

Student Score = 20

6. Using the information in the introduction, explain why Tay-Sachs would affect more males than females if it was a sex-linked disorder.

If Tay-Sachs was a sex-linked disorder it would follow the X sex chromosome. So this means that males are more likely to get Tay-Sachs because they get their X chromosome from their mother so they only need one recessive letter (x^t) and they will have Tay-Sachs. Males either have it or not they can't be a carrier. In order for a female to get Tay-Sachs she has to have two recessive letters ($x^t x^t$), but a female can be a carrier of Tay-Sachs, they have to have a dominant and a recessive letter ($x^T x^t$).

Student Response

If Tay Sachs was a sex-linked disorder it would follow the X sex chromosome. So this means that males are more likely to get tay-sachs because they get their x chromosome from their mother so they only need one recessive letter (x^t) and they will have tay-sachs. Males either have it or not they can't be a carrier. In order for a female to get Tay-Sachs she has to have two recessive letters ($x^t x^t$), but a female can be a carrier of tay-sachs. They have to have a dominant and recessive letter ($x^T x^t$).