**Collagen and Scurvy – Understanding the Connection?**

**Questions**

1. Maths Round (**1 mark each**)
   1. Which Century was Scurvy a major disease? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   2. What fraction (as a decimal to 2 sig. figures) does collagen account for in total protein in an average human? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   3. Protein makes up approximately 16% of the total human body mass. Using your answer from b), what is the % of collagen in the human body (3 Sig. figures)?

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* 1. How many years did it take from James Lind finding that Citrus Fruit prevented Scurvy to the discovery of the Chemical structure of Vitamin C? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Collagen is a very important part of blood vessel walls. Compare the major differences between Artery and Vein vessel walls and explain why these differences are needed (**5 marks**)

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1. Using Figure 1 from the Article, convert this image into a Biological drawing in the box below (following the rules of Biological drawings!) (**4 marks**)
2. Which Level of Structure do Scientists disagree with in terms of Collagen structure and why is this unusual? (**2 marks**)

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1. Collagens primary structure consists of which 3 amino acids and what bond joins them together? (**2 marks**)

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1. James Lind investigation using Sailors was significant as it represents a first in what? (**1 mark**)

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1. Why is Vitamin C so important in our diet? (**5 marks**)

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1. In modern, Western society, who might be at risk of developing scurvy? (**3 marks**)

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