

CUSTOMIZED VOCAL CONDITIONING FOR SINGING PROFESSIONAL VOICE USERS – CASE REPORT

Condicionamento vocal individualizado para profissionais da voz cantada – relato de casos

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ABSTRACT

This study is about the development of customized vocal conditioning programs to a specific demand of three professional singers. We selected three professional singers that were undergoing voice therapy to participate in this study: a singer and actress of Brazilian musical theater, country music singer and a rock singer. All subjects underwent speech-language pathology and ENT assessment. They all presented complaints related to tiredness and fatigue after vocal used and/or vocal improvement. The customized vocal conditioning program was one of the stages involving vocal therapy and it was customized according to the singers demand, need and availability. The singer and actress of Brazilian musical theater joined easily to the customized vocal conditioning proposal, reporting a better physiological mobilization, which gave her improvements before starting the artistic technique she was used too. The country singer also joined easily to the customized vocal conditioning program, without any difficulty, and reported extreme improvement in his comfort and his performance when singing after undergoing the selected vocal exercises. The rock singer showed greater flexibility on his vocal tract, on the stability issue in singing, on the expansion of his vocal range, he also showed an articulatory accuracy improvement and reduction of the excessive global constriction after beginning the customized vocal conditioning program. The customized vocal conditioning program shows positive effects, especially for singers, because it works exactly over the demand that will be used by the singers, working on specific exercises and focusing on their needs.

KEYWORDS: Dysphonia; Muscle Stretching Exercises; Speech, Language and Hearing Sciences; Larynx; Music; Voice

■ INTRODUCTION

Professional voice users have distinguished voice demand: professional voices may be categorized in artistic and inartistic¹. To inartistic voices, as teachers, the main aspect is efficiency through time while to artistic voices, as singers, the association between quality and demand are the most important

aspects to career longevity. The vocal tract adjustments in singing vary according to style and some may be more close to speech, as *MPB* (Brazilian Popular Music), while others require a vocal tract adjustment that is obtained after some long years of practice, as classic singing².

Muscle warm-ups have two main functions: to improve muscle dynamic and to make the subject ready to the exercises requirements. With warm-up is expected to obtain physic and psychic ideal state, as well as kinetic and coordination readiness of the body structures involved³. Warm-up literature point out several changes during and after the exercises, as: increase heart rate, higher flexibility of soft body tissues as muscles and tendons, increase in neural transmission, increase in power of concentration and muscle relaxation, economy of movement, and

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higher blood flow, helping to avoid lesions^{3,4}. The initial phase of muscle mobilization has the purpose to improve performance during the following physical exercises^{3,4}.

Literature also point out that association between general body and local warm-up may be used for both beginners and trained subjects^{5,6}. Muscle warm-up may be active, when general or specific exercises are used to sport, or passive, when muscle temperature is increased by external approach⁷. There is increase in body temperature with warm-up higher in active exercises (0.3°C approximately) when compared to passive (0.09°C approximately)⁸, which facilitates oxygen use without reducing high-energy phosphate availability, and the warm-up must produce a light sweating, without fatigue. Considering body warm-up contributes to reducing rigidity in body tissues, and it is known that rigidity is related to lesions⁶, to perform warm up must be encouraged. Warm up programs usually are performed for up to 15 minutes before the specific activity, although there are some conflicting opinions about the warm up methods⁶.

The literature about muscle cool down is more restricted than warm up, but equally controversial, without consensus in sport medicine, physiotherapy or physic education^{9,10}. The purpose of cooling down is to make the muscle to return to usual pattern of contraction, which would avoid muscle overuse. It is believed that cooling down spreads muscle leavings, including lactic acid, reducing probable muscle pain after exercising, from 24 to 48 hours, which is entitled DOMS: Delayed Onset of Muscle Soreness¹⁰; decrease the risk of dizziness or fainting since it promotes the blood flows in extremities; lower adrenaline levels in blood; and take heart rate back to usual¹⁰.

In voice field, the knowledge about vocal warm up is restricted, although it seems to be reasonable the use of this practice which entry was already made in Wikipedia¹¹. Even some knowledge from general muscles may be applied to larynx muscles; it is not possible to translate the strategy of members' muscles to voice production due its specificity¹². By similarity with general warm up, the vocal warm up prepare the voice to speech or singing activities or any other professional use¹³, organizing body and mind to the vocal activity, improving vocal quality, avoiding potentially the possibility to produce lesions¹⁵, and promoting ideal prepare to a good vocal performance¹⁶, and therefore recommended to actors and singers. Thus, the conditioning has a pre-use intervention, entitled vocal warm up and other post-use specific to voice, entitled vocal cooling down, in order to the system to return to usual adjustment¹³.

There are few references in national^{17,18} and international literature about vocal warm up^{13-15,19,20}, with controversial results, due to differences in subjects selection, the interventions used, and in results evaluation methods; and since there are great individual variability the results may not be generalized. Vocal warm up may be general, as used in corals and big groups of people¹⁸, or customized, with exercises direct to specific demand of the subject or from a certain group of people, as speech language pathologists¹⁴. It is known that both kinds of vocal warm up are important regarding the purpose and the number of people to perform the exercises.

So, the purpose of this research is to report the vocal conditioning programs and its results in three professionals of singing voice: a singer and actress of Brazilian musical theater, a country music singer, and a rock singer.

■ CLINICAL CASES REPORT

This research was approved by Ethics in Research Committee of *Fundação ABC – FMABC* under the protocol number CAAE 06948712.8.0000.0082 (document number 96.133). All subjects signed the informed consent, authorizing the performance and disclosure of the research according to resolution 196/96 (BRASIL. Resolution MS/CNS/CNEP nº 196/96 from 1996, October 10).

Case 1: singer and actress of Brazilian musical theater

Professional actress and singer with both classical and popular singing incursions, 24 years old, five years as professional Singer, take singing classes since she was 15 years old, report the following complaint “vocal fatigue and breakdowns at the end of performances in musical theater”, she also reports that this is the first time these symptoms happened. She describes a “nodule threat” two years ago, when she had high vocal demand in a role at theater. The otolaryngologist diagnosis at the speech-language pathology evaluation was edematous nodules bilateral and hourglass shape gap with indication of voice therapy. Voice had slight breathiness ad voice breakdowns only in specific demand tasks, and normal during spontaneous talking. She has an intensive voice usage in conversations due to personality and request. At evaluation moment she was still taking weekly singing classes. Good health state in general. She acts in theater and television. Does not smoke and report social alcoholism.

The voice assessment by the speech-language pathology, composed by perceptual evaluation and

self-evaluation of dysphonia impact, showed shiny voice quality, abrupt vocal attacks, proper pitch and loudness. It was also observed proper phonemes articulation and high speed rate. The data of self-evaluation dysphonia impact showed slight loss in VR-QOL (Voice-Related Quality Of Life questionnaire), with total score of 90 points, which represents a small reduction in voice-related quality of life in general. Patient did not respond to specific singing questionnaires, since they were not available at the time she was evaluated.

Case 2: country music singer

Professional country music singer, male, 20 years old, five years of career, report the following complaint “my voice is rough, it does not bother me much, the problem is the fatigue and the vocal attack when I have many hours of presentation in a whole”; the otolaryngologist diagnose at the time of speech-language pathology evaluation was “larynx asymmetry, superficial major stria sulcus on the left face vocal fold turned to vestibular face, slight ventricular eversion at left, vibration and phase asymmetry”.

At the beginning of his career used to sing in a country duo, performing the first voice, and at that point was in solo career for one year. For two years he has been taking weekly singing classes with one hour of duration each, besides singing at most weekends for about 90 minutes. He reports good state of health in general, with sporadic sinusitis crises. Besides the demand of singing career, he works with his father at an import and export company performing management tasks which requires talking on the phone for long periods and talking to employees. Use alcoholic beverages socially and deny smoking.

Voice assessment showed abrupt vocal attacks, strain and breathiness as vocal quality, slight effort

to speak, high fundamental frequency and pitch (F_0 of 184Hz), increased loudness. It was observed proper phoneme articulation, high speech rate, bifurcations, crackles and occasional voice breakdowns.

He evaluated himself as an extremely talkative person in social and labor situations, and had 39% of handicap at the questionnaire Modern Singing Handicap Index – MSHI^{1,21,22}, centered in defect domain of the protocol related to organic aspects of emission. Also told that sometimes perform vocal warm up using the exercises that he considers proper, without any forma instruction or regularity and does not perform vocal cooling down.

After voice assessment it was started voice therapy and customized vocal conditioning to singing activities.

Case 3: rock singer

Rock singer, heavy metal style, male, 43 years old, professional for 23 years. Teaches singing for about 42 hours per week, he uses talking and singing voices alternated in reduced intensity, has four hours of rehearsals per week and has four presentations per month, each one for two hours. He has studied classic singing for three years and popular for two years. He does not do vocal warm up or cooling down for performances, just make vocalizes before teaching singing.

He had search speech-language pathology help after roughness due to flu crisis. Reports alternate use of vocal registers during singing, exploring his voice from basal up to falsetto, and also using drive, vibrato and melisma as interpretative resources.

He produces great variations in resonance, using supraglottal structures in singing, larynx high vertical position and broad articulation.

The main characteristics of the three cases are summed in Figure 1.

Subjects/Data	Complaint	Vocal quality	ENT evaluation and management	Previous warm up and cool down
Singer and actress from Brazilian musical theater	"fatigue and voice breakdowns at the end of musical theater presentations"	<ul style="list-style-type: none"> - shiny voice quality - abrupt vocal attack - slight breathiness - normal <i>pitch</i> and <i>loudness</i> - proper phonemes articulation - voice breakdowns just in specific tasks - high speech rate 	<ul style="list-style-type: none"> - bilateral nodules - hourglass shape vocal gap - voice therapy indicated 	<ul style="list-style-type: none"> - artistic-technical warm up guided by singing teacher
Country music singer	"my voice is rough, it does not bother me much, the problem is the fatigue and vocal attack when I have many hours of performance"	<ul style="list-style-type: none"> - abrupt vocal attacks - vocal quality strain and breathy - slight effort to speak - high F_0 and <i>pitch</i> - increased <i>loudness</i> - proper phonemes articulation - high speed rate - occasional bifurcations, cracks and breakdowns 	<ul style="list-style-type: none"> - laryngeal asymmetry - major stria sulcus on the surface of left vocal fold on vestibular face - slight ventricular eversion on the left - vibration in asymmetry and phase – voice therapy indicated 	<ul style="list-style-type: none"> - sometimes performed vocal warm up with exercises that he judged proper without any formal guidance or regularity - did not perform vocal cooling down
Rock singer	"roughness after flu episode"	<ul style="list-style-type: none"> - alternate use of vocal registers in singing (from basal up to falsetto) - interpretative resources of drive, vibrato, and melismas - major resonance variations in singing - use of supraglottic structures to vocal effect - high vertical larynx position - broad articulation 	<ul style="list-style-type: none"> - without larynx disturbances - sign of laryngopharyngeal reflux - aryepiglottic constriction during singing - vestibular folds medialization as interpretation resource - pharynx constriction in high notes - voice therapy and reflux treatment indicated 	<ul style="list-style-type: none"> - did not perform vocal warm up and cool down at shows - use to do some vocalizes before teaching singing

Figure 1 – Main characteristics of the three clinical cases.

■ RESULTS

The customized exercises of warm up and cooling down were selected according to the patients needs, based on literature, summed in Figure 2.

Customized Vocal Conditioning Program for the singer and actress of Brazilian musical theater

Customized vocal warm up: 1. Sustained basal sound, for 5 seconds; 2. Sounded blowing high pitched, for 5 seconds; 3. Sustained tongue trills, in medium tone; 4. Alternating basal sound and high pitched sound in sequential emissions; alternating basal sound and high pitched sound in the same emission; 6. Articulatory sequences in chanted voice.

Subjects/Data	Vocal warm up	Purposes of the vocal war up exercises: physiology and literature ⁷	Vocal cool down	Purpose of cool down exercises: physiology and literatures ²⁷
Singer and actress from Brazilian musical theater	<ol style="list-style-type: none"> 1. basal sound 2. high pitched sounded blowing 3. Tongue trills 4. Alternating emissions between basal and high pitched sound in sequential emissions 5. Alternating basal and high pitched sound in the same emission 6. Articulation sequences in chanted voice 	<ol style="list-style-type: none"> 1. To contract the thyreoarytenoid muscle; to relax cricothyroid muscles; to relax posterior cricoarythenoid muscle; to mobilize and relax mucosal wave 2. To favor proper vocal folds closure; to favor laryngeal muscle balance; to deactivate larynx isometry; to deactivate vestibular median constriction 3. To mobilize mucosa; to balance pneumo-phono-articulatory coordination; to reduce phonatory effort; vocal warm up 4. and 5. To make flexible the sound emission with muscle working from low notes to high notes 6. To reduce vocal attack and global vocal effort; to increase vocal resistance; to modify patterns of voice and speech 	<ol style="list-style-type: none"> 1. Lip rolls in descending glissando 2. Yawn sounding emission with neck stretch and shoulder rotations exercises 	<ol style="list-style-type: none"> 1. To mobilize mucosa; to balance pneumo-phono-articulation coordination; to reduce phonation effort; to cool down 2. To relax the emission; to adjust the structures vocal tract balance; to reduce muscle tension in neck and shoulder girdle
Country music singer	<ol style="list-style-type: none"> 1. Lip rolls in usual pitch flat and modulated using maximum phonation time 2. Lip rolls in ascending and descending glissandos 3. Semi-occluded vocal tract exercises using high resistance straw 4. <i>Messa di Voce</i> with vowels /i, e, ε, a, o, ɔ, u/, produced properly 5. Humming chewing sound ad resonant in high pitch, ending with resonant emission of /ua/ 6. Short duration emissions in /m/ and /z/ 	<ol style="list-style-type: none"> 1. and 2. To mobilize mucosa; to balance pneumo-phono-articulatory coordination; to reduce phonation effort; to length and to short thyreoarytenoid muscles; to warm up; to increase glottic resistance; to improve phonation stability; to adapt glottic closure 3. To favor larynx muscle adjustments; to expand vocal tract; to improve glottis closure; to stimulate the enhance of resonance; to promote better pneumo-phono-articulatory coordination 4. To control the vocal fold closure and median compression over it; to control subglottic pressure; to adjust breathing support according to volume changes; to reduce vocal tract constriction; to enlarge resonance cavities; to improve articulation 5. To smooth emission; to reduce laryngo-pharigeal resonance, increasing oral components of resonance; to increase maximum phonation time; 6. To favor proper vocal fold closure 	<ol style="list-style-type: none"> 1. Lip rolls in descending glissando 2. Humming in descending glissando 3. Semi-occluded vocal tract exercise and sounded blowing in low register in maximum phonation time 4. Sounded yawn with neck stretch 5. Absolute vocal rest for 10 to 20 minutes after cooling down 	<ol style="list-style-type: none"> 1. To mobilize mucosa; to balance pneumo-phono-articulatory coordination; to reduce phonation effort; to cool down 2. To smooth the emission; to reduce laryngo-pharyngel resonance 3. To favor larynx muscles adjustment in order to reset the usual speech pattern; to stimulate resonance enhance 4. To relax vocal emission; to adjust balance of vocal tract; to reduce shoulder girdle and neck muscles tension 5. To offer time to reduce edema after voice usage

Subjects/Data	Vocal warm up	Purposes of the vocal warm up exercises: physiology and literature ⁷	Vocal cool down	Purpose of cool down exercises: physiology and literatures ²⁷
Rock singer	<ol style="list-style-type: none"> 1. Sustained tongue trills using maximum phonation time - flat and modulated 2. Lip rolls descending and ascending up to falsetto 3. Basal sound alternating with high pitched sound 4. Tongue popping associated with nasal sound 5. Mouth over opening and closing with vowels 6. <i>Messa di Voce</i> 7. Nasal sound with pharynx constriction to voice projection effect 	<ol style="list-style-type: none"> 1. and 2. To mobilize mucosa; to balance pneumo-phono-articulatory coordination; to reduce phonation effort; to length and short the thyroarytenoid muscle; to warm up; to increase glottic resistance; to improve stability; to adapt glottic closure; to warm up voice in falsetto region 3. To flexible the emission with muscle working from low register to high register 4. To relax supper-hyoid muscles; to rebalance phonation; to improve source-filter tune; to set anterior resonance 5. To reduce vocal tract constrictions; To enlarge resonance cavities; to improve articulation 6. To control vocal fold closure and median compression on them; to control subglottic pressure; to adjust breathing support according to volume change 7. To perform the desired vocal effect softly 	<ol style="list-style-type: none"> 1. Sounded tongue rotation in vestibule 2. Tongue trills in descending glissando up to reach pitch used in speech 3. Yawn-sigh technique 	<ol style="list-style-type: none"> 1. To reduce vocal tract constrictions; to reset tongue and larynx; to enlarge pharynx; to smooth voice emission 2. To mobilize mucosa; to balance pneumo-phono-articulatory coordination; to reduce phonation effort; to cool down 3. To reduce abrupt vocal attacks after voice usage; to enlarge vocal tract and pharynx; to lower down larynx; to balance motor adjustment of vocal tract after voice usage; to cool down

Figura 2 – Exercícios selecionados para aquecimento e desaquecimento vocal individualizado para os três profissionais da voz cantada: fisiologia vocal e literatura.

Perceptual evaluation pre and post warm up indicated reduction of abrupt vocal attack and easier emission phonation. Acoustic analysis did not show change in the parameters that already were in normality; there was just a production of a richer harmonic series with higher stability in spectrographic lines with absence of sub-harmonics, sometimes showed in weak voice emission.

After this physiologic warm up proposal, the patient followed with technical-artistic warm up designed by her singing teacher.

Customized vocal cooling down: 1. Lip rolls in descending glissando, sustaining in low register for 5 seconds; 2. Sounded yawn with neck stretch and shoulder rotation exercises. After customized cooling down, the patient reported to return to normal comfortable speech pattern.

The singer and actress of Brazilian musical theater easily accepted the customized vocal conditioning proposal reporting to feel gain with the execution of the physiologic exercises before going to technical-artistic that she already performed.

Customized vocal conditioning program to country singer

Customized vocal warm up: 1. Lip rolls in usual pitch sustaining the same note and modulating, varying with two notes, in maximum phonation time; 2. Lip rolls in ascending and descending glissando, going up to falsetto in high notes, in maximum phonation time; 3. Semi-occluded vocal tract exercise with high resistance straw alternating low emissions and comfortable falsetto, both in maximum phonation time; 4. *Messa di voce* with vowels /i, e, ε, a, ɔ, o, u/, properly produced, from *pianissimo* to *fortissimo* and again to *pianissimo*; 5. Chewing humming and resonant in high note, ending with resonant emission of /ua/ properly articulated 6. Short emissions of /m/ and /z/.

Perceptual evaluation pre and post warm up indicated reduction in abrupt vocal attacks, strain, breathiness, roughness, bifurcations and voice breakdowns during emission. Acoustic analysis showed jitter reduction (0.28% pre and 0.07% post), shimmer (from 3.15% to 2.09%), irregularity (from 3.61 to 2.60), GNE proportion (from 0.80 to 0.74), and higher stability in spectrographic lines, with

absence of sub-harmonics and bifurcations at post-vocal warm up.

Customized vocal cooling down: 1. Lip rolls in descending glissando sustaining it in low region for 5 seconds; 2. Nasal sound in descending glissando sustaining the sound in low region for 5 seconds; 3. Semi-occluded vocal tract exercise of lip constriction and sounded blowing in low region using maximum phonation time; 4. Sounded yawn with neck stretch; 5. Absolute vocal rest for 10 to 20 minutes after cooling down.

After customized cool down, the subject restored complete vocal pattern to colloquial, since in singing activity the voice is used in high register of head and falsetto.

The country singer easily accepted the customized vocal conditioning, without any difficult and reported extreme improvement in his comfort and vocal performance during singing with the selected exercises.

Customized vocal conditioning program to rock singer

Customized vocal warm up: 1. Sustained tongue trills in maximum phonation time using comfortable pitch; 2. Lip rolls descending and ascending up to falsetto; 3. Basal sound alternating with high pitched sound; 4. Tongue popping associated with nasal sound; 5. Broadly opening and closing the mouth during vowels; 5. *Messa di voce*; 7. Nasal sound with pharynx constriction in order to produce voice projection.

Customized vocal cool down: 1. Sounded tongue rotation in vestibule; 2. Tongue trills in descending glissando up to usual talking voice region; 3. Yawn-sigh technique.

The rock singer showed higher vocal tract flexibility, emission stability in singing, reporting broader vocal range, higher articulation accuracy, and reduction in excessive global constriction after initiating the customized vocal conditioning program. After professional voice usage in presentation, his voice showed to be without any disturbance and returning to usual speak emission after cooling down.

■ DISCUSSION

Singers and actor are commonly categorized as vocal elite, with high demand and necessity of high vocal quality, because any small vocal disturbance may bring serious consequences to their careers²³. Some of these professionals need major cares, health and wellness guidance for their voices, as for required specific vocal abilities, as for extreme use

of voice resources, besides they also need specific vocal conditioning to support the voice use demand.

New current trends treat vocal warm up as a set of exercises with functional purposes, the physiologic warm up, and with the one with performance purposes the artistic warm up²⁴. This difference helps to understand the speech-language pathologist and singing teacher contribution that may develop an associated program, contemplating America Speech-Language-Hearing Association – ASHA –, National Association of Teachers Singing – NATS –, and Voice and Speech Trainers Association – VASTA – recommendations, which directly benefits the voice professional. Both warm ups, physiologic and artistic, are important to singers and actors and act complementary, not excluding, because one kind of warm up do not replace the other. It is suggested the physiologic vocal warm up precedes the artistic because of the purpose to prepare the muscles, prevent vocal problems arising from professional voice use, and to easy the demand adjustments, with better vocal closure, higher trans-glottal air flow control, higher stretching and shortening of vocal folds, better vocal frequency and volume, looser mucosal wave and more periodic vibration, higher accuracy in phonemes articulation in speaking and singing^{13,14}.

Despite patient in case 1 had a larynx lesion, edematous nodules, the vocal quality deviations were discrete and the vocal warm up benefit was clearly perceived by her, that already did technical-artistic warm up. The patient followed in voice therapy and the nodules were reabsorbed, being discharged.

In case 2, the country singer did not have any larynx lesion, but anatomic variations, the minimum structural deviations. His main complaint was vocal fatigue, typical of these cases and not vocal quality disturbances. His customized vocal conditioning program had as focus to enhance his vocal resistance, improving, in second place, also his voice quality by the reduction in effort during singing. The patient reported great self-perceived benefit by using the program, following in voice therapy with therapeutic success.

Yet in case 3, intense vocal effects, entitled vocal extremes, are the characteristics of heavy metal²⁶ musical gender and may be potentially harmful. The prescribed exercises had as purpose a better physiologic activation of structures and muscles, as well as simplified and slower reproduction of style resources typical of this style. Vocal customized warm up and cool down may promote healthier laryngeal adjustments to the singer, higher vocal tract flexibility, stability of emission, enhance vocal range, and reduce excessive global constriction.

The developed program contributed to the singer to perform vocal extremes that characterizes his style, with less possible effort, for the acquired flexibility with differential muscle work.

■ FINAL CONSIDERATIONS

Vocal warm up and cooling down to the professional voice user, mainly singers and actors, entitled vocal elite, are of extreme importance to prepare voice as body and mind to the specific demand, in some situations in vocal extremes regarding singing style. Many times the professional voice user already performs these exercises to their artistic-technical needs, but there is a lack of strategy that allows physiologic readiness to the following activity, as the programs described at this paper.

Customized vocal conditioning showed positive effects among the subjects of this research, precisely acting over the demand that is required to professional use and according to specific needs of laryngeal conditions of the participants. It promoted healthier laryngeal adjustments, higher vocal tract flexibility, stability of emission, broader vocal range, and lower excessive global constriction with specific exercises and direct to their own needs.

Since this research presents customized vocal conditioning programs its results must be understood and applied with caution to other subjects and do not enable the direct transference of its founds and proposes to others populations because these are cases reports with a low number of subjects relevant to this kind of manuscript.

RESUMO

Este estudo tem como tema o desenvolvimento de programas de condicionamento vocal individualizado para a demanda específica de três profissionais da voz cantada. Trata-se de um relato de caso de três profissionais da voz cantada: uma cantora e atriz de teatro musical brasileiro, um cantor sertanejo e um cantor de roque. Os três indivíduos foram submetidos à avaliação fonoaudiológica, apresentando queixas relacionadas a cansaço e fadiga após uso da voz e/ou aperfeiçoamento vocal e realizaram avaliação otorrinolaringológica prévia. Os três pacientes estavam em processo de terapia fonoaudiológica, sendo uma das etapas o desenvolvimento de um programa de condicionamento vocal individualizado, de acordo com a demanda, necessidade e disponibilidade de cada sujeito. A cantora e atriz de teatro musical brasileiro aderiu facilmente à proposta personalizada de condicionamento vocal, pois sentia os ganhos de realização uma mobilização fisiológica antes de passar para a técnica-artística que já executava. O cantor sertanejo aderiu facilmente ao programa de condicionamento vocal individualizado, sem nenhuma dificuldade, e relatou extrema melhora em seu conforto e desempenho vocal durante o canto com os exercícios selecionados. O cantor de roque apresentou maior flexibilização de trato vocal, estabilidade da emissão no canto, ampliação da tessitura vocal, maior precisão articulatória e redução da constrição global excessiva após dar início ao programa de condicionamento vocal individualizado. O condicionamento vocal individualizado mostra efeitos positivos, principalmente para os profissionais da voz, pois os indivíduos trabalham exatamente sob a demanda que será utilizada com o uso profissional da voz, com exercícios específicos e direcionados para suas necessidades.

DESCRIPTORIOS: Disfonia; Exercícios de Alongamento Muscular; Fonoaudiologia; Laringe; Música; Voz

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