

You are considering taking feminizing hormones, so you should learn about some of the risks, expectations, long term considerations, and medications associated with transition from male to female.

It is very important to remember that everyone is different, and that the extent of, and rate at which your changes take place depend on many factors. These factors include your genetics, the age at which you start taking hormones, and your overall state of health.

It is also important to remember that because everyone is different, your medicines or dosages may vary widely from those of your friends, or what you may have read in books or online. Many people are eager for changes to take place rapidly: Please remember that you are going through a second puberty, and puberty normally takes several years for the full effects to be seen. Taking higher doses of hormones will not necessarily make things move more quickly; it may, however, endanger your health.

There are four areas where you can expect changes to occur as your hormone therapy progresses.

1) Physical

The first changes you will probably notice are that your skin will become a bit drier and thinner. Your pores will become smaller, and there will be less oil production. You may become more prone to bruising or cuts. You may notice that you perceive pain or temperature differently, or that things just “feel different” when you touch them. You will probably notice skin changes within a few weeks. In these first few weeks you will notice that the odors of your sweat and urine will change, and that you may sweat less overall.

You will also notice small “buds” developing beneath your nipples within a few weeks of starting your treatment. These may be slightly painful (especially to the touch) and uneven between the right and left side. This is normal, and is the normal course of breast development. The pain will diminish somewhat over the course of several months. Breast development is quite variable from person to person. Not everyone develops at the same rate, and most transgender women can only expect to develop an “A” cup or perhaps a small “B” cup, sometimes only after many years of hormone therapy. Like non-transgender women, the breasts of transgender women vary in shape and size, and are sometimes different sizes or shapes between the right and the left.

Weight will begin to redistribute around your body. Fat will begin to collect around your hips and thighs, and the fat under your skin throughout your body will become a bit thicker, giving your arms and legs less muscle definition and a smoother appearance. Hormones will not have a significant effect on the fat in your abdomen (otherwise known as your “gut”). Your muscle mass will decrease significantly, as will your strength (though you should continue to exercise to maintain your muscle tone as well as your general health). Depending on your diet, lifestyle, genetics, and starting weight and muscle mass, you may gain or lose weight once you begin HRT.

The fat under the skin in your face will increase and shift around to give your eyes and face in general a more female appearance. Please note that your bone structure (including your hips, arms, hands, legs and feet) will not change. The facial changes can take up to 2 years or more to see the final result; It is usually a good idea to wait at least 2 years after beginning HRT before considering any drastic facial feminization procedures.

The hair on your body, such as your chest, back and arms will decrease in thickness and will grow at a slower rate. It may not all go away, however, and some people may need electrolysis or laser to help reduce unwanted body hair. Your beard may thin a bit and grow a bit slower; however, it will rarely go away completely without electrolysis or laser treatments. If you have had any scalp balding, this should slow or stop, though the amount that will grow back is variable.

Some people may notice minor changes in shoe size or height. This is not due to bony changes, but due to changes in the ligaments and muscles of your feet.

2) Emotional.

Your overall emotional state may or may not change, this varies from person to person. Puberty is a roller coaster of emotions, and the second puberty that you will experience during your transition is no exception. You may find that you have access to a wider range of emotions or feelings, or have different interests, tastes or pastimes, or behave differently in relationships with other people. While psychotherapy is not for everyone, most people would benefit from a course of supportive psychotherapy while in transition to help you explore these new thoughts and feelings, and get to know your new self.

3) Sexual.

Soon after beginning hormone treatment, you will notice a decrease the number of erections that you have. When you do have an erection, it will be less firm, and will not last as long. You may lose the ability to penetrate. You will still have erotic sensation, and will still be able to orgasm. However, when you do orgasm, it may be “dry”. You may find that there are different sex acts or different parts of your body that bring you erotic pleasure. Your orgasms will feel different, with more of a “whole body” experience, less peak intensity, and longer duration. It is recommended that you explore and experiment with your new sexuality through masturbation, using sex toys such as dildos or vibrators, and involve your sexual partner.

Your testicles will shrink to less than half their original size, or less. In nearly all cases, this does not affect the amount of scrotal skin available for future genital surgery.

4) Reproductive.

You must assume that within a few months of beginning hormone therapy, you will become permanently and irreversibly sterile. While some people may be able to maintain

a sperm count on hormone therapy, or have their sperm count return after stopping hormone therapy, you must assume that this will not be the case for you. If you think that there might be any chance that you may in the future want to parent a child using your own sperm, you should speak to the doctor about preserving your sperm in a sperm bank. This process generally takes 2-4 weeks and costs between roughly \$2000-\$3000. You should store your sperm before beginning any hormone therapy.

Also, if you are on hormones but remaining sexually active with a woman who is able to become pregnant, you should always continue to use a birth control method to prevent unwanted pregnancy.

Many of the effects of hormone therapy are reversible, if you stop taking them. The degree to which they can be reversed depend on how long you have been taking them. Breast growth, and possibly sterility are not reversible. If you have an orchiectomy (which is removal of the testicles) or genital reassignment surgery, you will be able to take a lower dose of hormones. However, it is important to remain on at least a low dose of hormones post-op until at least age 50 years old, to prevent a weakening of the bones, otherwise known as osteoporosis.

Cross-gender hormone therapy for transwomen may include three different kinds of medicines. Estrogen, testosterone blockers, and progesterones.

1) Estrogen

Estrogen is the hormone responsible for most female characteristics. It causes the physical changes of transition, as well as many of the emotional changes. Estrogen may be given as a pill, by injection, or by a number of preparations applied to the skin, such as a cream, a gel, a spray or a patch.

Pills are convenient, cheap and effective, but they are hard on your liver and are less safe after age 35 or if you smoke. Patches can be very effective and safe, they may cost a little more than pills, and they require that you wear them at all times. Sometimes, they may irritate your skin. Creams, sprays and gels are very effective and safe, and absorb quickly into your skin. These do tend to be a bit more expensive, and may not work as well for people who still have testicles.

Risks associated with estrogen include high blood pressure, blood clots, liver problems, stroke, and perhaps diabetes. Also, there are potential unknown risks since we have not done a lot of research on the use of estrogen in transwomen. It is possible that in the future we may learn about more risks or side effects, particularly when using estrogen for many years. Contrary to what many may believe, a very small amount of estrogen is needed to deliver the maximum effect. Taking very high doses of estrogen does not necessarily make changes happen more quickly, but it can be dangerous and harmful to your health.

There is not much scientific evidence about the risks of cancer in transgender women.

We believe that your risk of prostate cancer will go down, but we are not sure, and therefore you will still need to be tested for that cancer when appropriate. Your risk of breast cancer may increase slightly, though it will still be less than a non-transgender female. Breast cancer screening with mammograms is recommended to begin between ages 40 and 50, for people who have been on hormones for more than 2-3 years.

Many transwomen are interested in taking estrogen injections. Estrogen injections may be appropriate for some people in some cases. When you take estrogen injections, you will have the same amount of estrogen as a pregnant woman. This can make you nauseous, tired, or cause you to gain weight or have mood swings. In people who smoke, or people over 35-40 years old, this high level of estrogen can be dangerous and increase your risk of stroke, blood clots, diabetes, or other disorders. If the doctor does start you on estrogen injections, you should expect to stop them after 1-2 years, since the body is not designed to be constantly exposed to such high levels of estrogen. When you stop the injections and switch to another form of estrogen, you may feel sick for a while, with mood swings, anxiety, and other symptoms as your body re-adjusts to the lower and healthier levels of estrogen.

After you have had genital surgery or orchiectomy (removal of the testicles), your estrogen dose will be lowered, and estrogen injections will be stopped. Once you have had your testicles removed, you need very little estrogen to maintain your feminine characteristics.

Estrogen can make your liver work too hard, causing damage. Your doctor will periodically check your liver functions, cholesterol, and perform a diabetes screening test to monitor your health while on testosterone therapy.

2) Testosterone blockers.

There are a number of medicines which can be used to block testosterone. Some of these drugs block the action of testosterone in your body, and some of them also prevent the production of testosterone. Most of the testosterone blockers are very safe. The one most commonly used, spironolactone, does have some side effects. It can make you urinate excessively, especially when you first start taking it, which can make you feel dizzy or lightheaded. It is important to drink plenty of fluids when taking this medicine. Also, spironolactone can interact with some blood pressure medicines and can be dangerous in people with kidney problems. It is important to share your full medical history and medication list with the doctor so that they can be sure there will be no interactions. People taking spironolactone must have their potassium levels checked periodically, as it can rarely get dangerously high, which can cause your heart to stop.

3) Progesterone.

Progesterone is a source of constant debate among both transwomen and providers. Progesterone has a number of reported benefits, such as improved mood, energy or libido, better breast development, or better body fat redistribution and “curves”. There is very

little scientific evidence to support these claims. However, some transwomen do prefer to take progesterone and have seen some of these benefits. When you take a natural form of progesterone, your risk of things like blood clots, stroke, or cancer are minimized, but still may be increased; There simply is not enough research in this area to make an accurate prediction of you risk.

Progesterone may be given by a pill or by a cream. The pill is easy and relatively safe, the cream is also quite easy and safe. Both are about the same price.

I understand the foregoing information about feminizing hormone usage, and I hereby consent to the prescription use of feminizing hormones.

Patient _____

Date _____

Physician _____

Date _____