

Voice Feminization

Dr. Haben's metrics for successful voice feminization surgery are to produce results that:

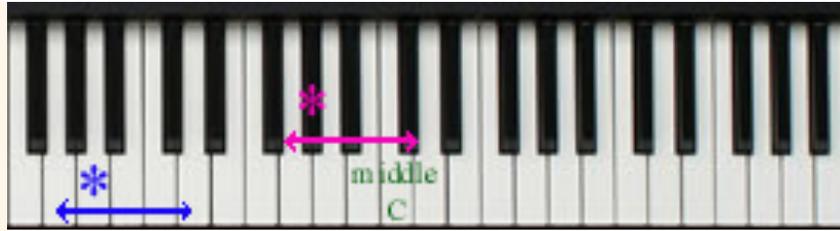
sound natural
effortless voice production
without "thinking about it", placing the voice or worrying about "slip-ups"
prevents clients from being misgendered

PLEASE read through EVERYTHING carefully.

Feminization voice surgery can be performed on both pre and post Gender Confirmation Surgery transgendered clients, cis/ biologic females and gender-neutral individuals.

Surgery to raise the pitch of the voice is relatively straight forward in most patients in experienced hands. Having the final voice perceived as being female instead of just a higher pitched male voice goes well beyond pitch-raising surgery. The first step is understanding the differences between "pitch" versus "voice" versus "speech." The vocal cords are simply 'sound generators'. Pitch is the rate at which the vocal cords vibrate which determines the frequency of a sound produced. Pitch is essentially ALL that the voicebox (larynx) does. The pitch at which we speak is called the speaking fundamental frequency (SFF) and the array of pitches that our larynx can produce is range. An untrained male voice usually has a little over an octave of range, which are 12 notes on a piano. Voice is what results as we mold that sound. Voice is shaped by the size and shape of our throats, mouth, nose and sinuses, giving it resonance just like the size and shape of a piano gives that sound character. The "voice" or sound of an upright piano would sound different than that of a concert grand piano even if the same note is being played. It is important to understand that the resonators of your voice, the shape of the throat, mouth, and sinuses, can not be changed in feminization laryngoplasty. Even gender confirmation surgery and/or facial feminization cosmetic surgery can not change these resonators. Assessing these areas pre-operatively are vital to predicting how the voice might sound, and be perceived, afterwards.

Next, voice is shaped into words and sentences. This is speech. A genetic female uses a different part of the brain to produce speech than a genetic male and has a certain sing-song quality called prosody. Prosody can not be changed with hormones or surgery. It must be learned, the way an actor would acquire the skills to take on another's personality of sorts. It requires a speech therapist who is very, very experienced in transgender voice changes. For most, years of practice are required to perfect female prosody and have it sound natural and effortless. Perfecting female prosody is 50% of the final result. This is why a cis-female with a very low speaking voice is still perceived as female even when their speaking fundamental frequency is in the androgynous or high-male (such as many female television reporters).

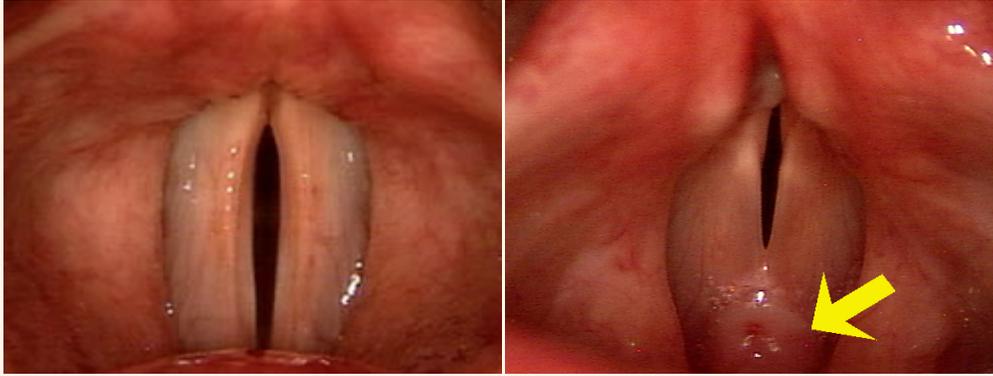


The average cis-female speaking fundamental frequency (*) is right around 210 hertz or G^{#3} on a piano (the normal range is within the pink arrows). The average cis-male SFF (*) is around 110 hertz or A₂ on a piano, or about 11 notes lower (essentially one octave, including the black keys!).

Pitch can typically be raised 2/3 of an octave or 8 notes (= approximately 60-75 hertz ±25 hertz) on average and in many cases requiring one or more feminization techniques. Not all clients get meaningful pitch elevation while others can achieve an octave or more. **Please see below regarding our metrics of success and guarantees.** There are many things that impact the degree of pitch elevation such as age; whether you ever smoked; have had vocal fold polyps or scarring from voice abuse; limited range to begin with; larger body habitus or chronic medical condition such as reflux or diabetes. In general, the lower your voice starts, the lower you will likely end up. A thorough in-person, pre-operative evaluation will help predict the degree the voice could be raised under ideal conditions. If you look at a real piano the higher notes have the shorter, thinner, tighter strings. Vocal folds vibrate in much the same way. Dr. Haben has created and refined several surgical techniques, alone or in combination, to achieve the purpose of shorter, tighter and thinner vocal cords with the goal of a speaking frequency as close to the cis-female range as possible given your anatomy and healing. These include techniques that are endoscopic ('through-the-mouth'), open ('with an incision') and a combination of both.

"Minimally-Invasive" Feminization Laryngoplasty "Single" Feminization Laser-Assisted Vocal Fold Webbing Anterior Commisure Retrodisplacement

These are different terms for shortening the vocal cords using an endoscopic, minimally-invasive, laser-assisted procedure which can be done as a stand-alone surgery or with a Crico-Thyroid Approximation ("CTA"), and/ or thyroid chondroplasty, a "triple" or "double" as described below. The terms are descriptive and essentially synonymous in intent: shorten the functional length of the vocal cords thereby raising the pitch. The laser assists in controlling the degree of webbing as well as the amount of anterior commisure retrodisplacement and the final vibratory length of the vocal cords.



CLINIC images before and 6 months after the minimally-invasive feminization alone. Notice the controlled webbing where the yellow arrow is pointing, shortening the functional length of the vocal cords.

PROS of minimally-invasive endoscopic feminization voice surgery alone?

Best for those with a speaking fundamental frequency already in the high-male or androgynous range

No incision in the neck, less invasive, quicker recovery

Pitch could be elevated by as much as 50 hertz or approximately 6 notes on average and in many cases

Less time in the O.R., therefore less expensive

More dynamic range, important for those who sing

CONS of minimally-invasive endoscopic feminization voice surgery alone?

NOT recommended for clients 40 years or older without special permission (see FAQs below)

Not ideal for those with low or average male speaking fundamental frequency

Less pitch elevation compared to open and endoscopic technique combined

Procedure shortens vocal cords but can not stretch, tighten or thin them like a rubber band

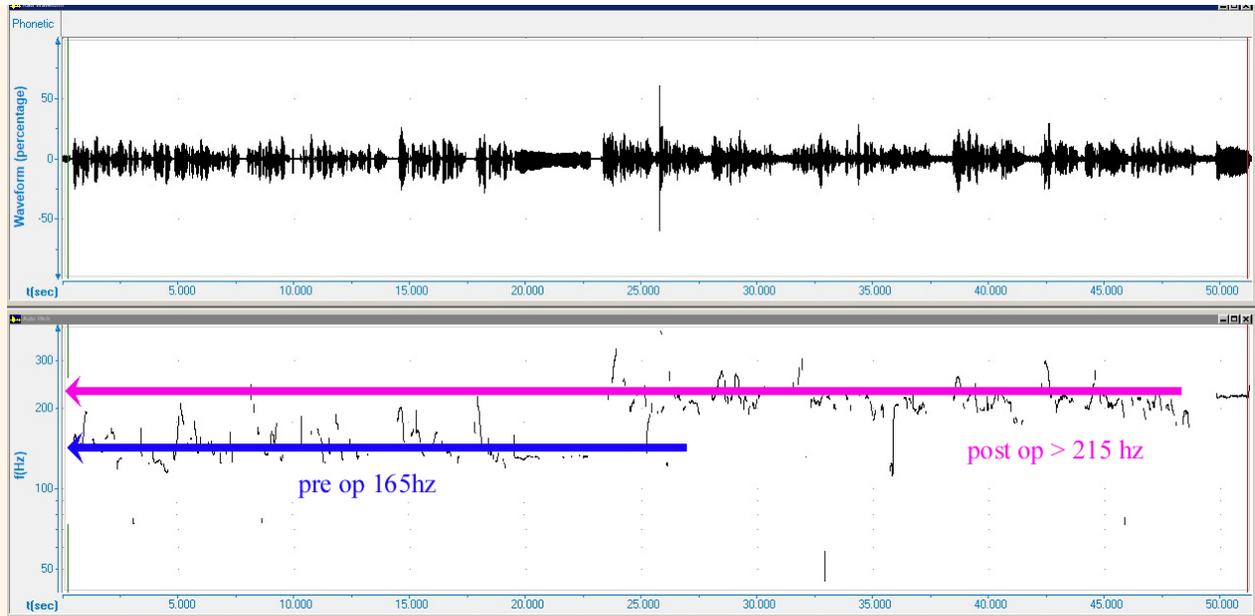
More of the natural lower range is preserved, undesirable to some clients

“Minimally Invasive” Feminization Examples

The following examples represent average results in typical healthy non-smoking clients having undergone the minimally-invasive endoscopic feminization voice surgery alone. These examples aim to provide potential clients with realistic, achievable and reasonable expectations in good candidates. Although these examples are average and typical, not everyone achieves the same results and there are no guarantees to the degree of pitch elevation.

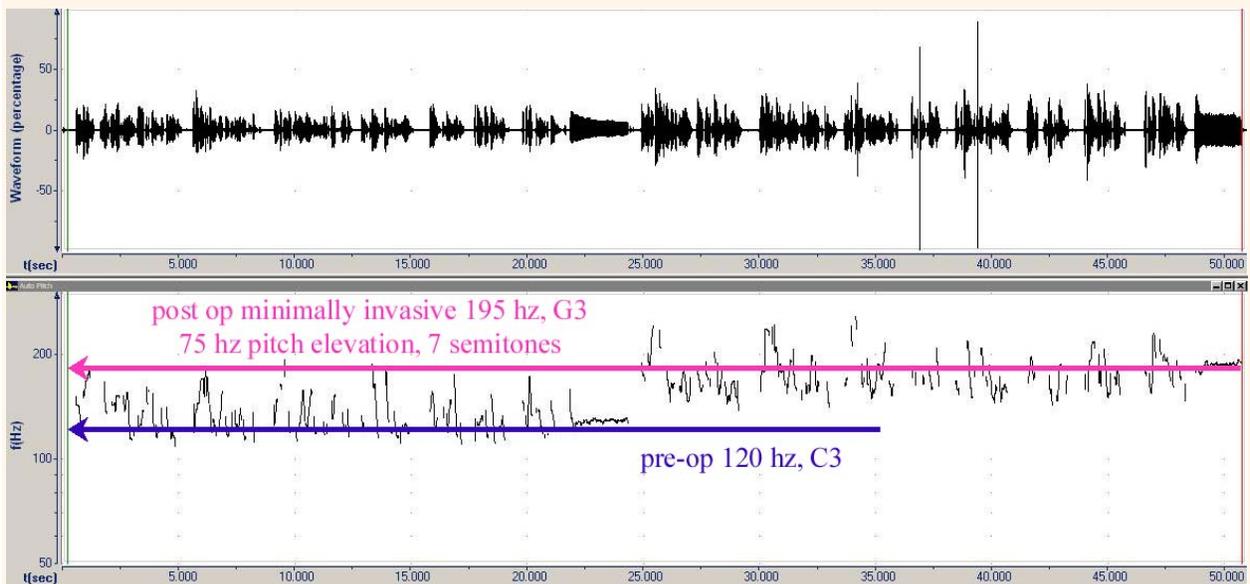
EXAMPLE SINGLE 1: EXAMPLE [INSERT 2019 NEW SINGLE 1 WAV](#)

The patient's speaking fundamental frequency is centered around 165 hz or approximately G3, considered the androgynous range. Post-operatively the voice is centered around 215 hz or approximately A3, high cis-female range, representing a typical and average result of 50 hertz of pitch elevation (see voice analysis below) and a soft natural sound.



EXAMPLE SINGLE 2: EXAMPLE INSERT 2019 NEW SINGLE 2 WAV

Pre-operatively, the speaking voice is centered around C3 in the male range or approximately 120 hz. 3 months after minimally-invasive endoscopic feminization voice surgery the pitch is centered around G3 in the female range or approximately 195 hz which is almost $>2/3$ of an octave higher, or approximately 7 notes (see voice analysis below), which is slightly greater than average pitch elevation.



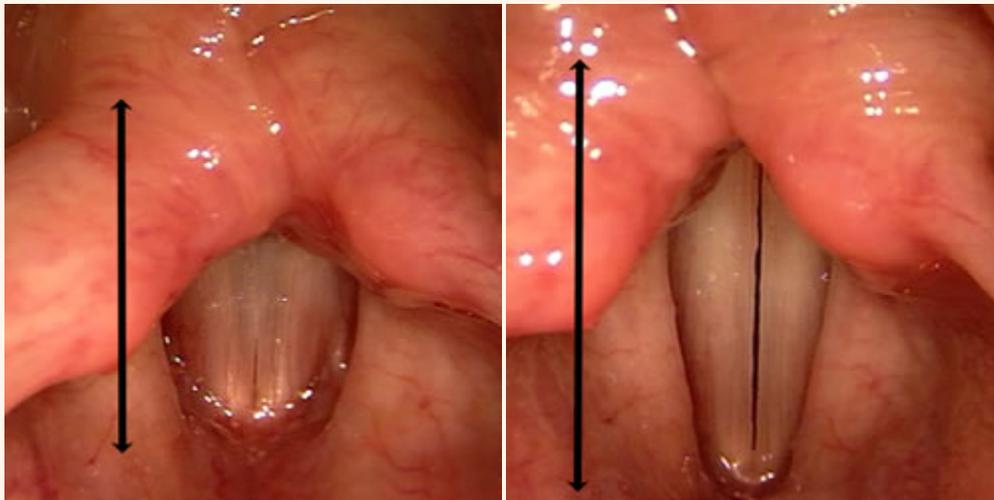
Additional Pre and Post "SINGLE" audio examples:

INSERT 2019 NEW SINGLE 3 WAV

INSERT 2019 NEW SINGLE 4 WAV

INSERT 2019 NEW SINGLE 5 WAV

"Open" Feminization Laryngoplasty Crico-Thyroid Approximation "CTA"



The vocal cords can be stretched and thinned by making a small incision in a skin crease in your neck and tightening the cartilages that now allow you to go from a regular to a falsetto voice. A "CTA" mimics contraction of the "singer's muscles", the cricothyroids. When contracted the cricothyroids raise the pitch the way you could now if you engage your falsetto voice. Through the same incision and at the same setting the Adam's Apple can be shaved, a procedure termed thyroid chondroplasty (aka tracheal shave). If you have had prior facial feminization with a "tracheal shave", the tracheal shave would need to be re-done (see FAQ) as part of the "triple." The neck incision is about 2-3 inches long and is hidden as best as possible in a skin crease. Note in the pictures above how the vocal cords become thinner and more taut.

PROS of the CTA added to the endoscopic glottoplasty?

Recommended in clients over 40 years, former smokers and those with low/ average fundamental frequency

Raises pitch more effectively and consistently higher than the endoscopic procedure alone

Stretches and thins the vocal cords in addition to shortening their functional length

Better eliminates the lower baritone range

CONS of the CTA added to the endoscopic glottoplasty?

Speech is somewhat more effortful for the first few months

Incision takes 6-12 months to mature, overall longer recovery

Takes longer in the O.R., therefore more expensive

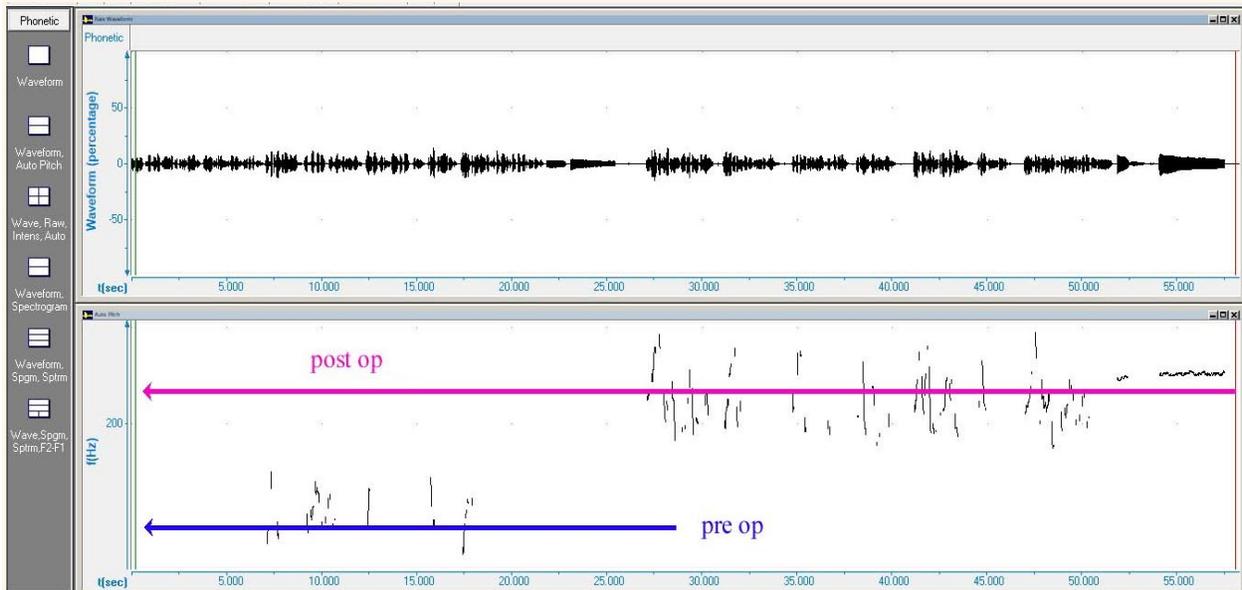
Not recommended in those where the singing voice is very important as it diminishes the lower dynamic range

“Triple” Feminization Examples

The following examples represent average results in typical healthy non-smoking clients having undergone the open (with CTA) and endoscopic feminization with thyroid chondroplasty (aka “triple”). These examples aim to provide potential clients with realistic, achievable and reasonable expectations in good candidates. Although these examples are average and typical, not everyone achieves the same results and there are no guarantees to the degree of pitch elevation.

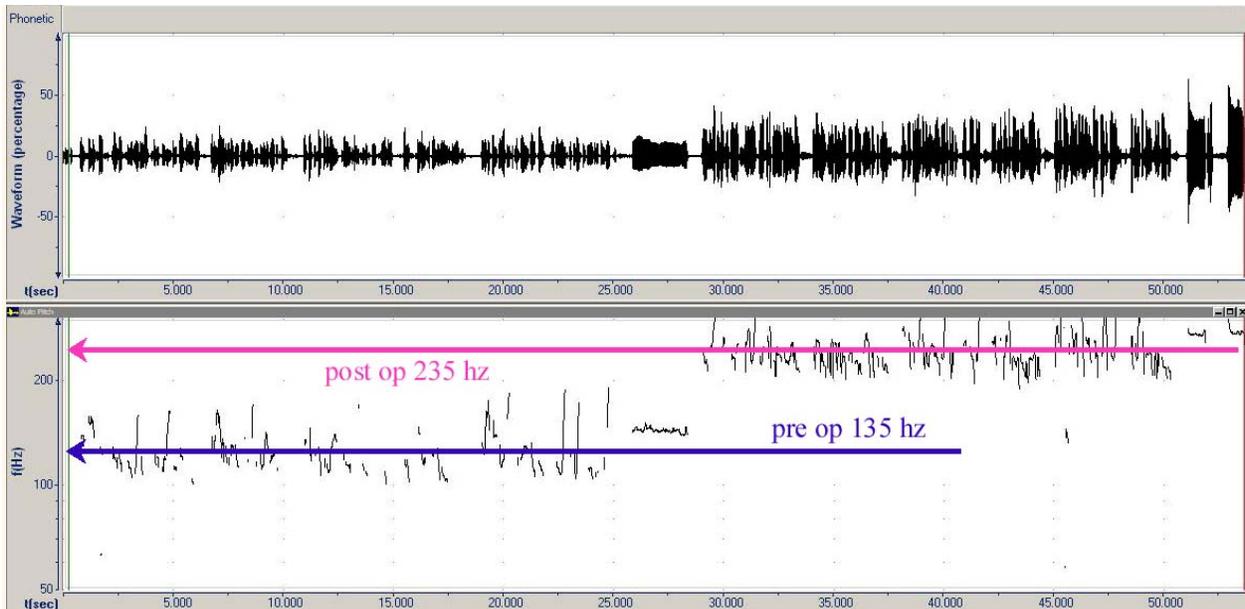
EXAMPLE TRIPLE 1: EXAMPLE INSERT 2019 NEW TRIPLE 1 WAV

Acoustic analysis in a patient with an average cis-male baseline speaking voice. Preoperatively the speaking voice is centered around 115 hertz or about A#2 on a piano. Postoperatively the voice is now centered around 220 hertz, A3 on a piano, representing nearly a full octave of pitch elevation and into the upper cis-female range (see voice analysis below).



EXAMPLE TRIPLE 2: EXAMPLE INSERT 2019 NEW TRIPLE 2 WAV

Acoustic analysis in a client with a middle average cis-male baseline speaking voice. Pre-operatively the speaking voice is centered around 135 hertz or about D3 on a piano. Postoperatively the client achieved a greater than average 100 hertz pitch elevation to 235 hertz (see voice analysis below).



Additional Pre and Post "TRIPLE" audio examples:

- INSERT 2019 NEW TRIPLE WAV 3
- INSERT 2019 NEW TRIPLE WAV 4
- INSERT 2019 NEW TRIPLE WAV 5
- INSERT 2019 NEW TRIPLE WAV 6
- INSERT 2019 NEW TRIPLE WAV 7

Thyroid Chondroplasty aka Tracheal Shave aka Adam's Apple Shave

CAN you do a stand alone tracheal shave without any voice feminization surgery?

Yes. The incision for the tracheal shave is hidden under the chin instead of being placed lower in the neck as is required for the CTA.

CAN you do the minimally-invasive feminization AND a tracheal shave withOUT a CTA?

Yes! It is considered a "DOUBLE." The incision for the tracheal shave is again hidden under the chin instead of being placed lower in the neck as is required for the CTA.

Thyroid Chondroplasty Examples



EXAMPLE above of a “tracheal shave” done as part of the triple feminization. With the triple the incision must be made in a skin crease lower in the neck. The above incision is only 3 months old.



EXAMPLE above of a “tracheal shave” done as a stand alone procedure or as part of a “double” feminization. Note that the incision may be hidden under the chin. The above incision is mature at over 12 months old.

Cost:

All feminization voice surgeries with or without thyroid chondroplasty are considered elective cosmetic procedures, and, as such, are not covered by any private or government insurance. Unfortunately, we do not participate in Care Credit or have payment plans available.

Each of the procedures come packaged to include the cost of the surgery; pre-operative consultations and all post-operative visits; ALL hospital charges for outpatient surgery including associated anesthesia fees, as well as MediCab transportation to and from the hotel and hospital on the day of surgery; 2-nights Marriott Hotel stay for you and your chaperone as well as all associated taxes. Overnight hospital observation is mandatory for those

travelling without a chaperone; airport and clinic transfers; meals; entertainment; special testing or additional rooms are not included. Postoperative medications are not included, however your private insurance may cover these costs.

PLEASE read the sections on REFUNDS, GUARANTEES and REVISIONS carefully.

The package for the **SINGLE** minimally-invasive feminization voice surgery is \$5,500. The hospital requires payment of a \$2,500 credit card deposit to secure a confirmed surgery date. The deposit includes a non-refundable \$500 assessment (see below regarding refunds). Deposits made by personal checks drawn on a US bank could require a 20 business day holding period before the surgery date can be assigned.

The package for the **TRIPLE** open and endoscopic voice surgery with thyroid chondroplasty is \$7,250. The hospital requires payment of a \$3,500 credit card deposit to secure a confirmed surgery date. The deposit includes a non-refundable \$500 assessment (see below regarding refunds). Deposits made by personal checks drawn on a US bank could require a 20 business day holding period before the surgery date can be assigned.

The package for the **DOUBLE** minimally-invasive feminization voice surgery with thyroid chondroplasty is \$7,000. The hospital requires payment of a \$3,500 credit card deposit to secure a confirmed surgery date. The deposit includes a non-refundable \$500 assessment (see below regarding refunds). Deposits made by personal checks drawn on a US bank could require a 20 business day holding period before the surgery date can be assigned.

The package for the **THYROID CHONDROPLASTY** withOUT voice feminization surgery is \$4,500. The hospital requires payment of a \$1,500 credit card deposit to secure a confirmed surgery date. The deposit includes a non-refundable \$500 assessment (see below regarding refunds). Deposits made by personal checks drawn on a US bank could require a 20 business day holding period before the surgery date can be assigned.

NOTE: Additional cost for overnight hospital observation for clients without a chaperone is approximately +\$650.

Refunds:

What is the policy regarding refunds? Can surgery be rescheduled?

A: We understand emergencies occur. We are happy to reschedule your surgery at no additional cost. If you decide to cancel your surgery altogether you will be assessed a non-refundable \$500 fee to cover the expenses in setting up your surgery, even if an in-person consultation has not yet been done. Refunds take 10 business days to complete and only the original credit card can be used to process the credit.

What if my case is cancelled/postponed for a medical reason?

A: It is very important that you disclose any medical condition well before surgery. Should you develop a cough, cold, flu, illness or breathing problem the week before surgery you must call the office at once. Your surgery will likely be rescheduled at no additional cost. Rarely, clients are not cleared for surgery due to an undisclosed medical condition after they have travelled to New York and are awaiting their procedure. Your surgery will be postponed

until the medical condition has been evaluated/ corrected and your procedure will be rescheduled for the first available date. There may be hospital costs if additional testing is required. No reimbursement is possible for the transportation expenses incurred and hotel nights used.

What if I miss my pre-operative consultation the day before surgery?

A: The preoperative consultation on the day or two before surgery is mandatory even if you have had a prior in-person consultation. If you miss this appointment your surgery will be rescheduled even if it was missed due to travel delays / bad weather or circumstances beyond your control. We recommend anyone travelling during the winter months; having a connecting flight or coming internationally arrive at least a day early.

Guarantees:

Are my results or degree of pitch elevation guaranteed? Am I paying for a surgery or a specific result?

A: You are paying for a surgical procedure which has inherent risks including that of non-healing, surgical failure and suboptimal results. The degree of pitch elevation is finite and largely determined by your healing; the size, shape, age, condition, mass and health of you and your larynx as well as how carefully post-operative instructions are followed. As such, there can be no outcome guarantees, implied or expressed except that Dr. Haben will apply his expertise and years of experience for every client.

What is your metric of success? Is pre or post-operative speech therapy necessary?

A: The best metric for surgical success is NOT how much the pitch is raised but rather how often one is misgendered over the telephone to an unknown, untrained, blinded listener. Remember, speech therapy is a vital component of the final result. Working with a trans-qualified speech therapist preoperatively and resuming no sooner than 3 months postoperatively is a very important component of the final result. The best place to look for a trans-qualified speech therapist is through recommendations for others in the trans-community.

Do you have even more examples? Are there former clients that I can contact?

A: HIPPA regulations prevent distributing client information. We have posted a number of typical results to give potential clients enough information to make a realistic decision. If you wish to contact a former client, we recommend posting a request on a forum such as www.SusansPlace.org or www.reddit.com where many of our clients are active and willing to interact. We have begun a Facebook page for potential, current and former clients to interact and blog about their experiences and post questions. We hope that you will friend us and stay up-to-date with the latest information regarding feminization voice surgery.

<https://www.facebook.com/Feminization-Voice-Surgery-1509177442710841>

Revisions:

Can the surgery be revised if I wish for more pitch elevation? Is there a cost?

A: It is unusual for voice feminization surgery to require revision at our Center. Rarely clients do not heal well or are suboptimal with following postoperative instructions and revision surgery could be considered. As with

procedures reimbursed by private or government insurance, revision surgery will incur a charge. Dr. Haben will petition for the greatest amount of cost reduction permissible by the hospital.

FAQ:

Why is the “triple” recommended for clients 40 years old and older? What if I do not think I need the “triple”?

A: Healing is much less predictable in clients 40 years of age and older due to reduced plasticity and a number of other well-documented physiologic factors resulting in less margin for error using only the minimally-invasive approach. It is more predictable to realize meaningful pitch elevation using the combination endoscopic and open approach in this population. Endoscopic-only feminization procedures may only be booked after an in-person consultation and by special permission for unique circumstances in clients > 40 years. If you are not certain, it is always best to travel for the consultation beforehand and have a face-to-face discussion.

What if I would like to come in just for a consultation?

A: Consultations are one hour and include voice analysis, physical examination including a scope of the voicebox and a lengthy discussion regarding possibilities. The charge of \$500 will be applied towards the cost of the surgery package.

Can't I just send you a voice recording? Do you offer telephone, Skype or virtual consultations?

A: The Center gets dozens of requests daily for voice analysis. It is impractical as well as unfair to those who have taken the time and expense to travel for an in-person consultation to do complementary voice analysis. Additionally, voice analysis is only a small part of determining whether a client is a good candidate for voice feminization surgery and can not replace an in-person consultation. Dr. Haben is unable to offer telephone, Skype or virtual consultations to prospective clients, even to those living in other States or Countries.

Where is the incision?

A: The incision for the CTA is made in a skin crease in the middle of the neck. The incision is hidden as best as possible in a skin crease and closed using plastic surgery technique. Prior incisions can not usually be used. The incision for a stand-alone thyroid chondroplasty or the “double” feminization is hidden under the chin.

Can I get a letter of support for name/gender change legal petitions?

A: Absolutely, once you are at least 1 month postoperative voice feminization.

General:

How many surgeries does the Center perform? Is the surgeon Board Certified? Fellowship trained?

A: The Center is dedicated to laryngeal (voicebox) surgery. Dr. Haben has performed hundreds of pitch alteration surgeries and thousands of voice surgeries. The different techniques involved in feminization voice surgery have been developed by Dr. Haben and continue to be perfected at the Center over the last 10+ years. Dr. Haben is Board Certified in Otolaryngology and Fellowship trained in laryngology and voice surgery as well as earning a Master's degree for his research in voice and laryngology. Dr. Haben routinely lectures and publishes research on voice surgery and related topics.

Why is a chaperone needed after the surgery? What if I do not have one?

A: It is mandatory hospital, State and Federal guidelines that any patient undergoing general anesthesia MUST have a responsible adult with them for 24 hours after surgery. An acceptable chaperone must be 18 years or older and known to the client for at least one year. It is UNACCEPTABLE to "meet" a chaperone while in Rochester, "bunk" with another client having surgery the same day, or "hire" someone to stay with you. If you are not accompanied by an acceptable chaperone you will be required to spend the night in the hospital. There is an additional cost of \$650 for overnight hospital observation, however, you will be credited the second hotel night against that charge.

How far in advance do you book?

A: Most non-peak/ non-holiday week surgery dates book 2-3 months in advance.

Do you accept Medicare or private insurance for feminization procedures? Do I get any forms that can be submitted to my insurance? Or to my accountant for taxes? Is there a procedure (CPT) code for the surgery?

A: Feminization voice surgery is an elective cosmetic procedure. We neither accept Government / private insurance for the procedure nor will submit any forms to government or private insurance. A receipt of payment is provided; however, we are not responsible for insurance reimbursement, tax rebates or credits. Receipts can NOT be altered, modified or amended under any circumstance to meet any requested criteria. The procedure (CPT) code used for "endoscopic with or without open, feminization laryngoplasty, with or without thyroid chondroplasty, or thyroid chondroplasty alone" is 31599.

All your surgery dates are on Wednesdays. Do you operate any other day?

A; No. All surgeries occur on a Wednesday and the Center can not accommodate special requests.

How will we communicate?

A: It is vitally important that we have an accurate e-mail, telephone number and current mailing address. ALL confirmations and instructions occur via e-mail and it will be your responsibility to check your e-mail often as your surgery date approaches.

Travel:

Can I book my travel first and then call for a surgery date?

A: No. Surgery dates are not confirmed until the deposit is processed. We can not "hold" a date without payment and strongly advise against booking travel until you receive confirmation of your surgery date by e-mail.

I am coming internationally. Does this change anything?

A: International clients, *except* those from Ontario and Quebec, Canada, are required to stay an additional 3-7 days post-operatively (depending on the procedure(s) performed) before being cleared to return home. Clients from Alaska and Hawaii are considered "international" in this case due to the distance of airtravel. Additional hotel days may be arranged through the hospital at a discounted rate.

I need more days in the hotel or more total rooms. How is this arranged?

A: The package comes with a two night hotel stay for two adults: the night before and the night of the surgery. The hospital can arrange additional nights/ rooms at the hospital's pre-arranged discounted rates of approximately \$160-180 per night (subject to change without notice depending on availability).

Can I book my own hotel?

A: Yes, however, if you are only in town for the two nights we recommend using the hotel as part of the package. If you are required to stay longer / arrive earlier, you may choose to make your own arrangements. A credit of approximately \$160 will be discounted from the total package price for each of the 2 hotel nights not used. If you book your own hotel we can not offer transportation on the day of surgery.

What if I am local and do not need the hotel or transportation?

A. A discount for any unused hotel nights or transportation will be issued by the hospital. Please note that a chaperone is still required even if you are local.

When should I arrive?

A: Pre-operative consultation is mandatory even if you have previously had an in-person consultation. These occur on the Tuesday before Wednesday's surgery. If you miss your Tuesday consultation for any reason, including travel delays, your surgery will be rescheduled. For this reason, clients coming by air internationally or with connecting flights are strongly recommended to arrive MONDAY. Flight delays and cancellations are common in the North-Eastern United States, especially during winter. Please plan accordingly.

Any other advice for foreign travelers?

A: We recommend informing your credit card company of your travels and having a back-up just in case. Remember, you will be on strict voice rest post-operatively and can NOT have a "discussion" with your credit card company or bank if your card is declined for any reason.

Medical Questions:

Is there pre-operative testing required? I have heard that some surgeons require a CT scan before to prevent damage to the vocal cords.

A: In general no, unless you have a chronic medical condition, such as diabetes or a history of heart problems, etcetera. Sometimes medical clearance from your Primary Care Physician is required. If you have a question or concern please contact our office before you make any arrangements. The hospital will make a pre-operative telephone call to you the week before the surgery and make any necessary testing or clearance recommendations. You MUST arrange to be available for the anesthesia call or your surgery could be CANCELLED. A CT scan is not required. A surgeon that requires a routine CT scan in every patient to better understand the anatomy of the voicebox well enough to avoid damaging the vocal cords probably should not be doing this sort of surgery. This is not true for facial feminization where CT scans may be recommended.

Should I see my primary care physician first? What if I have a chronic medical condition?

A: In most cases it is not necessary, however, if you have a chronic medical condition such as asthma or heart problems; have not seen a doctor in many years; are concerned about your ability to undergo general anesthesia or are over age 60 a visit to your PCP is advised.

Do you perform the surgery on someone under 18? Older than 60?

A: Clients under 18 must have parental permission; be accompanied by a parent or legal guardian and have a letter of support from a qualified psychologist or psychiatrist. There is no "maximum age" however, the expectations for achieving a truly feminine sounding voice decreases with age due to reduced plasticity; hardening of the cartilages; stiffening of the vocal cords and less optimal healing compared to younger individuals. Results, and correspondingly

expectations, should be more modest in older individuals. This does not mean that very good results can not be achieved, just that they are harder to accomplish due to factors that are out of our control. Reasonable expectations will vary from client to client and can only be accurately determined at the time of consultation and examination with voice analysis.

I am/was a smoker. Does this matter?

A: Overall, current, recent and former smokers heal less well compared to nonsmokers. Of course, the amount and duration of smoking matters a lot. Dr. Haben does not test for recent or current smoking, relying on patients to tell the truth. Failure to disclose prior, recent or current smoking status could result in suboptimal outcomes, frustration and disappointment. Current and/ or post-operative smoking (or extensive second-hand smoke exposure) could have a significantly negative impact on success. Former smoking does not automatically prevent successful surgery.

I have not yet had gender affirmation/reassignment surgery yet, does this impact my voice? Is it better to have GRS first?

A: Following feminization voice surgery clients are not permitted to have any elective surgery under general anesthesia ("with a breathing tube") for 6 months. Some clients will heal fast enough to reduce this restriction to 3 months; however, they are required to present to the clinic in-person at 3 months for an examination and clearance. If the vocal cords have not fully healed, clearance is not granted. This possibility must be taken into consideration when timing this and other associated surgeries. Pre versus post GRS does not otherwise impact the success of feminization voice surgery.

Do you perform feminization voice surgery on biologic / cis-females or gender neutral individuals?

A: Yes, 5% of voice feminization procedures are performed on biologic females. The remainder of the information contained here is otherwise applicable.

Operation and Technique:

Which/ whose technique does Dr. Haben use?

A: Dr. Haben has developed his own technique having performed hundreds of successful pitch alteration surgeries over the last decade. Dr. Haben is not able to comment on how his technique differs from that of other surgeons or clinics.

I have heard of BoTox being used to keep the vocal cords "still" after surgery. Can this be done? Is there additional cost?

A: It is generally NOT necessary to use BoTox except in some revision cases, however, it can be considered in very unique circumstances. There is an additional +\$500 to cover the cost of the BoTox that is not included in the package.

Can you re-use a prior scar? Do you use a "plastic surgery" type closure?

A: In general, a prior incision can not be re-used because they are under the chin and too far away. Incisions are as small as reasonably possible without compromising the surgery; are hidden to the greatest extent possible in a skin crease; and are closed using plastic surgery technique.

I am a singer. How does this impact things?

A: Pitch-elevating feminization voice surgery does not give anyone a singing voice that did not exist before. Nor does it give additional soprano or falsetto range. The surgery is intended to raise the pitch of the speaking voice and not positively impact singing range or capabilities.

I hear there is a risk for a chipped or broken tooth or teeth?

A: The endoscopic portion of the procedure is "trans-oral" (= through-the-mouth). Every precaution is taken with the teeth, however clients with smaller mouths, larger tongues, sleep apnea, limited neck extension, baseline poor dentition or extensive dental work are at an increased risk. Overall, there is roughly a 2-3% risk for intra-operative dental trauma. If you have had extensive dental work, have bad dentition or are concerned about the risk of dental trauma you may contact your local dentist to create a SOFT, UPPER custom tooth guard. In ALL patients, a standard toothguard is provided and used during surgery.

How long is the surgery? How long am I in the hospital?

A: 2-2.5 hours in the operating room for double and triple feminization procedure; 1-1.5 hours for single feminizations and stand-alone thyroid chondroplasty. Clients arrive 1-1.5 hours before the surgery and leave 2-3 hours afterwards. Plan on 6 hours start to finish.

Do you need to place a urinary catheter during surgery?

A: No.

I have changed my mind and want my old voice back, can the procedure be reversed?

A: No. Just so that Dr. Haben is clear: no.

Post-operative:

Once I come off of voice rest, what will my voice sound like? Will it be feminine?

A; Once you come off of post operative voice rest your voice will sound much, MUCH worse before it gets better. Expect it to be quite hoarse and rough sounding. This is due to 'surgical laryngitis' from the procedure and can last from a few weeks to months depending on how you heal. Do not worry, this is normal and expected. The surgical laryngitis usually resolves by 12 weeks however the final result could take 6 months when all healing has finished.

Do some clients get longer voice rest? Is there a benefit for longer voice rest? I use my voice a lot for my work. When can I resume my normal voice usage without harming my voice?

A: All clients are placed on strict, non-negotiable, absolute mandatory voice rest for 30 days. Additional voice rest is not required in most cases. Once you complete the voice rest you may use your voice to an average, reasonable amount. Do not yell for 6 months. Do not whisper for 6 months. Speak normally but expect a raspy hoarse voice for up to 6 months.

For how long can the voice improve and the pitch elevate? Why?

A: The voice just *begins* to heal by 3 months. It will continue to heal, the pitch will continue to elevate slightly and quality will continue to improve up to 12 months. Some girls develop a ball of scar tissue over the web and sutures called a 'reparative granuloma.' These take 6-12 months to resolve, and as such, the voice improves in both quality and pitch during that time. The only way to know you have a 'reparative granuloma' is examination with a scope.

Is there much post-operative pain?

A: No. Most people state that the pain is tolerable and actually controlled well-enough with ibuprofen + Tylenol at the same time. Having a little more or a little less pain is not a sign of "something wrong" unless the pain is increasing day after day which could indicate an infection. All patients are placed on post operative antibiotics and steroids.

Can I use anti-scar cream or patches? What about the stitch removal?

A: The neck incision is as small as possible, hidden in a skin crease and closed with plastic surgery technique. All but one suture is absorbable. The one (blue) stitch on the outside is removed on the seventh post-operative day either by Dr. Haben (whenever possible) or by a medical person in your community. If your local medical professional has any questions regarding removal of the stitch they are encouraged to call the office. Clients may not remove their own suture. Once the suture is removed you may start to shower. Pat, do not rub, the incision dry after showering for the first month. If going out doors, use a >30 SPF sunscreen, or cover the incision with a scarf. Anti-scar creams/patches, Vitamin E oils, etcetera, may be used after the first month. Scars typically take 12 months to mature and heal. 12 months. Be patient.

Any other advice for the incision/scar?

A: Yes! Keep ice pack over the incision for at least 20 minutes at a time, at minimum 4-5 times per day for the first seven days. After the stitch is removed, take a towel and wet it with water as hot as you can comfortably stand (hot compress) and hold it over the incision for 20 minutes, 4-5 times a day until day 30. This helps it heal.

It is somewhat effortful to produce voice for the first few months even though it sounds great. Why?

A: Your larynx, your "instrument" has been tuned to a much higher frequency. As such, you will now have to learn to "play" a violin when you were used to playing a cello. The effortful feeling goes away after 6-12 months.

How many times am I seen post-operatively? Can I get voice analysis of the final product?

A: All clients are seen the day after surgery and cleared for travel. International clients are seen on the first and seventh post-operative days before being cleared for travel. All clients are recommended to return at 3 months for an examination and voice analysis. All post-operative care is included in the package, even if you have questions or concerns YEARS down the road. For those who can not make it back at 3 months, Dr. Haben recommends recording the first half of the "Rainbow Passage" (found on the internet) on a smartphone and e-mailing it for analysis. You will receive a reply comparing pre and post-operative vocal parameters, a copy of both pre and post recordings as well as the voice analysis in 4-6 weeks.

When can I have other elective surgery without harming my throat? When are things permanent?

A: >6 months. 3 months is minimum however you would need to be seen and examined in person before clearance could be granted. In cases where it has not healed and clearance is not granted you should be prepared to delay the elective surgery. In cases of emergency surgery, you will proceed with the unplanned emergency procedure and we will deal with whatever happens afterwards if necessary. Always tell your anesthesiologist that you have had voice feminization surgery and that they should use a "smaller" breathing tube and give steroids. If they have questions, they may always call the office to speak with Dr. Haben for specific recommendations.

I am concerned about the stitches in my throat? Can they break? What about coughing?

A; In general, patients should ONLY be concerned with factors that they have direct control over such as compliance with the post-operative instructions and taking their medications and NOT WORRY about factors which they have little to no control over such as talking in your sleep, slip-ups, single coughs or emergency surgery.

I misplaced the post-operative instructions, where can I get a copy?

A: Here. [INSERT PDF of post op feminization instructions here.](#)

Testimonials:

Can I contact any of your prior patients? Can you send me more before/after examples?

A: The Center does not use clients for advertising or disclose any client contact information, even with their permission. Many clients, however, are active on transgender websites and blogs such as Susan's Place or reddit. Frequently, if you post a request to contact someone who has had a procedure at the Center, you will find a former client willing to speak with you. We take patient confidentiality and HIPPA very seriously.

We have begun a FaceBook page for potential, current and former clients to interact; contact and blog about their experiences. We hope that you will join, friend us and stay up-to-date with the latest information regarding feminization voice surgery.

<https://www.facebook.com/Feminization-Voice-Surgery-1509177442710841>

"Thank you very much for offering your services to our community. I love what you have done with my voice and you've made my life much less stressful! I have not been misgendered since my voice surgery!

And I totally credit your work for that!"

"C." from Michigan, USA

"I really now sound like I feel inside and my neck is totally flat!"

"A" from Melbourne, Australia

"Merci Docteur Haben!!! I don't have to think about my voice anymore. It is natural. Merci encore!!!"

"W", from Paris, France

"You did an amazing operation when no one else would even have me as a patient. I can't thank you enough times!"

"S" from Hong Kong

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