

# Testosterone and voice

## Information for patients

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This leaflet contains:

- Information about how testosterone affects your vocal cords and your voice.
- Information about how to care for your voice and adapt to or monitor voice changes when you start taking testosterone.

### Does testosterone hormone replacement therapy (HRT) affect voice?

- Yes. Testosterone causes the vocal cords to thicken. Thicker vocal cords can vibrate more slowly and can produce lower pitches than thinner vocal cords can. The thickening of the vocal folds is a permanent, irreversible change.
- Whilst the vocal cords are changing, it is common to experience temporary voice breaks, hoarse voice, throat discomfort, vocal instability, reduced pitch range, or vocal fatigue. This is partly because you must *re-learn* how to control your vocal cords.

Note: Maintaining good hydration and other healthy voice habits, such as avoiding smoking, can be very helpful during this time.

### Are the effects of HRT the same as the impact of testosterone during teenage puberty?

Some voice changes may be impacted by your age when starting testosterone. As we grow older, the cartilage of our larynx ossifies and becomes less flexible. Cisgender teenage boys are typically exposed to masculinising levels of testosterone when they are growing.

#### Changes during a cisgender teenage boy's puberty include:

- The cartilage of the larynx grows and tilts. This increases the prominence of the 'Adam's apple'.
- The vocal cords thicken, and they also lengthen as the larynx is growing larger.
- The larynx descends (lowers), and the vocal tract gets significantly longer.

#### Changes in trans adults taking testosterone HRT:

- The prominence of the Adam's apple varies between individuals.
- The vocal cords thicken but their length may be limited by the size of the larynx.
- Vocal tract size may shift or grow a little, but it remains shorter (on average) than in cis men.

### How do these changes affect voice?

1. Thicker and longer vocal cords give access to lower pitch and easier access to thicker voice quality.
2. A larger vocal tract gives easier access to "darker" or "deeper" resonance.

Note: Access to “darker” (“deeper”) resonance can also be achieved with voice therapy. If you hold excess tension in your muscles this can make the vocal tract smaller. If you would like a “darker” or “less buzzy” resonance, it may be helpful to complete tension release exercises and learn to speak in a more relaxed, grounded way.

### **How quickly do voice changes occur?**

The onset and duration of voice change varies between individuals. Factors such as dosage, administration method, and personal physiology can all affect the speed of voice changes.

- You may not notice any change for a few months, or you may notice small changes almost straight away. Initial changes may include a feeling of tightness or the voice feeling scratchy or hoarse.
- The speed of pitch lowering is not consistent. Pitch lowering may be faster in the first six months, then slow down. Again, this can vary between individuals.

### **How long do voice changes take?**

- Most voice change tends to occur in the first 12 months of taking testosterone.
- Voice can continue settling over two or more years. The later changes will be more noticeable if you are a singer. You may experience further changes as your hormone levels change or as you age.

### **Monitoring pitch changes**

It is useful to pay attention to your vocal changes, or you may continue to use (or try to use) the voice you are familiar with.

To track your changes, you can make recordings before starting testosterone and at monthly intervals. This will show your progress and can help your confidence.

1. Track your lower range by singing (or humming) down to the lowest note you can comfortably reach.
2. Record yourself comfortably reading something aloud before starting testosterone and once a month after starting. Reading the same thing, in the same way each time, allows for direct comparison.

### **What if I'm unhappy with my speaking voice after taking testosterone?**

- 1) If you feel your voice hasn't changed much, is too feminine, sounds too 'buzzy', nasal, or unbalanced, or gets tired too quickly:
  - Follow vocal hygiene advice. Avoid smoking; maintain good hydration; relax excess tension in the muscles around the neck and jaw; and use adequate breath support. Pause for a slow relaxed breath whenever you need one.
  - Consider requesting a referral to voice and communication therapy to review if you are using efficient voice production and comfortable pitch, and/or to learn to use darker-sounding resonance.
- 2) If your voice is generally lower, darker and thicker, but you feel it is either too monotone or occasionally too high, bright or thin, e.g. when you are excited:
  - Notice if there is a pattern to when you are unhappy with your voice. See if you can practice relevant phrases to prepare for those scenarios.

- Consider requesting a referral to voice and communication therapy. This may include exercises to practice being expressive using volume change, stress, and pacing rather than excessive pitch raise, and/or practice maintaining darker resonance and thicker voice quality when your pitch goes up.
- 3) If you feel your voice has changed too much and needs to be less masculine, e.g. if you want an androgynous voice:
- Follow vocal hygiene advice, such as maintaining good hydration and completing vocal warm up exercises and gently explore what you can do with your voice, e.g. explore allowing your pitch to vary more when being expressive.
  - Consider requesting a referral to voice and communication therapy to learn how to control different voice characteristics.

Note: Remember that the vocal cord thickening caused by testosterone is irreversible and it will not be possible to return to your pre-T voice.

- 4) If speaking is painful, your voice is very hoarse for more than 6 weeks, or you are worried something is wrong:
- See your GP to discuss a referral to Ear, Nose and Throat (ENT) to assess the cause of these symptoms.

### Advice for singers

- Don't stop singing – gently continue singing and complete vocal exercises throughout your whole range (wherever that may be each day). Adapt your practice for your changing voice and focus on smooth transitions between registers.
- Understand you will have to re-learn the muscle memory for each note.
- Understand your voice change process won't be linear.
- Prepare for your voice to be weak at times, especially around your bridge/passaggio.
- Stay hydrated.
- Never push your voice to do anything that causes strain or discomfort.
- Maintain abdominal breathing and body awareness.
- Consider finding a singing teacher to work with during transition.
- Change the key of songs you sing so they're in a comfortable place for your voice or try new songs by people whose voices sound like your current voice.
- Search online for: personal accounts of other singers who have taken testosterone; groups for trans singers; or further online resources such as "Singing on Testosterone: A Handout for Vocal Transition."
- Understand that your singing voice can be part of your identity and it's okay to have mixed feelings throughout this process.

Reference:

Singing on Testosterone: A Handout for Vocal Transition; September 10, 2023; Peter Fullerton, Voice Teacher/Trans Voice Specialist; [www.peterfullerton.com/trans-resources](http://www.peterfullerton.com/trans-resources)