Supplemental Material S1. Individual acoustic and perceptual outcomes for transmasculine speakers at three timepoints—baseline, after circumlaryngeal massage (postmassage) and after laryngeal reposturing (postreposturing). Voice masculinity refers to ratings assigned by unfamiliar listeners in a paired comparisons task, with larger values indicating a voice was perceived as more masculine.

		Reading		Spontaneous				Reading	Spontaneous
Participant	**Timepoint**	**f_0 (Hz)**	**f_0 (ST)**	**f_0 (Hz)**	**f_0 (ST)**	**VTL (cm)**	**VTL (%)**	**Voice masculinity**	**Voice masculinity**
1*†	Baseline	185.8	0	143.0	0	15.4	0	–2.4	–0.4
1*†	Postmassage	157.8	–2.8	179.7	4.0	15.4	–0.3	–0.1	–2.0
1*†	Postreposturing	152.3	–3.4	160.1	1.9	15.9	3.4	2.6	2.4
2*	Baseline	166.0	0	164.4	0	16.2	0	–0.7	–1.5
2*	Postmassage	167.5	0.2	164.8	0.2	16.3	0.5	–1.9	–1.1
2*	Postreposturing	123.6	–5.1	144.6	–5.1	16.5	2.2	2.6	2.6
3*†	Baseline	163.7	0	160.9	0	16.4	0	–1.9	–0.4
3*†	Postmassage	148.7	–1.7	152.4	–1.7	16.1	–1.7	–1.0	–1.6
3*†	Postreposturing	148.1	–1.7	136.4	–1.7	17.0	4.0	2.9	2.0
4 †	Baseline	150.4	0	137.6	0	16.0	0	–0.8	0.1
4 †	Postmassage	167.9	1.9	148.2	1.9	15.7	–1.7	–1.5	–2.2
4 †	Postreposturing	141.1	–1.1	132.2	–1.1	15.8	–1.1	2.3	2.0
5*†	Baseline	132.8	0	142.4	0	15.6	0	–2.0	–0.4
5*†	Postmassage	134.0	0.2	158.6	0.2	15.3	–2.3	–0.4	–2.0
5*†	Postreposturing	119.9	–1.8	103.9	–1.8	15.4	–1.2	2.4	2.4
6*	Baseline	130.5	0	133.6	0	14.7	0	–0.3	–1.0
6*	Postmassage	133.2	0.4	136.9	0.4	15.5	5.0	–1.9	–1.5
6*	Postreposturing	132.0	0.2	131.1	0.2	15.6	5.6	2.2	2.4
7	Baseline	127.3	0	116.1	0	15.0	0	–0.8	2.3
7	Postmassage	126.0	–0.2	129.0	–0.2	15.1	0.8	–0.5	–1.4
7	Postreposturing	120.0	–1.1	125.8	–1.1	15.7	4.9	1.4	–1.0

Participant	Timepoint	Reading		Spontaneous		VTL (cm)	VTL (%)	Reading	Spontaneous
		f_0 (Hz)	f_0 (ST)	f_0 (Hz)	f_0 (ST)			Voice masculinity	Voice masculinity
8	Baseline	123.8	0	122.5	0	14.6	0	–1.5	–1.6
8	Postmassage	123.3	–0.1	114.1	–0.1	15.2	4.1	–1.1	–1.0
8	Postreposturing	114.1	–1.4	112.4	–1.4	15.5	5.7	2.6	2.6
9*	Baseline	116.5	0	121.9	0	15.1	0	–0.8	–2.2
9*	Postmassage	123.6	1.0	131.2	1.0	15.9	5.0	–1.4	–0.8
9*	Postreposturing	116.0	–0.1	112.2	–0.1	15.2	0.4	2.2	3.0
10*	Baseline	106.5	0	92.0	0	15.3	0	–2.4	–1.6
10*	Postmassage	90.8	–2.8	94.3	–2.8	15.6	1.7	–0.3	–0.7
10*	Postreposturing	82.6	–4.4	93.6	–4.4	16.4	6.7	2.7	2.3
11	Baseline	99.7	0	88.1	0	15.8	0	0	–0.3
11	Postmassage	101.3	0.3	102.9	0.3	15.4	–2.8	–1.6	–0.4
11	Postreposturing	102.3	0.4	101.3	0.4	16.0	0.8	1.6	0.7
12	Baseline	99.6	0	104.3	0	15.6	0	–0.1	–0.7
12	Postmassage	102.2	0.4	105.6	0.4	15.3	–2.2	–1.6	0.7
12	Postreposturing	101.2	0.3	95.8	0.3	16.7	6.7	1.8	0.0
13	Baseline	97.6	0	92.9	0	15.4	0	–1.6	–2.2
13	Postmassage	95.2	–0.4	93.3	–0.4	15.6	1.7	–1.0	–0.1
13	Postreposturing	89.2	–1.6	86.2	–1.6	14.9	–2.9	2.6	2.3
14*	Baseline	92.1	0	92.0	0	16.8	0	–1.5	1.5
14*	Postmassage	87.9	–0.8	90.5	–0.8	16.4	–2.5	–0.5	–0.5
14*	Postreposturing	93.0	0.2	87.5	0.2	17.2	2.2	2.0	–1.0
15*†	Baseline	84.8	0	86.2	0	17.5	0	–1.1	–1.0
15*†	Postmassage	88.3	0.7	84.0	0.7	18.0	2.8	–1.0	–1.4
15*†	Postreposturing	85.1	0.1	73.0	0.1	18.1	3.0	2.0	2.3

*Participants whose current differs from their ideal voice, per self-evaluation; †Participants with < 1 year exposure to testosterone through gender-affirming hormone replacement therapy. f_0 = fundamental frequency; ST = semitones; VTL = vocal tract length.