

# The Role of 5 Alpha Reductase Inhibitors on Body Hair Transplantation

The pathway that leads to the production of the 3 androgens (DHT, testosterone and Androstenedione), also has a route that leads to the production of Estrogen. When you block DHT production by 5AR inhibition, the path to testosterone and/or estrogen production tends to be upregulated. The degree to which either of these two hormones (testosterone and Estrogen) are affected by 5AR inhibition should depend on several factors including the patient's idiosyncratic predispositions, drug dosage, drug type and actions (eg. Dutasteride blocks both 5AR-1 and 5AR-2 hence leaves less room for DHT production via the 5AR1 pathway -the case with finasteride) etc.

In healthy individuals, most body hair (relevant to BHT) responds especially to testosterone positively. Hence if DHT blockage results in more testosterone production than estrogen, you may actually end up with a positive effect on body hair than in premedication periods. If however, more estrogen is produced than is testosterone, you may well have a slowing of body hair growth and/or breast enlargement and/or loss of libido etc. If these hormones (Testosterone and Estrogen) are raised to the same degree activity-wise, then you may have no change in body hair status as the effects of the 2 will balance out (most patients on alopecia reduction doses). This is the basis for my previous statement "Some activities of 5AR inhibitors (dutasteride and finasteride) are not a direct result of DHT or lack of it" found in the post you pasted above. As you can judge from the aforementioned, some activities of 5AR inhibitors is as a direct result of Testosterone and/or estrogen upregulation, rather than DHT.

A study on chest hair suggests that when slowing of hair growth occurs with finasteride use, it sustains for about 6 months following which it ceases to affect it either way as evidenced by observations in months 6 through 12. It is believed that even in these cases, the effect of testosterone increases to balance the initial estrogenic burst that may have occurred in the earlier months. Also these uncommon negative effects tend to reverse with cessation of meds.

Please note: All the studies leading to the aforementioned statements have been based on prostate studies whereby higher doses of 5AR inhibitors are used compared to the standard doses for hair loss indications.

## **Conclusion:**

As stated in an earlier post: I do not generally dissuade my patients from using finasteride or dutasteride post-BHT, but certain caveats have applied. I have thus far advised caution in the following events:

1. Breast symptoms have occurred and persist.

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2. Libido problems have occurred and persist.
3. 5AR inhibitors have been used for less than 6 months.
4. I pay special attention to the use of dutasteride (an effective 5AR-1 and 5AR-2 inhibitor), and patients using higher doses (of either meds) than is the standard recommendation for hair loss treatment.
5. I have also re-emphasized pre-operative wet shaving and the intra-operative selection of only actively growing body hair for transfer. These would constitute anagen hair that has weathered any real or imagined negative effects of any agent the patient may have been using.

I find these guidelines prudent to follow pending further evidence that warrants refining them.

So to the question, CAN 5AR inhibitors cause reduced body hair...yes. Should this pose a cause for concern as to the future of BHT in MPB? Likely not. The problem may occur in a minority of predisposed men, when it does, it is not sustained past 6 months.

Incidentally, I have seen challenges from either side of the BHT argument for the other side to point to a study that proves or disproves a point. It just so happens that in the BHT practitioners of today lays the best chance if any of such studies happening. Most branches of medicine will have little incentive to monitor the effect of finasteride / dutasteride on BHT in healthy men to the extent that would satisfy our scrutiny.