

Reading for understanding

Education in Chemistry

July 2017

rsc.li/EiC417-medical-plastics

These questions accompany the above article 'Body, heal thyself'.

Read the whole article first. The questions appear in approximately the order in which the answers can be found in the text. You should answer in full sentences and you might find it useful to organise your work in bullet points to ensure you answer all parts of each question.

1. Explain why the scientists believe polymers are a logical choice for building medical implants.
2. Explain why in theory it is possible to design a polymer to behave exactly as you wish.
3. Give three reasons why using metals for implants in the body is not ideal.
4. Describe two roles of nano-hydroxyapatite in the implants being designed by Davide's team.
5. State one similarity and one difference between the polymer implants being developed by Davide and by Julian.
6. Give two limitations of the current plastic spacer treatment for worn out cartilage.
7. State what is meant by the term hybrid material and explain why Julian is researching this type of material for cartilage replacement.