

Dr Clare Boothroyd presents the session - PCOS and androgens and excess hair

**Dr Clare Boothroyd:**

Male hormones circulate through the blood bound to what we call a carrier protein, which is like a truck that is carrying a good.

And this carriage protein is very important because most male hormone is on the carriage protein, and when it's on the carriage protein it doesn't have any effect on the hair follicle.

It is only the male hormone which is free in the blood stream. And that is actually for women a very small component. On this slide you can see there is a very small 1% free, and most male hormone is bound to the carriage protein.

Now, these carriage proteins are very much affected by things like the contraceptive pill, pregnancy or obesity reduces the number of carriage protein. So that hairiness, or the pre-disposition to hairiness will always be worse if there is extra weight around.

In addition, high male hormones tend to reduce female carriage proteins and this means that there are more free hormones, free male hormones in the system to go and bind with the hair follicles and cause the problem.

So hairiness is likely to be effected quite well by weight change, or by pill or by pregnancy. Insulin resistance is another thing that reduces the carriage protein. So this is all tied in together. There are no good studies that hairiness is reduced by these changes but that is because no one has taken the trouble to do them over a long period of time.

But I think we will start to see that data start to evolve over the next ten years.