes for many soldiers.
- **Surgical developments:** More doctors became experienced in **neurosurgery**, e.g. brain surgery, when they had to remove shrapnel from the brain. The ideas of **Harvey Cushing** helped improve the survival rates of those with head injuries and led to experimental new techniques e.g. the use of magnets. Plastic surgery also saw advances, e.g. **Harold Gillies**, developed new techniques to carry out skin grafts and facial reconstructions.
- **Paving the way for future medical developments:** The advances made during WW1 continued to be important after the war, for example the British National Blood Transfusion Service was set up before WW2 and wouldn't have been possible without the development in WW1. Medical developments in WW1 also led to further advances e.g. further developments in plastic surgery during WW2.



WW1 did not accelerate medicine and treatment

- **No antibiotics:** Although there were new methods of treating infection, it was still difficult to successfully treat severe infections. Antibiotics (e.g. penicillin) were not discovered until 1928 and not developed until just before WW2. The treatment of infection was still limited throughout WW2.
- **Understanding/treatment of mental illness:** There were around 80,000 shell shock cases recorded in WW1 but there was limited progress in the understanding and treatment of this mental illness. Over 300 soldiers were shot as shell shock was often seen as **cowardice** to get out of fighting. Others were subjected to **Field Punishment Number One** and were strapped to a fixed object for hours each day, sometimes in range of enemy fire. Soldiers were sent to hospital for rest as the war went on and cases increased but there was still a lack of understanding.
- **Medicine/treatment based on pre-war developments:** Many medical developments and treatments used during WW1 had been developed before the war. For example, **carbolic acid** was used to treat infection but had been in use since the late 1860s. **Aseptic surgery** which allowed for safer surgeries and blood transfusions had also been introduced by the early 1900s. Another example is the use of **x-rays**, in use since the late 1890s; not much changed by war on the Western Front, other than the use of a few mobile units.



Model agree paragraph

‘WWI accelerated medicine and treatment’. How far do you agree with this statement?

To some extent I agree with the statement, that WWI accelerated medicine and treatment because of the advances made in blood transfusions. For example, there were developments in indirect transfusion, using the syringe-cannula technique which helped to prevent shock. Also, in 1915 it was discovered adding sodium citrate would allow blood to be stored (refrigerated) for 2 days. Then, in 1916 adding citrate glucose solution allowed blood to be stored for up to 4 weeks without clotting. Therefore I agree to a large extent that WWI did accelerate medicine and treatment because the advances in blood transfusions allowed blood to be stored for longer, so blood banks could be set up (like at Cambrai) which prevented more soldiers dying from blood loss. Before the war blood transfusions were often unsuccessful because blood would clot; it was the demand for blood transfusions on the Western Front that led to individuals experimenting and making these discoveries, therefore accelerating medicine.



Model disagree paragraph

‘WW1 accelerated medicine and treatment’. How far do you agree with this statement?

However, to some extent I disagree with the statement because of the lack of developments in understanding and treating mental illness. For example shell shock wasn't fully understood throughout the First World War. Even though men were sent to hospitals to rest it was still thought that shell shock was contagious and even caused by the pressure from exploding shells affecting the brain. Shell shock was also treated as cowardice and men were shot as punishment.

This suggests that WW1 didn't accelerate medicine and treatment because there was little progress made in the understanding of the causes of shell shock and how soldiers suffering from it could be effectively treated. This meant the treatment of mental illness didn't significantly improve as a result of war on the Western Front.



Model conclusion

‘WWI accelerated medicine and treatment’. How far do you agree with this statement?

To a larger extent I agree that WWI accelerated medicine and treatment. This is because war on the Western Front forced doctors to experiment with new techniques and treatments as a result of the significant number of new injuries being dealt with. This led to advancements such as the Carrel-Dakin method to treat infection, the Thomas Split to treat leg injuries and more doctors gained experience in neurosurgery and followed the methods of Harvey Cushing. Therefore I agree with the statement because the war directly led to new techniques and treatments and it paved the way for further medical developments later in the 20th century e.g. large blood banks being developed in Britain.



Glossary

- **Aseptic surgery** - Surgery where the environment is free from bacteria.
- **Carrel-Dakin method** - Where a saline solution was passed through tubes embedded in the infected wound for up to 6 hours.
- **Field Punishment Number One** - A punishment in the British Army, common during the First World War.



Extending writing task:

‘WW1 accelerated medicine and treatment’. How far do you agree with this statement?

1. Write your own paragraph disagreeing with the statement, using the same structure as in the previous example with our ‘agree’ paragraph.

You may want to use the following sentence starters:

- **However, to some extent I disagree with the statement because...**
 - **For example...**
 - **This suggests that WW1 didn’t accelerate medicine and treatment because...**
2. Challenge question: Write a conclusion explaining why you agree or disagree with the statement.

