A Simple Guide To Better Voicing

For Teachers and Professional Voice Users

Third (E-book) Edition

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Published by

Voice Research Laboratory Faculty of Education The University of Hong Kong Pokfulam Road Hong Kong

ISBN Number: 962-8093-09-6 (1st Ed) 962-8093-18-5 (2nd Ed) 978-988-16085-8-1 (3rd Ed)

Acknowledgement (First Edition)

I would like to acknowledge with thanks the generous support of a publication grant from In-service Teacher Education Programme (INSTEP), which permitted publication of this book.

I would like to thank my colleague, Polly Lau, for all the work that she has done in making the publication of this book possible. I am also grateful to Patricia Ho, who has given valuable suggestions at various stages of the writing.

Thanks also to Estella Ma, Cindy Cheong, May Poon and Nicole Li for their translation of the book into Chinese and their editorial assistance.

Last, but not least, I am most grateful to Helen Sjardin, who has kindly agreed to write the foreword for this book.

Acknowledgement (Second Edition)

We would like to acknowledge with thanks the generous support of a publication grant from In-service Teacher Education Programme (INSTEP), which permitted revision of the book and for the publication of the second edition.

We would like to thank Brenda Wun, for all the editorial and graphical work that she has done in making the publication of this book possible.

Acknowledgement (Third Edition)

We are grateful that this e-book edition can be distributed free with the generous support of *Shirley Grundy Knowledge Exchange Fund*. The funding also allows publishing a Putonghua version, which is in response to the great demand from the professionals in China PRC.

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Foreword

People who use their voice professionally may see changes or loss of voice as a threat to their work performance and social interactions. In many cases, complications can be avoided by early intervention of faulty patterns.

To make appropriate adjustments to voice production or the speaking environment, it is important to know the basic physiology and reasons behind these recommended changes.

Associate Professor Edwin Yiu provides an excellent tool to achieve this in his book which lives up to its title very well - "A Simple Guide to Better Voicing".

The book is primarily practical, backed up with clear and concise diagrams. The organisation with chapter summaries, allows the user to be selective at a glance and refer back readily to areas most relevant to individual problems.

As a speech pathologist, working with professional voice users, I recognise the value of this book for people who are keen to improve the strength and stability of their voices and to understand the rationale behind what they are doing.

Having the option of a compact disc video is an additional practical bonus as demonstration of techniques often makes it much easier to imitate and recognise the difference between faulty and efficient patterns.

Helen Sjardin Chief Speech Pathologist Royal Perth Hospital Western Australia Australia

Preface (First Edition)

This book is intended as a sourcebook for teachers and professional voice users who want to use their speaking voice more efficiently. Voice problems are common in teaching professionals; sales and customer-service personnel; missionary preachers and people who have to use their voice constantly. Voice problems affect not only work, but also have a significant impact on social and personal life. One of the causes of voice problems in professional voice users is overuse or misuse of the voice. Voice problems can, however, be prevented with proper management of undesirable vocal behaviours and by using the natural voice more *effectively* and *efficiently*.

The vocal behaviour management and vocal exercises described in this book are based on contemporary research findings and are proven to be effective. Practical suggestions given in this book help you to change your pattern of voice use to a more effective and efficient one.

Edwin Yiu (PhD)

1999

Preface (Second Edition)

After this book was first published in 1999, many speech therapy students have expressed that they found this book useful for their clinical work. Therefore, when the books were sold out, it was decided to do a second edition instead of a re-print so that the new edition will be in a format that suits a wider range of readers. such teachers. professional voice users. therapy/pathology students and speech therapists/pathologists. The revision work is made possible with the second author (KC) agreeing to take up this challenging task. We believe that photographs can illustrate better than drawing. Therefore, we have replaced the diagrams used in the first edition with photographs from our Voice Research Laboratory. The aim of this second edition, however, still remains unchanged. It is intended to help you to change your voice use pattern to become a more effective and efficient speaker.

Edwin Yiu (PhD) Karen Chan

2003

Preface (Third Edition)

It has been 15 years since this book was first published in 1999. With the rapid development of voice science and voice therapy professional in China, there has been a great demand on publications dealing with voice therapy. We therefore decided to make this book available as an e-book so this can be widely distributed with no cost.

Professor Edwin Yiu (PhD) Dr Karen Chan (PhD)

2014

How is this book organised?

Chapter 1 describes the common diseases of vocal folds caused by vocal overuse and misuse. It also describes how the human larynx (voice box) produces voice.

Chapter 2 and 3 describe ways to manage vocal behaviours. Details on how the voice can be affected by undesirable vocal habits are discussed. Practical suggestions to develop good vocal habits are also outlined in these chapters.

Physiological exercises for an improved voice production are covered in Chapters 4 to 5. A series of physiological exercises that aim at efficient voice use are described. Readers can practice these exercises to develop skills in voice projection.

In order to help the readers to understand and practice these exercises, a video clip of various physiological exercises is available at the following websites:

Voice Research Laboratory, Faculty of Education, HKU http://www.speech.hku.hk/clinic/voice/voicelab.html

In this book, an icon is placed next to the section heading when a video clip is available to demonstrate how these exercises can be carried out properly.

CHAPTER ONE: VOICE PROBLEMS AND VOICE PRODUCTION

Teachers and professional voice users are at a high risk of developing voice problems. Voice problems present in many different forms. The following two scenarios highlight some of the signs and symptoms of voice problems.

Scenario 1

Amy has been a primary school teacher for 2 years. She first noticed her voice turned deep and husky 6 months ago. She went to see a throat specialist doctor and was told that she had a nodule on her left vocal fold. The doctor told her to stop teaching for a week and asked her to go back for a review after the voice rest.

Scenario 2

Mr Smith is a real estate agent. He has just started this new job 2 weeks ago. His practice is very busy and he has to do a lot of face-to-face and telephone conversations. His clients said they could not understand him on the phone because of his high breaking pitch. Mr Smith finds his throat dry and his voice losing after talking to clients every morning.

These two scenarios illustrate some of the most common signs and symptoms of voice problems. They include:

- Weak voice
- Loss of voice
- Vocal dryness
- Vocal tiredness
- ➤ Hoarse, husky or harsh voice
- > Inability to control voice pitch
- Shortness of breath when speaking

Do I Have a Voice Problem?

The checklist that follows helps you to determine whether you have a voice problem. Put a tick against the item which describes your current voice condition.

Checklist to identify voice problems			
	My voice is husky or harsh.		
	I frequently run out of breath when I speak.		
	My voice gets tired easily after I speak for extended periods.		
	My voice sounds different in the morning or at night.		
	My voice doesn't sound as good as it used to be.		
	I lose my voice when I speak.		
	My throat hurts and feels dry after speaking for a long		
	time.		
	People on the phone think I am of the opposite sex.		

If you have ticked 1-2 items, there is a slight concern and you should read Chapter 2 to see what you can do to reduce these problems. If you have ticked more than 3 items, you should consult a throat specialist - commonly known as an ENT (ear, nose and throat) surgeon or a laryngologist.

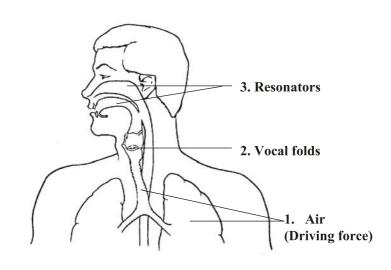
In order to understand how to avoid a voice problem, a better understanding of the principle of voicing and how disease is developed in the voice box is useful.

Where Does the Voice Come From?

There are 3 components in voicing. We need to coordinate the *driving force*—which is the air from the lungs, the *vibration* of the vocal folds, and the *resonance*—which is the amplification of voice by the mouth and nasal passages.

Fig. 1.1 Lungs, larynx and resonators

- 1. The air from the lungs causes the vibration of vocal folds
- 2. The vocal folds in the voice box (or larynx)
- 3. The mouth and nasal passages as resonators (amplification)



Voice Box (larynx)

The voice box is known as the larynx. It is made up of several structures: cartilages, vocal folds and muscles. The cartilages give the shape of the voice box and together with the muscles, they protect the vocal folds. The vocal folds are the source of voicing and the muscles control the movement and vibration of the vocal folds.

Cartilages

Cartilage is a soft bony-like structure. The larynx is made up of several cartilages. The biggest cartilage of the larynx is the

thyroid cartilage. Figure 1.2 is a frontal view of a thyroid cartilage model. You can imagine that the skin and muscles are stripped away for you to see the thyroid cartilage. You can feel the thyroid cartilage on your neck. The prominence at the front of your neck is called the thyroid notch of the thyroid cartilage. It is commonly known as the Adam's apple in men (Fig. 1.3). The thyroid notch in women is usually smaller.

Fig. 1.2 Thyroid cartilage and thyroid notch model (front view)

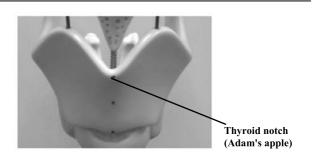
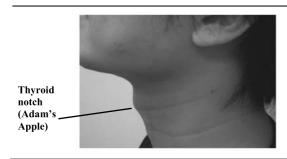


Fig. 1.3 Photo of a man's thyroid notch (Adam's apple)



Vocal Folds

Voice originates from the vibration of the two vocal folds. The normal vocal fold length for men is about 17-20 mm, while for women is 12-17 mm. The vocal folds are no bigger than a rubber band and are protected by the thyroid cartilage and the other cartilages. They form a V shape when they are not vibrating. You can feel the vibration of the vocal folds by putting a finger on the neck at the thyroid cartilage and say 'ah'. The vocal folds can be seen using a special mirror called a laryngoscope (laryngeal mirror) or by using a video-endoscopy (Fig. 1.4). The images seen through the endoscopy are like those in Figure 1.5.

Fig. 1.4 Vocal fold examination using a videostroboscopy



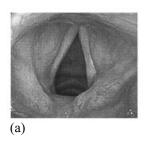
Muscles

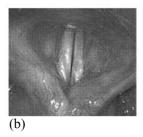
Muscles of the voice box and the neck control the movement of the vocal folds. During voicing, muscle contraction moves the vocal folds together and changes the shape of each vocal fold to produce different tones. If you strain the muscles of your neck, the vocal fold vibration will also be affected. Try squeezing the muscles of your neck with your fingers while saying "ah...". You can hear a change in the quality of your voice. This shows the importance of muscles in controlling the quality of voice.

What Causes Vocal Fold Vibration?

The muscles control the shape and movement of the vocal folds. They do not, however, cause the vibration. It is the air from the lungs that sets the vocal folds into vibration. When we breathe, the vocal folds are fully opened and are presented as an inverted V-shape opening in Figure 1.5a. This allows air travel in and out of the lungs. When we start producing voice, muscle contraction moves the vocal folds together and closes the opening (Fig 1.5b.). Air pressure building up below the vocal folds forces the vocal folds to burst open and vibrate quickly. The vibration produces voice. This is like plucking a guitar- or violin-string that produces sound.

Fig 1.5 Endoscopic images of the vocal folds





The frequency or rate of vibration is very high. In males, the vocal folds vibrate at 80 -140 times per second. In females, the frequency of vibration is 180-240 times per second whereas children's voice can be as high as 200-270 times per second. The higher the frequency of vibration, the higher is the pitch. Therefore, higher pitch is found in women and children.

Breathing-voicing coordination

The air is the driving force for the vibration of the vocal folds. When the vocal folds come together, the air pressure from the lungs will set the vocal folds into vibration. The larger the driving force, that is, the more air coming out from the lungs, the bigger is the vibration, and the louder is the voice.

Generally, an average pair of lungs can take in approximately 4,000 cc of air. That is about the size of two big bottles (2-litre size) of soft drink. To fully utilise the air in our lungs for voicing, we need to have a good co-ordination between breathing and voicing.

There are several undesirable breathing habits that make breathing-voicing co-ordination difficult. These include:

i. Shallow breathing

Shallow breathing means only a small amount of air is breathed in and out every time. Therefore there will not be enough air for voicing. Try to breathe in gently and deeply. Chapter 3 describes in detail the breathing exercise you can practice to promote a better breathing pattern.

ii. Breathing out before speaking

In order to fully utilise the amount of air in the lungs for voicing, one has to start producing voice immediately after breathing in and just at the moment of breathing out. If, however, you breathe out the air before producing any voice, the amount of air for voicing will be reduced. Therefore, if you want to speak efficiently, do so immediately after you have breathed in fully and are about to breathe out. Chapter 5 describes a humming exercise, which you can practice to improve the co-ordination.

iii. Speaking on residual air

When you try to get a few more words out in one breath, you have to strain your voice. This will damage your vocal folds. Stop talking when you run out of breath. Take a breath in before you speak again. Try practice not speaking on residual air by using passage reading. Take a breath when there is a punctuation mark

in the passage and talk slowly. You can see Chapter 5 for exercise.

Resonator (Amplifier)

Different mouth shapes and tongue positions produce different speech sounds. For example, when you try to say the sound "ma", you have to move your lips together at the same time lowering your soft palate to produce the sound "m". Then open up your mouth widely while raising your soft palate (which is an unconscious process) and produce the sound "a". And when you want to say the word "tea", you put the tip of your tongue behind your upper teeth. Then you produce the sound "ee" while at the same time, releasing the tongue from the teeth.

If you try to say these two words now with the same amount of effort, you will notice that the sound "ma" sounds louder than the word "tea". This is because you are using your whole oral cavity and nasal passage for the sound "ma". But when you say "tea", the cavity is relatively smaller because your soft palate is raised to close the nasal passage from the oral cavity while at the same time, your tongue is raised.

The effect that the oral cavity amplifies the voice is called resonance. The bigger the cavity, the louder is the voice. The shape and size of your oral cavity (i.e. the resonator) therefore determine loudness. You can think of your mouth as an "amplifier". If you speak with your jaw or mouth half closed, your voice is soft and mumbling. If you want a louder voice, make your "amplifier" bigger. You can do this by speaking with an open mouth and a clear diction.

Common Diseases of the Vocal Folds

Many voice problems are caused by vocal overuse, abuse or misuse. This may lead to swelling or abnormal tissue growth on the vocal folds. There are three common diseases or pathologies found in people who frequently overuse, abuse or misuse their voice. They are vocal nodules, vocal polyps and chronic laryngitis.

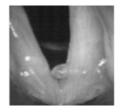
Vocal nodules and polyps

Nodules and polyps are tissue swelling found on the vocal folds. They are caused by the constant hitting action of the vocal folds. Nodules are often found on both vocal folds but may just appear on one side of the folds (Fig. 1.6a). They are found most commonly in children and women who talk excessively. Polyps are usually larger than nodules. They are usually found on one side of the vocal folds (Fig. 1.6b). Since the tissue growth increases the mass of the vocal fold and prevents the two vocal folds closing completely, the voice becomes hoarse and husky.

Fig. 1.6 Endoscopic images of the vocal nodules and polyp



a. Vocal nodules



b. Vocal polyp

Chronic laryngitis

Laryngitis means inflammation of the larynx (voice box). The vocal folds become inflamed and swollen. There are different causes for laryngitis. Constant vocal abuse is one of them and can lead to persistent or chronic inflammation (Fig. 1.7). The vocal folds may become thickened and congested in chronic laryngitis. Thickened vocal folds may lead to lowering of the voice pitch.

Fig. 1.7 Endoscopic image of the vocal folds with chronic laryngitis



Summary

Things you have learned in this chapter:

- 1. Voice problems can present in many forms, such as loss of voice, husky voice or vocal dryness.
- 2. Voice is produced when the air from the lungs set the vocal folds into vibration.
- 3. A good speaking voice requires:
- sufficient breath support
- not straining the voice
- > speaking with an open mouth
- > speaking with a clear diction
- 4. Vocal misuse can lead to diseases of the voice box such as vocal nodules, polyps or chronic laryngitis.

CHAPTER TWO: PREVENTING VOICE PROBLEM: VOCAL HYGIENE

Many broadcasters, such as news announcers or radio disc jockeys, have a pleasant voice. They know what is good for their voice and are also aware of what to do to avoid harming their voice. There are a number of factors that affect our voice. If we do not deal with them carefully, it is very easy for voice problems to develop. These factors will be discussed under the following headings.

- Speaking habits
- General personal health
- > Environmental control
- Stress and emotion
- > Hydration and dietary factors
- Medications

Speaking Habits

Constant screaming, shouting or excessive loud voice

Screaming and shouting are harmful to vocal folds because these two behaviours mean forceful vibration of the vocal folds. Frequent forceful vibration will lead to swollen vocal folds with fluid retention (oedema). With the swelling, voice quality will change. Overtime, the swelling may develop into a vocal nodule or polyp. Therefore, screaming, shouting, and excessive loud voice should be avoided.

Talking too much

The effect of talking too much is similar to that of screaming. When one talks excessively, the vocal folds do not have a chance to rest. Therefore, it is difficult for the swelling to go away. This is why the voice should be given frequent vocal rest, i.e., without any talking.

Speaking with an inappropriate pitch

With an inappropriate high pitch voice, the vocal folds are stretched and the neck muscles are strained in order to raise the voice box to a higher position. With an inappropriate low pitch voice, the vocal folds are shortened and become bulky. In both conditions, the impact of vibration on the two vocal folds during voicing is localised to small areas on the vocal folds rather than evenly distributed on the whole vocal folds. This localised pressure can easily damage the vocal folds. A non-straining natural pitch (sometimes known as an optimal pitch), however, requires minimal effort. The pressure on the vocal folds is evenly distributed on the whole vocal folds. Chapter 5 describes the humming exercise that helps you to speak with your optimal pitch.

Speaking too fast or too long without pausing for breath

Speaking too fast or too long without allowing the breath to get replenished would strain the vocal folds. The vocal folds have to work harder by hitting each other more forcefully. This can easily cause damage to the vocal folds. Therefore, one should speak slowly and use short sentences in speech to allow breathing in air for normal vocal fold vibration.

Abrupt start and excessive force in speaking / Frequent throat clearing or coughing

Using excessive force, especially in an abrupt fashion, and frequent throat clearing or coughing cause the vocal folds to hit each other harder. As explained above, the impact causes damage to the vocal folds. To avoid these, speak gently and do not strain your voice. If you feel an irritation in the throat, do a dry swallow instead of clearing the throat. If you cough frequently, see a doctor to find out the cause. In some people, coughing may be caused by reaction to acid reflux or allergy. Controlling the allergy generally reduces coughing.

Uncoordinated breathing and speaking

Poor breath support such as shallow breathing or inability to coordinate speaking and breathing may result in inadequate voicing. Good co-ordination requires some practice. Chapter 4 describes some breathing exercises that you can practice to improve your breathing support for voicing.

Speaking with a closed mouth or tensed jaw

The mouth works like a speaker. In order to have good resonance, speak with an open mouth. You will find the diction clearer and the voice louder. Chapter 5 describes a series of exercises that you can practice to improve vocal resonance.

General Personal Health

Smoking

Cigarette smoke causes irritation to the vocal folds because the secretion produced to lubricate the vocal folds is reduced. The only way to eliminate this specific irritation is to quit smoking. If you find it difficult to quit smoking immediately, try to reduce

smoking now and seek professional advice or join a stop-smoking program. Remember *smoking is hazardous to health*.

Alcoholic consumption

Alcohol also has a drying effect on the vocal folds. It reduces the secretion for lubrication so that the vocal folds are susceptible to damage. Do monitor the amount you drink and avoid drinking excessively.

Resting

Resting is important for body metabolism. Muscles need rest to recover from their tiredness as a result of constant work. The vocal fold muscles similarly need a good rest after speaking for some time. Sleeping is a good way to get rest. Frequent late nights affect our body function and the swelling of the vocal folds is unable to go away. Therefore, make sure you have plenty of rest.

Sex and thyroid hormones

Sex hormones and thyroid hormone are the most common body substances that can affect voice. Voice problems related to sex hormones are more commonly found in females. About one third of women notice voice changes before and during their menstrual period. Another one third of women notice voice changes in between two menstrual periods, i.e. during the ovulation period. These changes can be subtle and may only be noticeable in people who have a high demand on voice use. Although these natural processes cannot be avoided, it is possible to reduce the effect by placing less demand on the voice during these periods.

Thyroid hormone is produced by the thyroid gland in the neck just around the voice box. Thyroid hormone deficiency (hypothyroidism) causes hoarseness and vocal tiredness. The exact mechanism is not clearly understood but it is believed that it is caused by retention of fluid (i.e. swelling) in the vocal folds.

Medical treatment can usually reverse the process of these voice changes.

Stress and Emotion

Voice conveys emotion. When we feel happy, the joy transmits through our voice. Likewise, people can sense the sadness in your tone when you feel unhappy. This can be explained by the fact that the nerve that controls the voice box also reacts to emotion and stress. Therefore, our emotion may easily affect the control of voicing.

Effects of stress on the body

People who are under constant stress may develop stomach problems. This is because the nerve which controls the stomach functions also responds to stress. On stimulation, the nerve sends impulses to the stomach and causes more gastric juice secretion. The excessive gastric juice causes stomach problems such as aching or ulcer.

Similarly, emotional stress can affect the control of the vocal folds. Stress induces muscle tension. The muscle tension in our neck will affect the proper functioning of the vocal folds. Try to squeeze your neck muscles with your fingers and at the same time try to say a few words. You will notice your voice is strained. This is because the muscle tension (caused by your squeezing) affects vocal fold functioning. Therefore, muscle tension as a result of stress affects voice production.

How to deal with stress and emotion properly

Stress is frequently a component of everyday life. It comes from work and interpersonal relationship. Work can be stressful, especially when it is highly demanding, requires a lot of effort, or is highly competitive. Apart from work, we have to deal with interpersonal relationships. Human relationships are complex. We normally interact with colleagues, spouses, children, parents,

relatives and friends. When a relationship becomes strained, stress usually follows. Some people find the more intimate the strained relationship is, the more is the stress.

Release of physical tensions

There are different ways to release the physical tension that comes from stress. Relaxation exercise described in Chapter 4 is an effective means to reduce muscle tension caused by stress.

Release of mental pressure

The release of physical stress and tension is important but a release of mental pressure is also helpful and necessary. Talking has a cathartic effect. When you have a problem or feel upset about something, find a person that you can talk to. Although you may not be able to resolve your problem, you may feel better after you have talked it over. So talking can help to release your mental stress. Of course, you have to remember not to talk excessively because excessive talking may also damage your voice.

Hydration and Dietary Factors

Fluid is important to our body. It is necessary to have plenty of fluid because the surface of the vocal folds requires lubrication during vibration. The lubrication comes from normal secretion of mucus by the vocal folds. Therefore, drinking enough fluid for hydration is essential.

You may ask how much fluid should one take? Some say 2 litres a day, and others say 8 glasses a day. The best rule of thumb to determine the *input* is to monitor your *output*. When your water output (urine) is yellow in colour, it means the hydration level in the body is not enough. Clear urine indicates your hydration level is adequate. Drink more fluid until your urine is clear and colourless.

In addition to adequate hydration, avoid taking food that irritates your throat or voice. For some people, food that causes irritation includes spicy food, deep-fried food, ice cream, coffee, strong tea, chocolate, milk, honey or drinks that contain caffeine. Some ingredients in these food substances thicken our saliva and secretions while others have a direct irritating effect on the mucosal membrane of the vocal folds. The best way to find out which food to avoid is to try it out in a controlled manner. When you notice any voice change after eating certain foods, try to avoid them in the future.

Medications

Some medications prescribed by doctors or bought "over-the-counter" may affect voice. Some of the common medications include antibiotics, anti-histamines, corticosteroids, painkillers and contraceptive pills.

Antibiotics

Antibiotics are used to treat bacterial infection. However, they have potential side effects that may affect our voice. These effects include:

- > dryness, which reduces lubrication to the vocal folds;
- > allergic reactions, which results in swollen vocal folds; and
- > yeast infection.

Antihistamines

Antihistamines are used to treat allergy. They reduce secretions, which in turn thicken the mucus and reduce the lubrication to the vocal folds.

Corticosteroids

Corticosteroids are used to treat inflammation. Long term use of this medication may have adverse side effects. Among the side effects, muscle bleeding and drying effect will affect vocal fold function. Some asthmatic patients may notice voice change following the use of corticosteroid inhaler such as Becotide.

Painkillers

Aspirin is a common painkiller and it may cause bleeding in small blood vessels. Bleeding in the blood vessels on the vocal folds will no doubt have a devastating effect on voice production.

Hormones

Contraceptive pills with a high male hormone (progesterone) component may cause voice quality change and result in a low pitch voice. The changes are usually reversible and can be treated by replacing the pills with other types that have a different malefemale (progesterone-oestrogen) hormone balance. Your gynaecologist will be able to give you advice on this.

The effects of these drugs on voice are usually transient and reversible. One has to weigh the risks and benefits of taking these drugs. Always consult your doctors or pharmacists on queries related to drugs.

Environmental Control

Passive smoking

"Second-hand" smoking is as hazardous as smoking yourself. Cigarette smoke dries up the secretion of the vocal folds. It also irritates the throat and stimulates coughing. All these put extra burden on the vocal folds. So, avoid staying in smoky environment!

Exposure to dry air

Dry air takes away moisture from your vocal folds while you breathe in. The effect is particularly noticeable if you breathe through you mouth because you will not get the benefit of moisturisation as in breathing through the nose. This drying effect, as explained above, is unhelpful for the vocal folds vibration. So, avoid breathing through the mouth.

Noisy environment

In a noisy situation, you normally have to raise your voice in order to be heard. This causes extra burden on your vocal folds. Avoid chatting in noisy restaurants, pubs or Karaoke lounges. For teachers, avoid talking to students while they are making noises. Get their attention and quiet them down first by using non-verbal means such as hand-clapping, knocking on the blackboard or waving your hands. The rule of thumb is to avoid competing with background noise when you speak.

Do's and Don'ts

There are a number of things that we should do or avoid in order to keep our voice in its best shape. Table 2.1 lists out the reasons and methods for carrying out the good habits and Table 2.2 shows you things that you should avoid doing.

Table 2.1 Things to do to keep the voice in good shape

Do	Why?	How?
Speak slowly and pause for breath	Rapid speech induces tension. When we pause for breath, our speech will slow down. Pauses allow you to breathe in more air.	Pause at the end of every sentence for a breath. Practice slow speech and pausing by listening to your own voice on a recorder.
Have frequent voice rest	Silence allows vocal folds to have a rest.	Take a 1-minute vocal rest after every 30 minutes of continuous talking or singing.
Speak with an appropriate pitch	Appropriate pitch requires minimal effort to produce adequate loudness.	Avoid too low or too high a pitch. You may need help from a speech therapist to identify the appropriate pitch for speaking. See Chapter 4 for exercises to locate the optimal pitch.
Speak with an open mouth and clear diction	These are essential for effective communication and resonance.	See a speech therapist for help. See Chapter 4 for exercise.
Drink plenty of fluid	Fluid is important for body metabolism and lubrication of the vocal folds during vibration.	Drink about 6 glasses of water per day or until you urine becomes colourless and clear.
Have enough rest	Rest allows muscles to relax and recover from tiredness.	Have adequate sleep.

To be continued...

Table 2.1 Things to do to keep the voice in good shape (con't)

Do	Why?	How?
Relax your body muscle	Muscle tension in the neck region affects the control of vocal fold movement.	Stay relaxed. Carry out relaxation exercises. See Chapter 4 of this book.
Enjoy a positive healthy life style	A healthy life style helps to ease our stress.	Participate in outdoor activities such as swimming, hiking and jogging. Develop leisure activities such as reading, listening to music. Have regular meals, sleep well and avoid over work.
Use a positive attitude to deal with problems	A positive attitude facilitates problem—solving ability, therefore reducing stress.	Talk to your family or friends and share your emotion with them.

Table 2.2 Things to avoid

Don't	Why?	How?
Talk or sing continuously or loudly	Excessive vocal fold vibration without rest will cause damage. When we increase the loudness, the impact to the vocal folds is greater.	Pause in between sentences. Add in short vocal rest and drink some water after every 30 minutes of continuous talking or singing.
Talk in noisy environments (like Chinese restaurants, Karaoke, game centres)	We increase our loudness when we talk in noisy situations, this puts extra strain on the vocal folds.	Avoid talking in noisy environments (e.g. crowded restaurants, Karaoke, Arcades). Get closer to the listeners Use gestures to help getting the message across. Ask people to pass the message around for you. Write down your message.
Clear throat or cough excessively	Air is used to clear the phlegm from the throat in coughing. This produces abrupt onset of voicing and the impact is harmful to the voice. When the chest muscles contract during coughing, the body tension increases.	Try to do a dry swallow and the phlegm can usually be cleared. Drink more water which can clear the phlegm or reduce the itchy feeling in the throat. Clear the throat or cough <i>gently</i> .

To be continued...

Table 2.2 Things to avoid (con't)

Don't	Why?	How?
Laugh, scream or cry excessively	The extra impact caused by excessive coughing, laughing, screaming or crying on the vocal folds is damaging.	Do not laugh, scream or cry for too long. Use body language, such as clapping, to convey emotion.
Smoke	Chemicals in tobacco are harmful to the lungs and vocal folds.	Stop smoking - first by reducing your smoking to half, then stop all cigarette smoking completely.
Drink alcohol, strong coffee or tea	The ingredients in these drinks cause fluid retention and swelling of vocal fold tissues.	Avoid drinking alcohol, strong coffee or strong tea. Drink more water.
Eat spicy, oily, deep-fried food or chocolate excessively	The ingredients in these food substances stimulate throat secretion and thicken the saliva.	Avoid or reduce the intake of these food substances. Drink more water.
Stay in dry environments (e.g. using a heater, air- conditioning or stay under direct sunlight)	Vocal fold vibration needs lubrication, dry air reduces lubrication and causes damage to vocal folds.	Put a bowl of water near the heater or air- conditioner. Use a humidifier. Drink plenty of water. Avoid direct sun-light.

Summary

Things you have learned in this Chapter:

"Speak gently and avoid abusing your voice" is an effective way to prevent voice problems.

CHAPTER THREE: STRATEGIES ON PUBLIC SPEAKING TO PRESERVE VOICE

There are a number of things that you can do in classroom teaching or public speaking that help to prevent vocal abuses and maximize the projection of your voice. These tricks also help to enhance your presentation skills and facilitate the communication between you and your audience.

Health and Environmental Control

Stay hydrated

It is very important that you keep your vocal folds moist while you speak, this would help to protect from early fatigue and maintain appropriate vibration of the vocal folds. Have a glass of water nearby when you teach or present. Even a small sip of water would help!

Use relaxation exercise to reduce body tension

Chapter 4 describes a set of exercise to help you to relax. The key is that you have to remind yourself to avoid muscle tension during your presentation. Also, note your speaking or sitting posture while you present. For example, for teachers, if you always have to hold up your arms to write on the board and speak at the same time, you may find that your shoulders will remain tensed throughout the day. This could hinder your production of a relaxed voice. Carrying out some simple relaxation exercises just before you teach or present will help your body to relax.

Presentation Skills

Appropriate use of the microphone

Many speakers have reported that the microphone changes the sound of their voice and was not useful in projecting their voice. This may be a result of inappropriate use of the microphone. In order to fully utilize the microphone, two points have to be noted:

1. The position of the microphone

The microphone should not be right in front of the mouth, but slightly lower and away from the mouth (Fig 3.1). This position is to prevent the breathing and air bursting sound (such as the 'p' sound) from amplification.

Fig. 3.1 Appropriate Use of the Microphone



2. Projecting the voice

Although your voice only needs to travel to the microphone for amplification, this short 'voice travelling' distance often leads to poor projection of the voice and increases the tension in the voice box. This in turn leads to a change in the voice quality and early vocal fatigue. Even with the use of a microphone, you should imagine that your voice is travelling to the far end of the room and covering the audience like an umbrella. Carry out the projection practice in chapter 5 to learn how to project your voice without straining your vocal folds.

Short vocal rest

No matter how skilful you are in projecting your voice, your voice would still be tired after a long period of continuous talking. The best way to keep your vocal folds in good shape is to schedule frequent one-minute breaks throughout your presentation. This can be achieved by scheduling short question and answer session every 30 to 45 minutes. This not only helps your vocal folds but also help your audience to absorb the information you presented.

Clear diction

Obviously, if you want your audience to be interested in your presentation, they first have to be able to hear what you are saying. When your voice is transmitted through the amplifiers and across a large area, your words can become muffled. Therefore, it is very important that you have a clearer diction than you normally do in social conversations.

Good speaking-breathing coordination

Breath support is the driving force for our voice. It is essential that you do not speak when little air is left in your lungs, for example, speaking a number of long sentences without any pause for breath. Good coordination is especially important when you are talking to a large audience because you need stronger breath support to speak loudly. You will find that when you speak without good breath support, your voice would sound strained and your throat will feel tight, especially near the end of a phrase. Practice the breathing and projection exercises in the next two chapters.

Head positioning

When presenting or teaching, try to maintain your head in a neutral position, i.e. not raised too high or tucked too low but look straight ahead. This is to reduce any unnecessary stress around the neck area and to optimize the vocal tract area for resonance.

Use gestures and non-verbal means to get listeners' attention

Yelling or screaming is not the only way to get the attention of your audience. Try using non-verbal means, such as clapping your hands; knocking on the desk or writing board; wave your hands or use gestures to capture your audience's attention before you begin to speak.

Gestures help to get the attention of the listeners and get your message across. However, use gestures with discretion because when used excessively, they tend to be distracting rather than helpful.

Use eye contacts

Look into the eyes of your audience to get their attention. Eye contact is also important because it allows you to find out (from their eyes) whether they have taken in your message.

Use audio-visual materials

Speaking is not the only means of communication. Audio-visual materials help the speakers to present their ideas more effectively. So try to use whatever audio-visual equipment or materials that are available, such as over-head projector, computer and video-tapes.

Summary

Things you have learned in this Chapter:

Some tricks that help classroom teaching and public speaking. The key to success is to use the microphone appropriately, speak clearly and use non-verbal communication as well.

CHAPTER FOUR: RELAXATION AND BREATHING FOR BETTER VOICING

A relaxed body with adequate breath support is essential for good voice production. Our voice can easily be affected by emotion. When we are under stress, our voice may sound strained. This is because stress induces tension in the vocal folds and the neck muscles, which affect the vocal folds function.

Therefore, in order to free our bodies from unwanted tension, we have to deal with the mental stress as well as muscle tension. Progressive relaxation exercise is an effective way to tackle mental stress and muscle tension. With reduced stress and tension. relaxation can result in better voice quality.

A whole-body progressive relaxation exercise is described in this chapter. Practising this exercise helps to reduce or eliminate your body muscle tension and to promote better breathing habits.

Progressive Relaxation Exercise

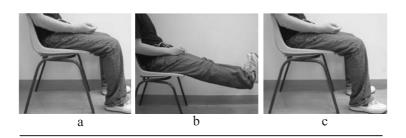


The relaxation exercise described here begins with an exercise starting from the legs and continues up to the neck. The key to relaxation in this exercise is to release the muscle tension. To practice relaxation, you should wear loose clothing and find a comfortable chair. Follow the steps described below. Repeat each step three times.

Step one: Relaxing the feet and the legs

Sit on a chair with your feet resting comfortably on the floor (Fig. 4.1a). Then raise your legs and pull your feet towards yourself. Squeeze the muscles in your feet, calves and thighs (Fig. 4.1b). Feel the tension for 5 seconds, then relax and put the feet back on the floor (Fig. 4.1c). Now feel the relaxation for at least 5 seconds. Repeat the step three times.

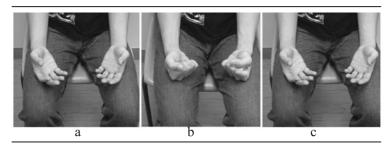
Fig. 4.1 Tightening and relaxing the feet and legs



Step two: Relaxing the hands

Rest your hands on the lap (Fig. 4.2a). Squeeze and make a fist for 5 seconds (Fig. 4.2b). Then, let go and rest the hands on the lap again (Fig. 4.2c), remember not to fully stretch your fingers. Your fingers should form a bowl-shape when your hands are totally relaxed. Now feel the relaxation. Repeat the step three times.

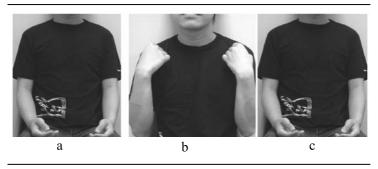
Fig. 4.2 Tightening and relaxing the hands



Step three: Relaxing the arms

Raise your arms as shown in Fig. 4.3b. Clench your fist, bear down and tighten your muscles in your arms. Feel the tension in your arms. Then let go and feel the relaxation now. Repeat the step three times.

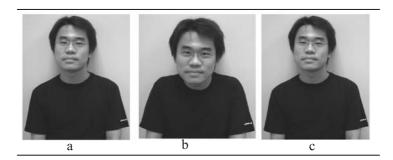
Fig. 4.3 Tightening and relaxing the arms



Step four: Relaxing the shoulders

Raise your shoulders up and tense the muscles (Fig. 4.4b). Then, let go and lower your shoulders slowly (Fig. 4.4c). You should feel the relaxation after you lower your shoulders. Repeat the step three times.

Fig. 4.4 Shrugging and relaxing the shoulders



Step five: Whole body relaxation

After the step-by-step relaxation of the feet, legs, hands, arms and shoulders, your body muscles should be relaxed. Feel if there is any remaining tension in the legs, arms and shoulders. You do not need to move your body parts to check for the tension. Just feel it

Sit there and relax for a few minutes (Fig. 4.5). Think of a relaxed atmosphere. For example, imagine you are walking on a quiet beach or listening to some light music.

After you have ensured your body is relaxed, proceed to the next step to relax your muscles in the head and neck area.

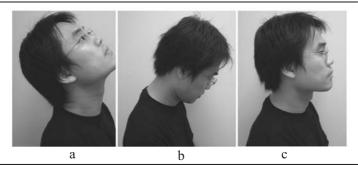
Fig. 4.5 A relaxed posture



Step six: Relaxing the head and neck

Extend your neck backward and stretch the muscles of your neck (Fig. 4.6a). Then move your head forward until your chin almost touches your chest (Fig. 4.6b). You will feel the tension at the back of your neck. Then move your head back to the usual position where you can look straight ahead (Fig. 4.6c). Repeat the step three times.

Fig. 4.6 Tightening and relaxing the head and neck



Progressive relaxation exercise is an effective way to relax your body muscles. Practice the exercise regularly everyday and especially when you feel tensed. The whole exercise takes less than 10 minutes. The more you practice the exercise regularly, the easier it will be for you to relax when body tension builds up. Spend at least 10 minutes a day to carry out the exercise.

After the exercise, remain in your seat and proceed to the breathing exercise.

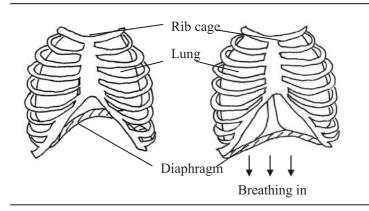
Breathing

There are three breathing methods, which a normal person may use:

- diaphragmatic (abdominal) breathing
- > thoracic (chest) breathing or
- > clavicular (shoulder) breathing

Diaphragmatic (abdominal) breathing is the most efficient way of breathing because it uses the muscle (diaphragm) which separates our chest from the abdomen. When the diaphragm contracts, it goes down and increases the space in the chest (Fig. 4.7). Therefore, the lungs can expand and we can breathe in air.

Fig. 4.7 Movement of the diaphragm

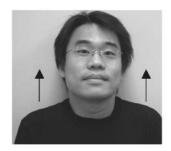


Thoracic (chest) breathing uses the muscles of the ribs to raise the rib cage. This increases the volume of the lungs and so we can breathe in.

Clavicular (shoulder) breathing uses the collar bone to raise the shoulders in order to breathe in extra air (Fig. 4.8). This is normal if you are doing some strenuous exercise because your body urgently needs extra air to burn the fuel in your muscles. However, this requires extra effort from your shoulder muscles. So, if you use your shoulders in normal breathing, the tension develops in the shoulder can easily transfer to your neck and affects your voice box. Therefore, shoulder breathing is only necessary when your body needs extra air quickly. It is a less efficient method for normal breathing. It creates tension in the neck region.

Fig. 4.8 Clavicular breathing





In general, most males use abdominal breathing while most females use chest breathing. If you are already using abdominal breathing, the breathing exercise described in the next section will help you to fully utilise your lung capacity. If you are a chest breather, practising abdominal breathing exercise will help you to adopt a more efficient breathing method.

Breathing Exercise

The breathing exercise described here helps you to maximise your breathing capacity and co-ordinate the breath support with voicing.

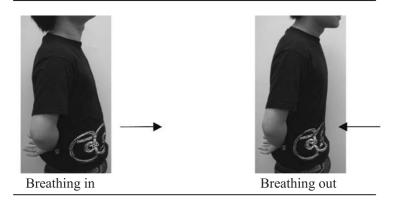
Step 1: Relaxed breathing

Before doing any breathing exercise, it is important to carry out the relaxation exercise first. A relaxed body facilitates abdominal breathing. So sit back, relax and carry out the progressive relaxation described earlier. After finishing the relaxation exercise, keep still and slowly place a hand on the stomach just below the chest (Fig. 4.9). You should feel the in and out movement of your abdomen (Fig. 4.10).

Feeling the movement of the abdomen Fig. 4.9



Fig. 4.10 Abdominal breathing



Step 2: Abdominal breathing

A) If you feel little or no movement in the abdomen or the movement is found in the chest, try not to concentrate on the breathing exercise. It is easier for the body to use the abdominal breathing naturally if you are not thinking about it. Wearing loose clothing will also allow you to feel the movement of the abdomen easier. You will notice that the more relaxed you are, the easier it is to feel the movement in the abdomen. You may also try doing this exercise lying on your bed. After you have established abdominal breathing, go to Step 2B below.

B) If you feel the movement in the abdomen, just keep relaxing and breathe slowly. You will find the movement becomes more obvious when you breathe deeply. But, remember not to move your shoulders to breathe deeply.

Step 3: Breathe Slowly

In order to control the rate of breathing, count silently for 3 seconds while you are breathing in. Then another 3 seconds while you are breathing out. For example, breathe in (and silently count "101-102-103"), then breathe out (and silently count "101-102-103").

Have a watch in front of you. Note the time and then breathe for 15 cycles. Count one "breathing-in" and one "breathing-out" as one cycle. After finish breathing for 15 cycles, note the time again. If it is longer than one minute, then the pace for breathing is just right. Indeed, when one is not speaking, the slower the breathing, the better it is.

An efficient breathing means taking in the maximum amount of air with minimal muscle effort. You need to practice the slow and deep breathing a lot before you could master the breathing skills.

Step 4: Sighing

After you have breathed in and out for at least 20 cycles. You can start to add voicing while you breathe out.

Start with gently breathing out first, then breathe in, and then sigh while breathing out again. Try this for a few times. Remember you only use the mouth for sighing, not for breathing in.

Then, try to say "ha" instead of sighing.

Beware that you do not strain or push the "ha" out. Just say the "ha" gently and listen to the voice quality. There should be no effort used.

The relaxation and breathing exercises are essential for better voicing. They are warm up exercises for better voicing. Therefore, it is useful to practice these exercises everyday. The best time for practice is in the evening after dinner when the daily activities slow down. After you have mastered the relaxation and breathing exercises, you can go to the next chapter to learn about voice projection.

Summary

Things you have learned in this chapter:

- 1. Relaxation and good breathing pattern are important for voicing.
- 2. Progressive relaxation exercise.
- 3. Exercise for diaphragmatic (abdominal) breathing.
- 4. Co-ordinating breathing and voicing using the sound "ha" to practice sighing.

CHAPTER FIVE: BETTER VOICING AND VOICE PROJECTION

In order to have your voice heard clearly in a classroom or in a group, your voice needs to be projected with a clear resonance using an optimal pitch. That is, the pitch of your voice should not be too high or too low. An inappropriate pitch induces tension in the vocal fold muscles, whereas an optimal pitch will get the best resonance from your vocal tract (i.e. the resonator). You should also open your mouth during speech so as to project the voice.

This chapter describes several exercises to help you produce an optimal pitch and project your voice efficiently. Since these exercises require regular practice before you can master the skills, the recommended minimum practice period is stated with each exercise.

Humming and projection



Week One: Humming (Practice 3 times a day)

One way to produce a relaxed voice is to say "uh-um" in response to someone's question.

- 1. Try to say "uh-um" softly after you have taken a breath in GENTLY.
- 2. Make sure you start the sound "uh" with a gentle onset.
- 3. Say "uh-um" again softly. This time, prolong the "m" for a few more seconds. You will hear yourself saying "uh-m...". This is humming.
- 4. Try Step 3 again and put a finger on the bridge of your nose (Fig 5.1). You can feel the vibration there if your humming is gentle and relaxed. This vibration is caused by the resonance in your head.

Fig. 5.1 Feeling the vibration of humming



- 5. Say the "m" softly for about 3 to 5 seconds long and feel the vibration. Do not hum for too long or you will run out of breath.
- 6. If your pitch is too low or too high, the resonance will be reduced and you will feel the vibration reduced around the bridge of nose too.
- 7. Practice humming three times daily for at least a week in order to master the skill in producing an optimal pitch.
- 8. Use Table 5.1 as a checklist for your humming exercise to ensure you are doing it properly.

Table 5.1 Checklist for proper humming

Week Two: Humming with word projection (Practice 3 times a day)

When you feel confident in humming using an optimal pitch, you can practice more by adding words to the "m". Practice these words everyday for 1 week.

- 1. Practice humming and projection with the following sounds using appropriate mouth shapes:
 - a) m ah
 - b) m—e
 - c) m oo

Proper mouth shape ensures the voice is projected properly. The proper mouth shape for each sound should be:

- When you are saying an 'ah', open your mouth as wide as possible
- When you are saying an 'e', spread your lips and relax your muscles in the neck and face
- When you are saying an 'oo', purse and round your lips.
- 2. Refer to Table 5.2 to ensure that you are doing the humming and projection properly. Notice that the new item in Table 5.2 is 'clear pronunciation'. This is essential for proper projection.
- 3. Practice humming and projection with the following words:
 - a) m warm
 - b) m—man
 - c) m more
 - d) m where
 - e) m wood
 - f) m meat
- 4. Refer to Table 5.2 again to check whether you are doing the humming and projection properly or not.

Table 5.2	Checklist	for p	oroper	projection
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Gentle onset
Steady voicing
Optimal pitch
Relaxed neck muscles
Clear pronunciation

Week Three: Humming with phrase projection (Practice 3 times a day)

- 1. Practice humming and projection with the following phrases:
 - a) m mother cares
 - b) m weather's fine
 - c) m—thank you
 - d) m Monday morning
 - e) m—all right now
- 2. Use Table 5.2 again as the checklist to monitor your own projection. If you feel confident, proceed to the Step 3.
- 3. Practice projecting the following phrases *without* using humming:
 - a) mother cares
 - b) weather's fine
 - c) thank you
 - d) Monday morning
 - e) all right now
- 4. Use Table 5.2 again to see whether you can project the phrases comfortably. If you feel the pitch is not quite right, go back to Step 1 above and use the "m" to practice a few more time before you attempt this step again.

Week Four: Humming with sentence projection (Practice twice a day)

- 1. Practice humming and projection with the following sentences
 - a) m I want to go home now
 - b) m The boys are fighting
 - c) m Nobody is here
 - d) m Today is a lovely day
 - e) m Let's go and do it
- 2. Use Table 5.3 to rate the sentence projection. If the ratings for all the different areas are "good" or "excellent", go to Step 3. Otherwise, practice Step 2 again.
- 3. Practice the following sentence without using humming
 - a) I want to go home now
 - b) The boys are fighting
 - c) Nobody is here
 - d) Today is a lovely day
 - e) Let's go and do it
- 4. Use Table 5.3 to rate the projection of each sentence.

Week Five: Passage reading (Practice twice a day)

1. Read aloud the following passage. Initially, you should use a hum ('m') at the point marked by two slashes (//).

North Wind and the Sun

// One day, // the wind and the sun had a debate on // who was more capable. // While they were talking, // a man dressed in a thick black coat came along.

// So they decided to see who was capable // to undress the man // with the black thick coat.

//The wind started first by blowing very hard. // But, the harder she blew, // the tighter the man held on to his coat. // So the wind gave up eventually.

// A while later, // the sun came out // and it became hot. // The man quickly took off his coat. // So // the wind had to admit // that the sun was more capable.

- 2. You may find the reading sounds funny but the practice allows you to remember to take a breath in before each humming.
- 3. Practice the passage with humming for a few days.
- 4. Then you can stop using the humming and just concentrate on projecting the sentences in the passage. However, you should still pause at the slashes to replenish your breath.
- 5. Once you are familiar with the passage, try to imagine you are reciting this in a hall to a large audience. Project your voice so that the person sitting at the back of the hall can hear you. Do this by following Table 5.3 and imagine you can visualize your voice throwing to the back of the room.
- 6. Use Table 5.3 to rate your passage reading.

 Table 5.3
 Rating scale for sentence projection

<u>Instruction</u>: After projecting each sentence, rate the sentence using each of the items below to determine whether the projection was "bad", "good" or "excellent."

Gentle onset	Bad	Good	 Excellent
Steady voicing	Bad	Good	 Excellent
Optimal pitch			
Relaxed neck muscles	Bad	Good	Excellent
CI 1	Bad	Good	Excellent
Clear speech	Bad	Good	Excellent
Appropriate speed	Bad	Good	Excellent
Breathing support	Bad	Good	 Excellent
Naturalness			
	Bad	Good	Excellent

Summary

Things you have learned in this chapter:

- 1. Exercise for humming.
- 2. Exercise for voice projection.

FINAL WORDS: PRACTICE, PRACTICE AND PRACTICE

Professional voice users are susceptible to developing voice problems. Voice problems as a result of vocal abuses and misuses, however, can be prevented.

This book has described a number of vocal hygiene strategies (see Chapter 2 and 3) and exercises (see Chapters 4 and 5) to promote better voicing.

These strategies and exercises need constant practice. There is no short cut to master the skills for voice production. It would take at least a few months of constant practice before mastering these skills

And remember, practice alone doesn't make perfect. Only

"Perfect practice makes perfect".

Appendix

North Wind and the Sun

One day, the wind and the sun had a debate on who was more capable. While they were talking, a man dressed in a thick black coat came along.

So they decided to see who was capable to undress the man with the black thick coat.

The wind started first by blowing very hard. But, the harder she blew, the tighter the man held on to his coat. So the wind gave up eventually.

A while later, the sun came out and it became hot. The man quickly took off his coat. So the wind had to admit that the sun was more capable.