

## Instructions for transdermal testosterone

- ❖ **To boost testosterone efficacy**
  - ✘ Rub ten times over and out on the skin surface
  - ✘ Use always a large skin area.
  - ✘ Take a highly concentrated testosterone gel or ethanol solution (penetrates best; 50 mg/ml)
  - ✘ Avoid putting creams and lotions on skin surfaces or using bath oil where testosterone is to be applied. They may counter the absorption of testosterone
  - ✘ Apply to non hairy skin areas
- ❖ **To obtain a 24-hour testosterone effect by a twice-a-day testosterone application**
  - ✘ Apply testosterone on large skin surfaces with high penetration (forehead, lateral sides of the neck, regions above the clavicle on the chest, eventually sides of the belly)
  - ✘ Avoid eating large amounts of cereal fiber (whole grain bread, bran flakes, etc.)
- ❖ **To avoid high levels of estradiol (female hormone) and the resultant more female body appearance with gynecomastia (breast development) and benign prostate hyperplasia**
  - ✘ Avoid applying testosterone on skin surfaces high in fat tissue (such as the skin above an obese belly as fat tissue is rich in aromatase (the enzyme that converts testosterone to estradiol)
  - ✘ Avoid other causes of high estradiol (caffeine, alcohol intake; wearing tight underwear, varicocoele)
  - ✘ Supplement with I3C and DIM (found in cruciferous as well). This decreases aromatase activity.
  - ✘ Check Estradiol levels at least yearly.
- ❖ **To avoid excessive levels of dihydrotestosterone (the hormone of body hair and erections, but also of male pattern baldness)**
  - ✘ Avoid applying testosterone on skin surfaces rich in body hair (such as cheeks, hairy chest or belly as these hairy skin areas are rich in 5-alpha-reductase (the enzyme that converts testosterone to dihydrotestosterone).
  - ✘ Supplement with Saw Palmetto Extract (professional products are most reliable for active ingredients).
  - ✘ Measure DHT or preferably 3-alpha-androstane-3,17-diol-glucuronide at least yearly.
- ❖ **To avoid providing your partner with undesired testosterone (and promoting hair growth on her face and body)**
  - ✘ Avoid applying the testosterone on skin surfaces with high body contact during intercourse (such as the chest under the clavicular), arms and do not have a woman apply this for you as the hand can absorb it as well.
- ❖ Men should also take 25-50 mg of DHEA twice daily orally before meals as this shares many of the benefits of testosterone and works synergistically. It is always low in middle age or older. *Designs For Health's 'Libidostim-M'* contains herbs and nutrients that prevent conversion to estrogen, DHT and can help ED. This has sufficient I3C, DIM and Saw Palmetto for many men.
- ❖ When testing hormone levels, have lab drawn before the next scheduled application time so we are measuring the '**trough**' level or low point. Please be able to tell the doctor that the lab was drawn at this time with regular consistent dosing of the

hormone measured for weeks prior. Do not tell the doctor when he is reviewing the lab result that you do not know when or even *if* you had been using the hormone prior to the lab draw or worse yet, that you maybe applied 2 hours before the lab; this makes it meaningless information!

**Notes:**

Only part of the transdermal testosterone penetrates through the skin and accumulates in the (subcutaneous) fat under the skin where it is slowly released into the blood stream. If the testosterone is put on too small a skin surface the penetrated testosterone will overload the underlying fat and most of it will go directly in the blood stream, creating a quick blood peak of testosterone that will also quite quickly disappear from the blood stream. The ethanol solution in my experience leaves the least amount on the skin surface.