

**NATIONAL
ACOUSTIC LABORATORIES
COMMONWEALTH DEPARTMENT OF HEALTH**

INTERNAL REPORT 3

JANUARY 1973

HEARING AID ORIENTATION

A SUGGESTED APPROACH

**G. L. HART
& GEM**

INTERNAL REPORT 9

JANUARY 1979

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A SUGGESTED APPROACH

G. L. PLANT

R. CHEW

INTRODUCTION

This booklet is a revision of the NAL Aural Rehabilitation Course issued in 1975. It is a series of lesson plans which should serve as a guide for audiologists in formulating their own programmes. It is of course stressed that each audiologist should devise his own programmes to suit his own capacities and style and to meet the variable needs of the client population with which he is dealing.

The Hearing Aid Orientation Course has been designed with the great majority of our clients in mind. Most adult clients, whether new or experienced aid users, are expected to benefit from such a course provided they see the course as part of the over-all fitting programme and provided that the course proposals and presentation reflect the enthusiasm and professionalism that is necessary on our part.

The Hearing Aid Orientation Course is part of the fitting process and should not be seen as something entirely separate and divorced from fitting. Because of this by the time clients attend the Hearing Aid Orientation Course they will realise, as a result of contact through appointment making, assessment and fitting appointment, that the course is a routine part of the overall audiological process. It is vital that clients coming to the Hearing Centre do not see NAL as simply a facility for having a hearing test, obtaining a hearing aid and nothing else. NAL's functions should be seen as extending far beyond this and this needs to be stressed to all clients.

The Hearing Aid Orientation Course aims at the development of better communication patterns in the aid user. This aim can only be achieved if the user is aware of the ramifications of his hearing loss, has a realistic attitude to amplification and gains a knowledge of the steps necessary to help overcome the hearing handicap. If these aims can be accomplished the benefits for hearing aid users will rise appreciably.

G. PLANT

REHABILITATION PROGRAMMES FOR THE DEAFENED CLIENT

There is no definitive estimate of the number of deaf persons in this country, but NAL estimates hearing impairment sufficient to impede communication (3 frequency average: 500 Hz, 1 kHz, 2kHz: exceeding 25 dB) runs to approximately 4% of the population. The figure which can be quoted with confidence is that for children in whom the incidence of deafness was found to be 2.544 per 1,000 live births, taking into account those children born in the period 1957-1967 who had been provided with hearing aids at the end of March 1974 (Goodall 1974). The figure for children varies depending on the years the survey was based as we find a fluctuating incidence of deafness each year, dependent on the fluctuations of the incidence of causes, particularly maternal rubells which in the years 1957-1967 accounted for 14.5% of all children known to have a permanent hearing handicap.

The figure arrived at by calculating 4% of the Australian population (approximately 14 million) is around 560,000 it is estimated that approximately 250,000 would benefit from hearing aid usage. The remaining number are those who although having a hearing handicap are not thought to have a severe enough loss to warrant aid usage or those with a conductive loss for whom surgery is seen as a preferable alternative. The estimate given does not include those whose loss is transitory or insignificant - U.S. estimates give this group as being approximately 2% of total population.

From these figures it becomes apparent that the congenitally deaf form a very small percentage of the hearing impaired population in Australia. Services for the congenitally deaf are relatively well established both educationally and vocationally but there exists in the community a much larger group - those with an acquired hearing loss - who with some notable exceptions receive comparatively very little assistance.

Those persons with an acquired hearing loss form a large percentage of the hearing impaired in the community. It is this group I wish to speak about, for in terms of community services and assistance available, they have lagged far behind the congenitally hearing impaired. This is not to decry the efforts of such organisations as the Australian Association for Better Hearing and the Melbourne based Hearing Education and Rehabilitation Programme as both have performed an invaluable service assisting the adventitiously deaf but are only reaching a very small percentage of those who may benefit from their assistance.

Many people with acquired hearing losses seek the services of ANL every year. These persons are eligible for NAL assistance by virtue of their being Social Security pensioners with Pensioner Medical Entitlement, Repatriation pensioners whose eligibility is determined by the Repatriation Department, Australian Government Compensation cases who require aids and serving members of the Australian Armed Forces whose eligibility is determined by Medical Officer of the Service. In the period 1974-75 the following number of hearing aids were fitted in the respective categories (see Figure 1).

Cal aids Fitted 1974-1975

Children	4,154
Pensioners	15,286
Repatriation	4,097
Armed Forces (serving)	23
Federal Departments	60
	<hr/>
	23,620
	<hr/>

Figure (i) (National Acoustic Laboratories Annual Report 1974-1975)

It can thus be seen that persons with acquired hearing losses form a large percentage (in the last financial year 82.4%) of clients fitted with Cal aids.

The adventitiously deaf present special problems very different from those with a congenital loss. Most have had normal hearing for the greater part of their lives and have acquired their hearing loss through presbycusis (hearing loss due to age), continued exposure to noise or through accident, injury or illness. Hearing aids are fitted to all clients who it is felt would benefit from aid usage but the mere fitting of the aid is not enough - it is only the beginning of a lengthy process.

The period immediately following the fitting of the aid is most critical if the client is to obtain optimum benefit from aid usage. To quote Dr. Ewertson, Director, State Hearing Aid Centre of Copenhagen:

"If a man is drowning you just don't throw him a life jacket and allow him to struggle by himself. You throw him a life line, bring him to safety, nourish, clothe and sustain him until he has returned to his former self" (Ewertson 1974).

The majority of hearing aid candidates today are those with sensorineural losses. The amount of help that a hearing aid may give these candidates varies greatly and cannot be predicted on the basis of the audiogram or even from the results of speech testing. Adjustment to the now amplified sound patterns may extend into prolonged periods of time - months or even years. Far too many hearing impaired persons are disillusioned when after initial trial they learn that the hearing aid cannot restore their hearing to 'normal'. Many stop wearing their hearing aids altogether.

This problem is most marked among those persons with mild to moderate hearing losses. This group forms a large percentage of those people fitted with hearing aids by NAL. New techniques now enable Audiologists to fit persons in this category with hearing aids. This clientele has created a new problem for the motivation of such persons to put up with the problems of aid usage is not as high as for those with severe hearing losses. There is an unfortunate tendency among this group to reject hearing aids when they do not immediately fulfill their often unrealistic expectations. This is possible because as a result of the nature and extent of their hearing loss, these people can 'get by' without a hearing aid in most situations but the result is a down grading of communication skills.

There are also other problems which can lead to non acceptance of hearing aid usage. Few people at the time of their first contact with an Audiologist have completely accepted their hearing loss or are strongly motivated to accept a hearing aid. Anxieties and fears are almost always present and successful rehabilitation programmes hinge on the reduction of such anxieties in the new user. Several factors based largely on ignorance or mis-information are major sources of anxiety.

Among these is the often perceived public attitude associating hearing loss in the aged with senility, eccentricity and even stupidity. The tendency to see deafness as an all-or-nothing phenomenon is also often present. There also exists the tendency to see their hearing loss relentlessly progressing to total deafness. This overall lack of knowledge concerning hearing impairment may make the deaf person over-estimate the severity of his hearing loss. There is also the group - albeit relatively small - whose family and friends have been compensating for their loss by increasing their speech level, speaking at close range and in other ways making adjustments to assist the individual. They may feel a hearing aid is not necessary for they are coping adequately. This however is an unsatisfactory state of affairs, as the compensations required to be made may in fact lead to the family members only speaking when it is absolutely essential. General informal conversation may not be carried on at all.

These then are some of the problems facing the new hearing aid user. A feeling of frustration may exist which could lead to total rejection of the hearing aid. This is obviously unsatisfactory both for the client and the dispensing agency.

It has become apparent that what this group needs more than anything else is positive reinforcement in the form of maximum encouragement and confidence which comes from a knowledge and training in the use of the prosthesis and in maximising the skills necessary to hear and listen under diverse and adverse conditions. NAL has recognised the great need for programmes to be formalised and expanded to assist this group through the very difficult post hearing aid fitting period.

The programme in this booklet attempts to overcome many of the areas causing most anxiety for our clients. Consisting of four 1 hour sessions it covers the nature of hearing loss and its effects on the auditory functioning of the client, guide to the optimum use of hearing aids and other devices such as telephone aids, alarm clocks for the hearing impaired etc., visual communication for the hard of hearing and a session for members of the client's family in which it is explained how they can help overcome the hearing handicap. Each session also includes some time devoted to a discussion of "hearing tactics". Hearing tactics are the various ways in which hearing impaired people get over the many contact and communications problems they experience. They include such areas as seating arrangements, the best positioning for optimum communicative cues and the great need to ensure others are aware of the hearing problem and compensate accordingly.

These programmes utilise teaching skills which are both specialised and unique. The process is not only one of education in the use of hearing aids but also one of re-educating the user in communication skills. Many of our clients have developed habits which are detrimental to their communicative skill and need to be overcome if real advantage is to be gained from the hearing aid.

The sessions are designed to be taken with groups of around ten

felt that the client gains a great deal from group participation in that it provides the hearing impaired individual with an opportunity to see his problems are shared by other individuals with the same disability. Much can also be gained from a mutual sharing of experiences and this is an area stressed in the programme. Much of the early work on Hearing Tactics (von der Lieth 1972, 1973) was done through the distribution of questionnaires sent to hearing impaired persons in Denmark, asking them about their kind of problems and how they were able to compensate for their loss. This material became the basis for a manual called "Hearing Tactics". The obvious value to be gained from this mutual sharing of information has been shown to be most beneficial and is actively encouraged in the programme.

It is thought that of the total adult case load attending NAL, a large percentage will require this specialised rehabilitation procedure described before, following the fitting of a hearing aid. The fears and anxieties created by a hearing loss need to be overcome to ensure clients are using their hearing aids to the fullest advantage. Many clients neither need nor desire these programmes but for many they will provide the necessary phasing-in period for hearing aid usage.

A smaller percentage may require additional assistance in the more specialised areas of communication therapy. This may take the form of therapy sessions in speech reading, auditory training, speech conservation and fine auditory discrimination. Meaningful aural rehabilitation needs to integrate all these areas in order to ensure it is perceived as having bearing on the client's normal day to day communication patterns. If the clients are felt to require extensive long term assistance it may be better for them to attend organisations such as LAMB or HEAR where such programmes already exist. For the majority though it is felt only an initial fitting programme is needed. Most clients do not require long term assistance but only a programme to help them through the difficult period immediately following aid fitting.

This has been a very short resume of the problems confronting the deafened members of our community. NAL has recognised these problems and is currently implementing post aid fitting procedures for these people. Much further work has still to be done but it is hoped the programmes envisaged will be of great help to many of the hearing impaired seeking NAL's services.

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SUGGESTIONS FOR APPROACHES TO HEARING EDUCATION CLASSES

ROBIN CHEW

N.A.L. SYDNEY

INTRODUCTION

This handout has not been devised as a prescription to be strictly adhered to. It is merely intended to provide a few ideas for those audiologists planning classes and to suggest a few possible pitfalls, based on the experiences of those who have organised classes in the past.

With any classes, the formats and approaches need to be expanded and modified to suit both the individual audiologist and the group of individuals attending the classes. Thus, the following are merely suggestions which it is hoped may be of some benefit to those who have not organised classes before, suggestions which may be accepted or modified depending on the audiologist concerned and his subsequent experiences in running the classes.

Information on the actual content and format of the sessions is readily available in this booklet, compiled by Geoff Plant. This format can be adapted, depending on the individual audiologist, the group and the number of sessions available for the course. Thus, the emphasis of this article is on the approach of the audiologist and the dynamics of the group, rather than upon the actual content of the course.

A. THE PSYCHOLOGIST'S APPROACH

1. Attempt to be casual and cheerful.
2. Make the patients feel that you are interested in their problems and in helping them to find possible solutions. This attitude, plus the group interactions (mentioned later) appears to lessen the patients' uneasiness about returning to the laboratories with any problems they may have after the termination of the classes.
3. Attempt to encourage the patients to relax in the group situation. Introduce the members of the group to each other. Maybe you can find some excuse to leave the group alone for a few minutes before the first session begins, allowing the patients to talk among themselves and to get to know each other a little. If the group as a whole is reasonably relaxed, patients may feel less uneasy about stimulating and/or contributing to discussions about their hearing losses and aid usage.
4. Encourage the patients to feel that the classes are an essential part of the procedure involved in obtaining a hearing aid; that understanding the aid, its limitations and possible solutions to these limitations, is as important as being able to merely manipulate the aid.

5. Always be realistic but positive. Make the patients aware of the limitations of their hearing aids but avoid sounding so negative as to cause the patients to become depressed and discouraged from attending further courses. This is particularly important in the first session. One way of being positive is to attempt, as far as possible, to offer a suggested solution for every problem that is discussed. Also, stress that the course is designed to help the patient to communicate more effectively in places where the hearing aid is of little or no help, not just to highlight the limitations of the aid and the difficulties associated with a hearing loss. One can also anticipate the positive material in following sessions; for example, at the end of Session 1, one can introduce the concept of visual communication in a positive manner. At the same time, avoid being unrealistic or overoptimistic as this may only result in disappointment on the part of the patient. As an example: one needs to stress that speechreading is a complement to the hearing aid, not a solution to its limitations.
6. Ensure that your manner of presentation enables all the members of the group to understand you clearly.
 - a. Observe the patients' responses at first. If anyone seems to have difficulty following you, rearrange the seating to give that person the maximum opportunity of observing you - this rearrangement of seating can be performed in such a way as to provide an illustration of the way patients should think about seating in meetings, etc. Occasionally a patient will experience considerable difficulty following what is said despite rearrangement of seating, often as a result of very poor speech discrimination. With these patients it is advisable to speak to them after the session and to arrange individual follow-up sessions for them.
 - b. Ensure that everyone, not just patients experiencing difficulty, can observe your face and gestures. If the group is of a suitable size, the audiologist can sit in the centre of a loose semi-circle of patients - this seems to provide optimal viewing conditions for most of the patients.
 - c. Project your voice.
 - d. Speak slowly and clearly, without exaggerating.
 - e. Encourage patients to let you know if they cannot hear you and/or to change their seating positions to enable optimal communication. This provides the patients with practice in actively manipulating the listening situation for their own benefit, something they should be encouraged to do throughout the course.

- f. Avoid using technical language, as this appears to confuse and worry some of the patients. Technical terms can be used if some group members are alert and interested enough - but ensure that these terms are accompanied by clear explanations in layman's terms, and stress to the group that the terminology used is of no importance and does not need to be remembered. Homophenes are a good example - all that matters is that the patients grasp the idea that some sounds appear alike on the lips; they do not need to know the definition of a "homophene".
7. Use visual aids as often as possible. This prevents the sessions becoming boring and tedious and also promotes clearer explanations of various concepts. Transparencies and slides have been prepared for this purpose. The audiologist may wish to supplement these by preparing slides and transparencies of his own, or by obtaining films or videotapes. Also, writing key words and phrases using the overhead projector or a blackboard is often helpful, especially if members of the group suffer from poor speech discrimination.

B. GROUP INTERACTION

As social isolation appears to be one of the most distressing aspects of deafness, it is felt that the interactions of the group during the classes is quite important. The audiologist needs to recognise the importance of, and to encourage whenever possible, group interaction. The classes perform an important function, not just as a means of disseminating information about hearing losses, but also as a social occasion during which patients feel free to approach each other, and the audiologist, and to share and discuss mutual problems and possible solutions.

There are various ways in which individuals may be encouraged to feel part of a group and thus to participate more actively in the classes and, hopefully, to gain more emotional support from the group as a whole.

1. The audiologist, rather than merely lecturing the group, may encourage the members to discuss individual problems or to provide personal illustrations of points being discussed. This discussion of individual problems appears to stimulate mutual support among group members and also appears to increase awareness of individuals that certain problems are shared, and thus to diminish the fear or apprehension many individuals appear to have about problems common to the hard of hearing. Though realising that others share a problem does not necessarily solve the problem in question, (for example, recruitment, background noises) patients seem to gain some comfort from knowing that they are not alone.

2. To some extent the format of the classes can be moulded to group reactions. That is, rather than strictly adhering to a prescribed format, the audiologist can deal with topics introduced by patients in such a way as to provide adequate coverage of the areas considered relevant. However, one needs to have some notion of what material needs to be covered in any one session in order to avoid being completely sidetracked by patient's queries. Also one needs to know when to interrupt class discussion and to steer issues being discussed back to what is relevant. For example, groups often contain at least one individual who will persistently interrupt with irrelevant, and often repetitious, comments and questions.
3. Encourage active participation in the classes by the group members. For example, rather than merely providing a list of hearing tactics for various situations, ask group members to a) suggest areas where they experience difficulties and b) to suggest and/or discuss possible solutions. This serves the dual purpose of making patients actively think about ways of organising the listening environment and of encouraging them to share their own solutions (some of which are quite original and effective).
4. The audiologist may like to encourage the members of the class to form their own groups once the classes terminate or to keep in contact with each other, thus sustaining the group support initiated during the classes. For example, patients could form drama groups or telephone each other regularly. Or maybe one member of the group may be qualified and willing to install loop systems for others.
5. In reference to group interaction, it is important to encourage patients to persuade family members and friends to accompany them to the classes. In this way, some of the understanding and support gained during the classes may be extended into the home situation. It seems that it must be stressed that the classes are intended for family and friends as well as for patients, as patients frequently state that they are unaware of this. On the occasions when family members and friends have attended, they appear to have gained a much greater understanding of the patient's difficulties in communicating and they also appear to have been far more willing to assist in attempting to overcome or at least alleviate these difficulties.

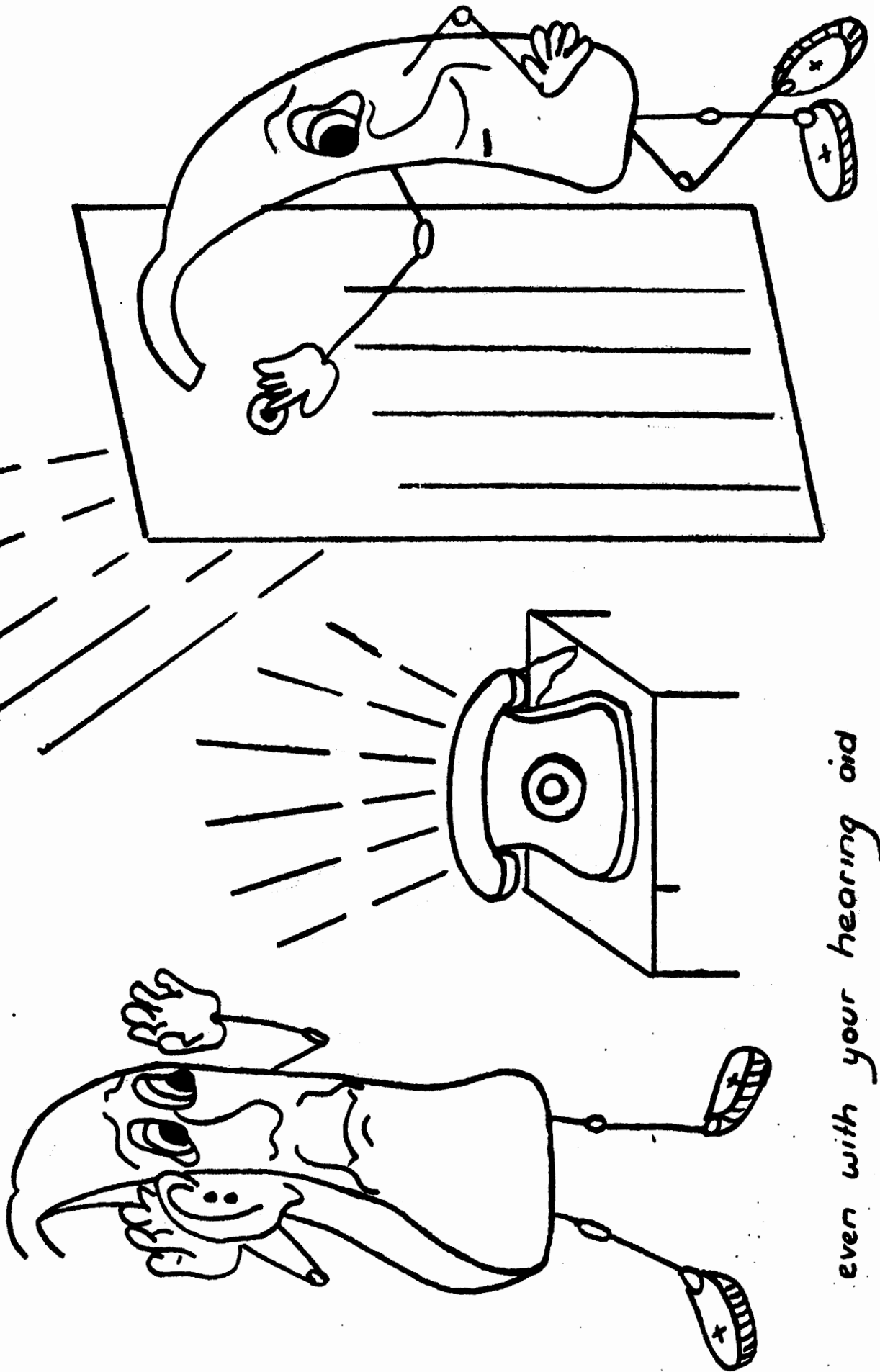
C. OTHER FACTORS

1. Throughout the course stress the need and possibility for the hard of hearing person to be active in changing and organising his listening environment to enable optimal understanding of what is being communicated. As frequently as possible, stress tactics that can be used to foster more effective communication. The patient should be able

but also with an awareness of what he can do to enable himself to understand what is being communicated most effectively. For example, he should not only be aware of why he cannot hear in meetings, but should have some ideas regarding what he can do to enable himself to hear as much as possible of what is being discussed (e.g. find out in advance as much as possible about the topics to be discussed, or position himself appropriately).

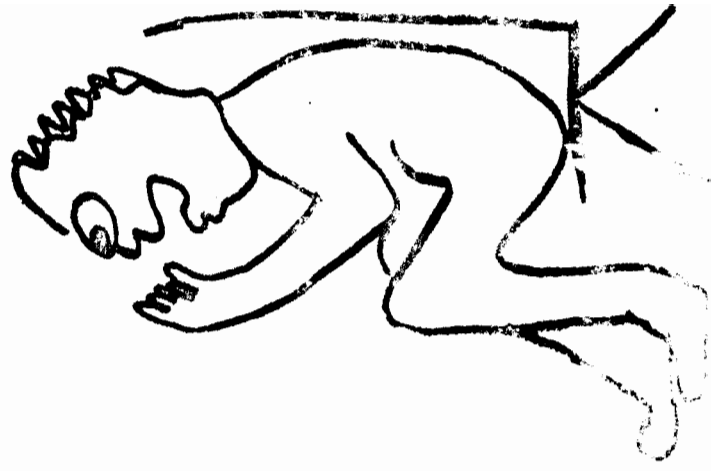
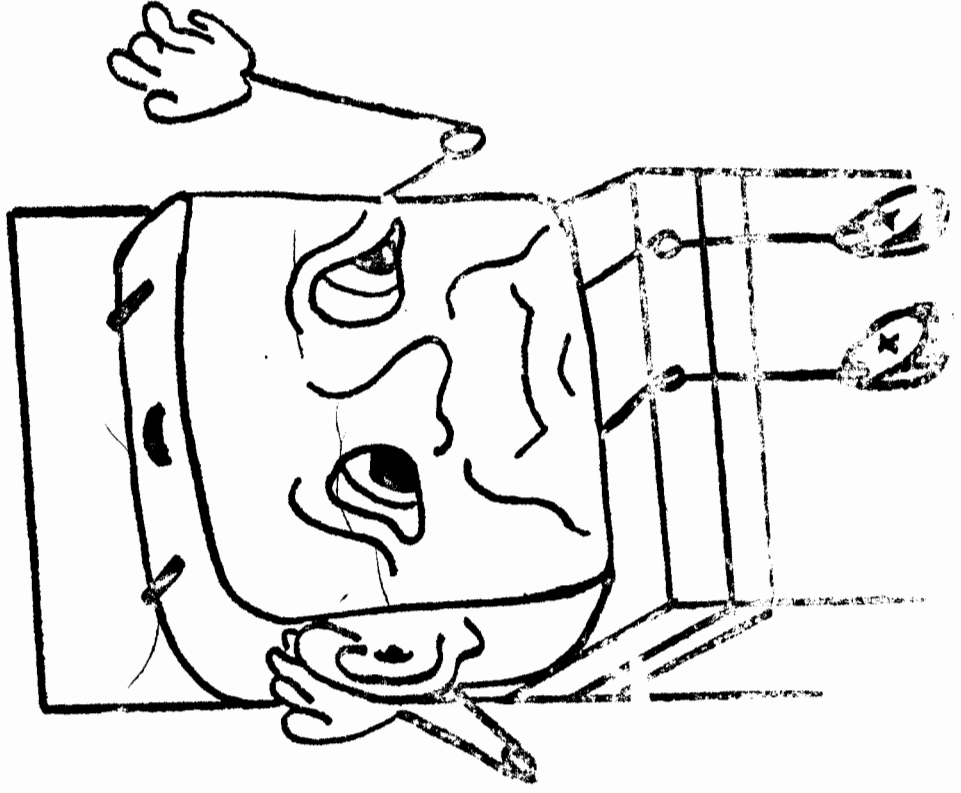
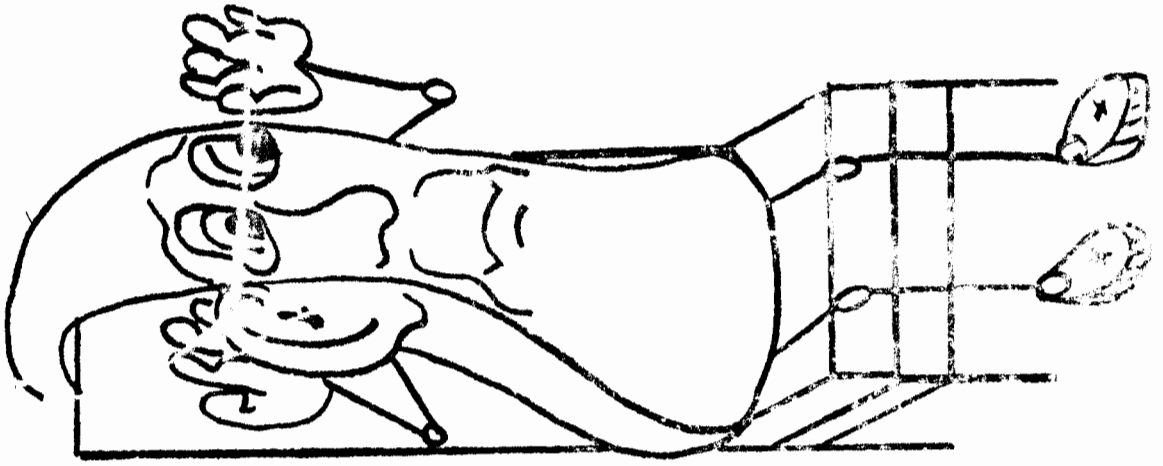
2. Therefore, throughout the course, one should emphasise not only the problems of deafness and their causes, but also possible courses of action that might alleviate the problems. It is realised that there are no effective solutions to many of the problems experienced by the hard of hearing, but it is felt that this approach serves two purposes. Firstly, an audiologist employing this approach is less likely to fall into the trap of merely listing difficulties and their causes, failing to offer any constructive suggestions throughout the course. Secondly, by continually examining problems in an effort to provide solutions, the audiologist may encourage patients to use the same approach in everyday situations, that is, instead of merely accepting that a certain problem is associated with his hearing loss, the patient will say 'Is there anything I can do to make it easier to hear in this situation?'
3. Throughout the course, attempt to link all the topics together logically. For example, in discussing hearing aids, one may anticipate the desirability of speechreading, or in discussing the symptoms of deafness (e.g. recruitment, high frequency losses) one may relate them to hearing aids and their limitations. This approach gives some continuity to the course.
4. Regarding the relaxation exercises, it is felt that whether or not these are introduced depends on the individual audiologist and upon the particular group involved in the course. It seems, from past courses, that groups are more receptive to the concept of relaxation if the subject is introduced when the topic of tension (resulting from the continual straining to hear) arises, as usually happens. In fact, some patients have pursued relaxation therapy further, and have seemed very pleased with the results. If the audiologist is to introduce the idea of relaxation therapy, it seems wise to discuss the concept with the patients in order to make it seem less awesome, as some patients may tend to associate relaxation with hypnosis. However, experiences on courses held till now seem to indicate that few patients see relaxation therapy as strange or threatening.

You have difficulty hearing the doorbell or the telephone

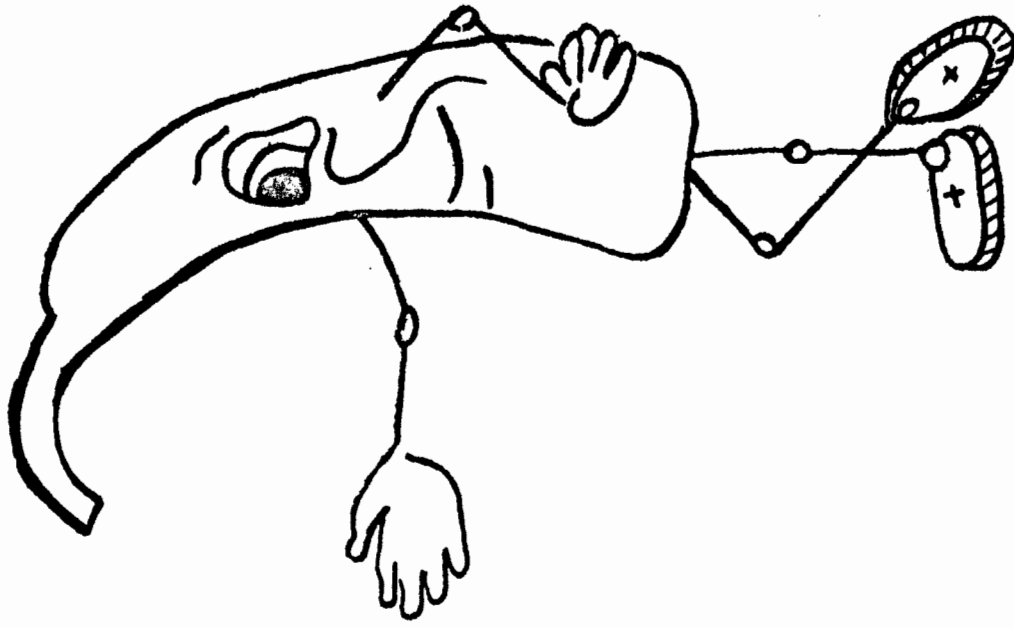
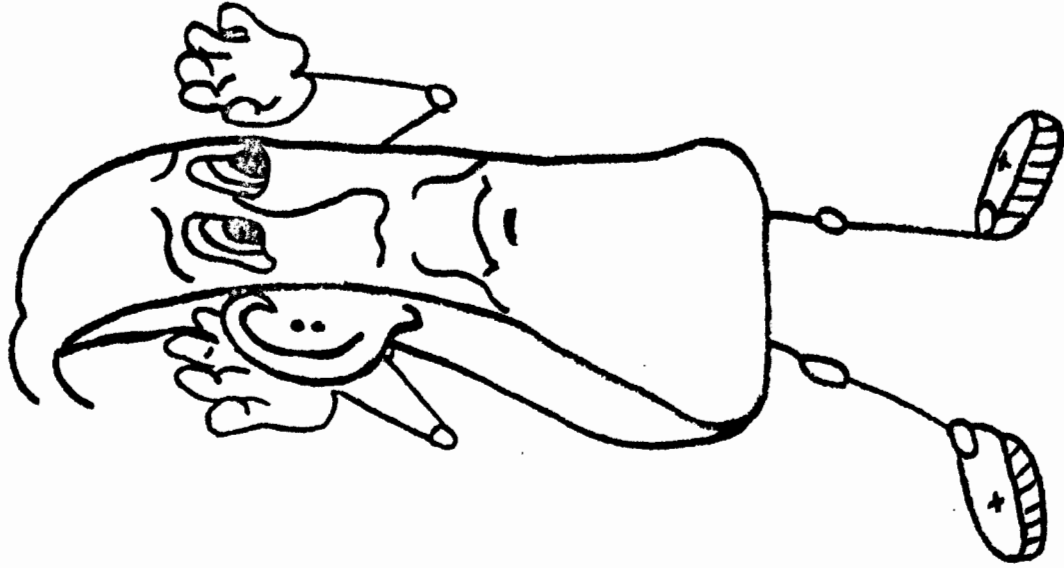
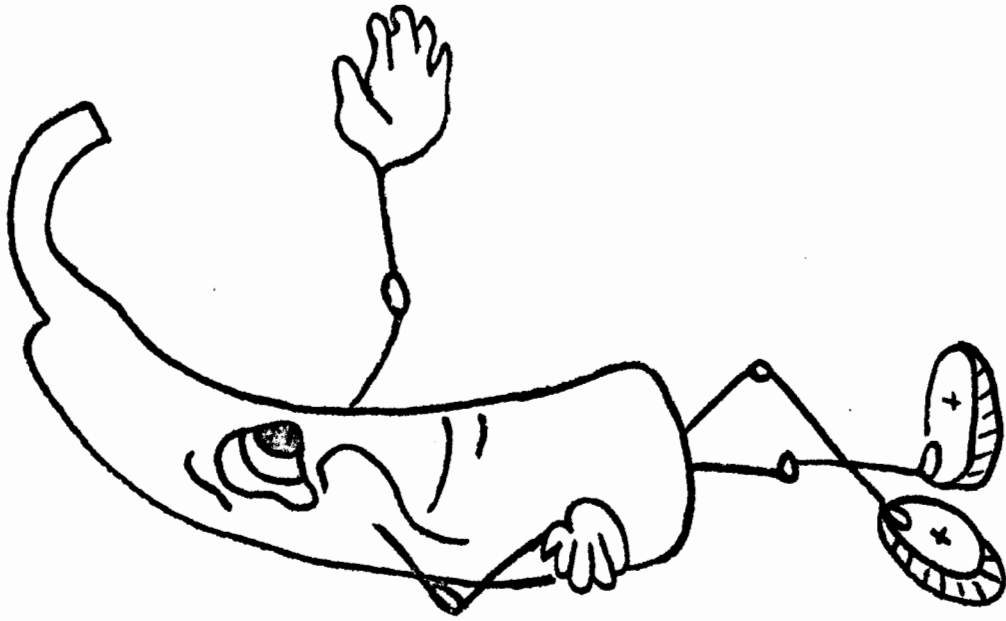


even with your hearing aid

You have a hard of hearing friend. In relative silence
problem you would like to understand and with whom
you would like to communicate more easily

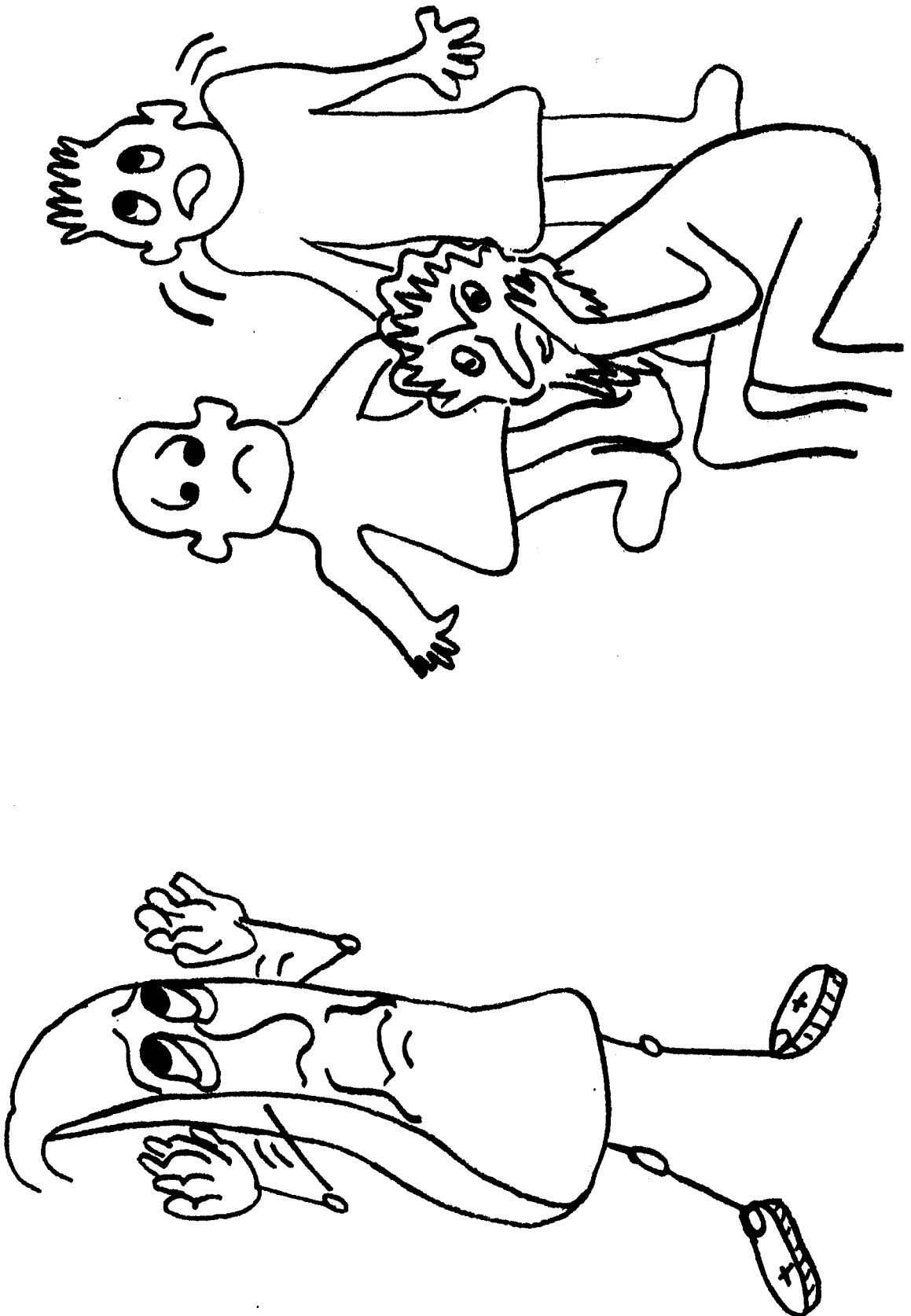


You often hear but do not understand what is being said



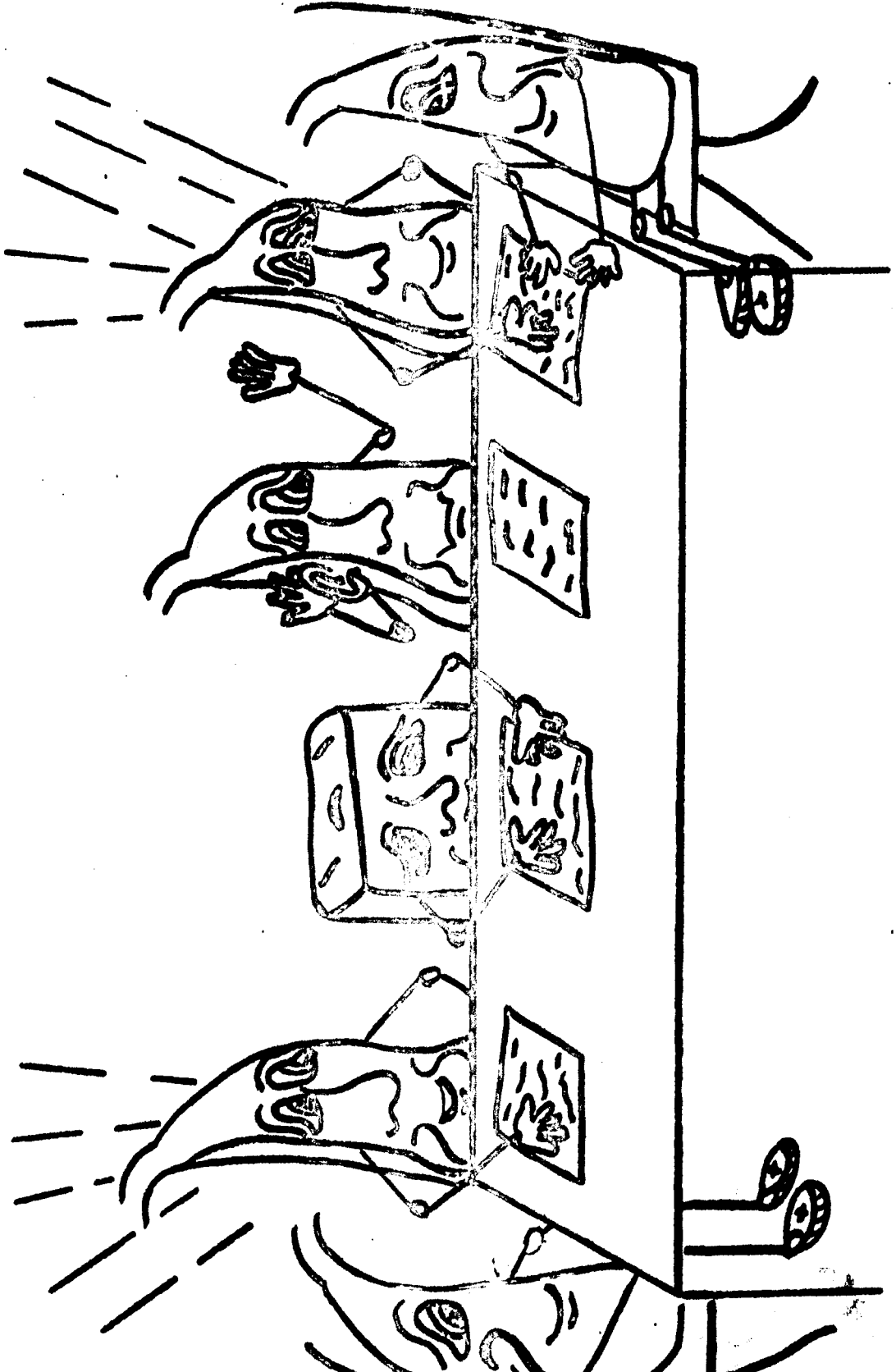
particularly when you are in a group

Family members and friends often have difficulty understanding your hearing problems and you find



it hard to explain to them

There are places in which your hearing aid is of little or no benefit eg noisy places or meetings



SESSION A

Aims:

- (i) To introduce clients to the programme and its content.
- (ii) To give clients an understanding of the process of hearing and an awareness of hearing loss, especially as it applies to themselves.
- (iii) To begin the process of fostering a realistic attitude to their hearing loss and realistic expectations concerning their hearing aid.
- (iv) To demonstrate the value of an auditory/visual approach.

Material to be covered (Please see introductory notes).

- (i) Give a brief description of the material to be covered in the sessions:
 - A. How we hear
 - B. Visual Communication for the Hearing Impaired
 - C. Hearing Aids and other Accessories for the Hearing Impaired
 - D. A Session for Family and Friends - it should be emphasised that these people are welcome at any session.

Throughout the programme there will be a short time (10-15 minutes) each week concerning Hearing Tactics - there is a section at the back of this booklet covering the topics in this area.

- (ii) Discuss 'How we hear', using a chart or overhead projection to assist in the discussion. It is important that this area is covered simply enough to ensure it is understood, encourage the clients to question to check on this. Discuss any reactions and queries.

Causes of deafness - for most clients it will be Presbycusis and it should be emphasised that the loss will not get better but progressively worse. Emphasis that this is the time to begin the patterns of adjustment necessary to overcome this as much as possible. Discuss the possibility of surgical intervention which appears to be a strong source of concern for many of our clients.

In this area you could divide the ear up into 3 sections:

- (i) outer (ii) middle (iii) inner,

and use this to describe the differences between conductive, sensorineural and mixed losses and through this explain the possibility for surgical intervention.

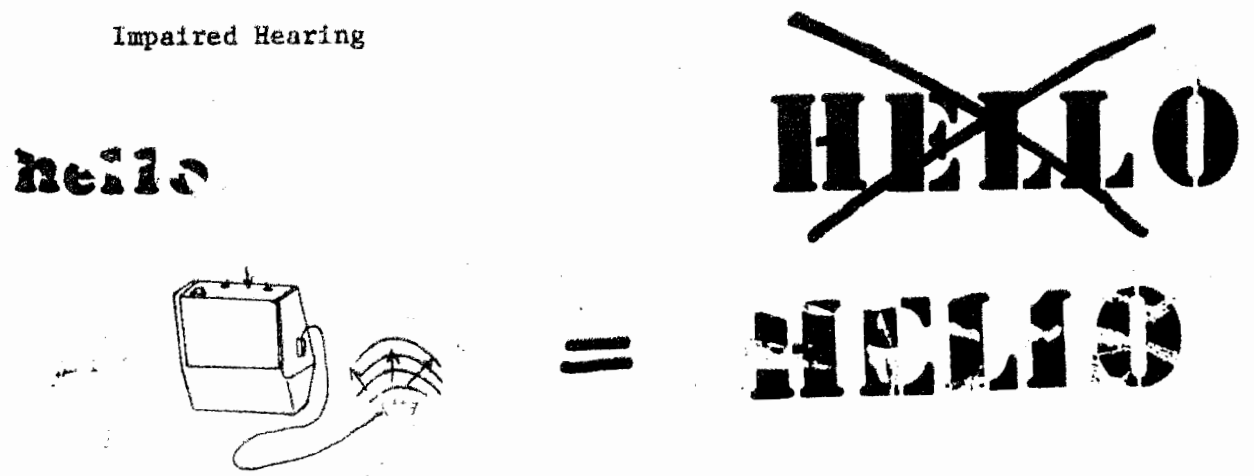
A frequent complaint of this group is that they can hear people talking but can't understand what is said and many expect a hearing aid to result in "normal" hearing. Flash cards may assist in explaining this.

Example No.1

Impaired Vision



Impaired Hearing

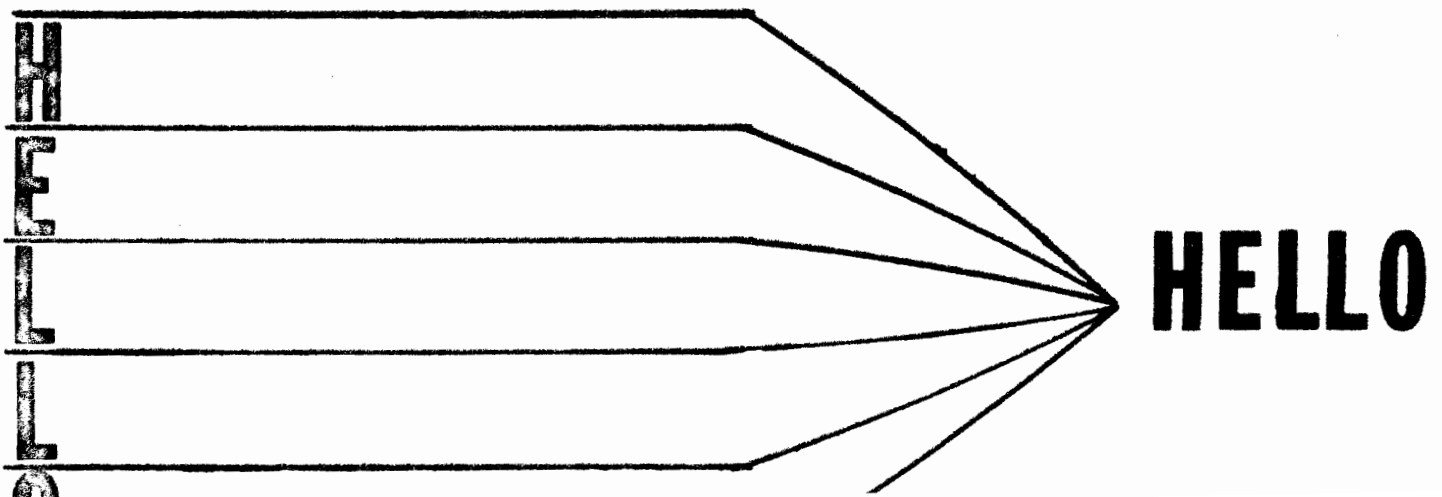


loudness may be returned
but clarity is still missing

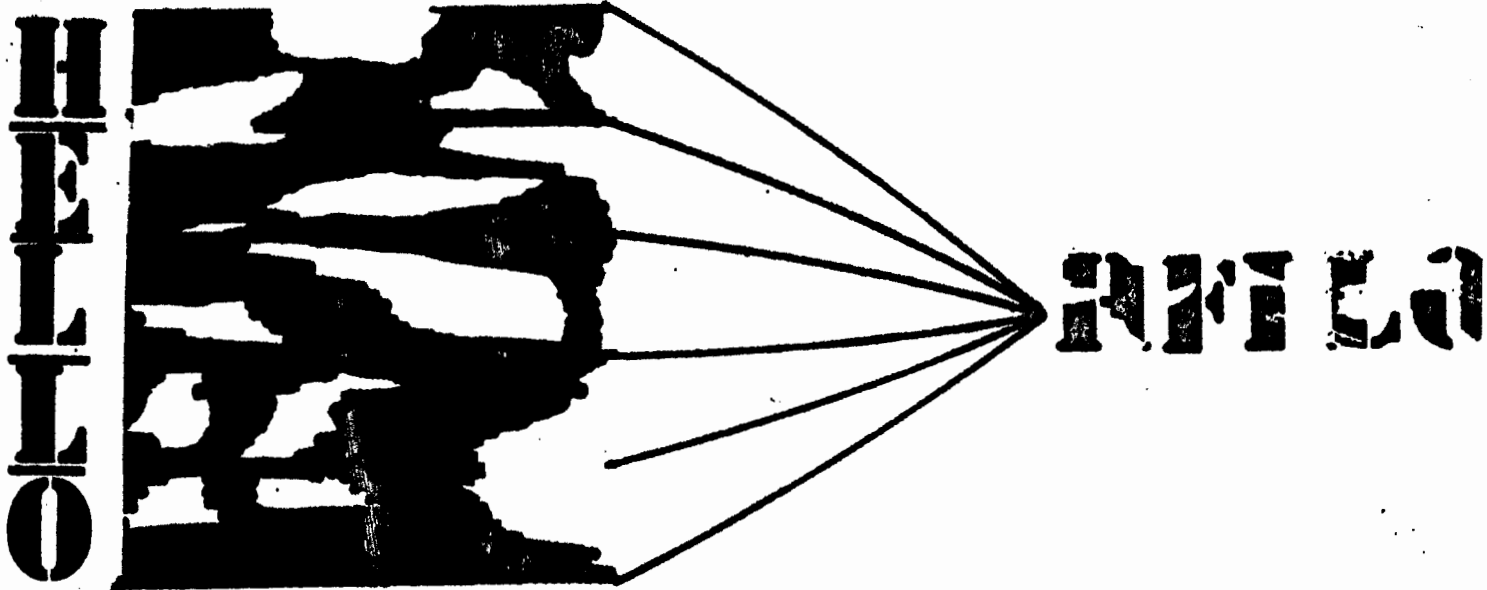
Example No.2

Analogy of telephone wires.

Each wire takes through a part of the sound of words.



If some of the wires are broken the message is distorted.



What can be done to overcome this problem?

- a) Acceptance of disability.
- b) Compensate for disability by being aware of the nature of hearing loss.
- c) Can no longer expect to be capable of engaging in rapid conversational tasks while carrying out other occupations at the same time.

STOP LOOK AND LISTEN.

The important point seems to be an integrated approach using both the eyes and ears to overcome this problem. To demonstrate the value of an integrated use a taped exercise - it is important that the tape is of the person taking the session. Present the tape through speakers at a conversational level and ask class members to write down the words they heard, making sure clients don't regard the exercise as a "test".

Next present the same words (in a different order) live voice. Show correct answers for both and compare scores. This should serve to reinforce the use of a total approach.

**LISTENING + LOOKING
= COMMUNICATION**

To show the reasons for an audio/visual approach a simple explanation of the speech spectrum may be useful. By showing the speech spectrum it is possible to show the cause of trouble with the high frequency consonants. Emphasise that these are the speech sounds most easily seen.

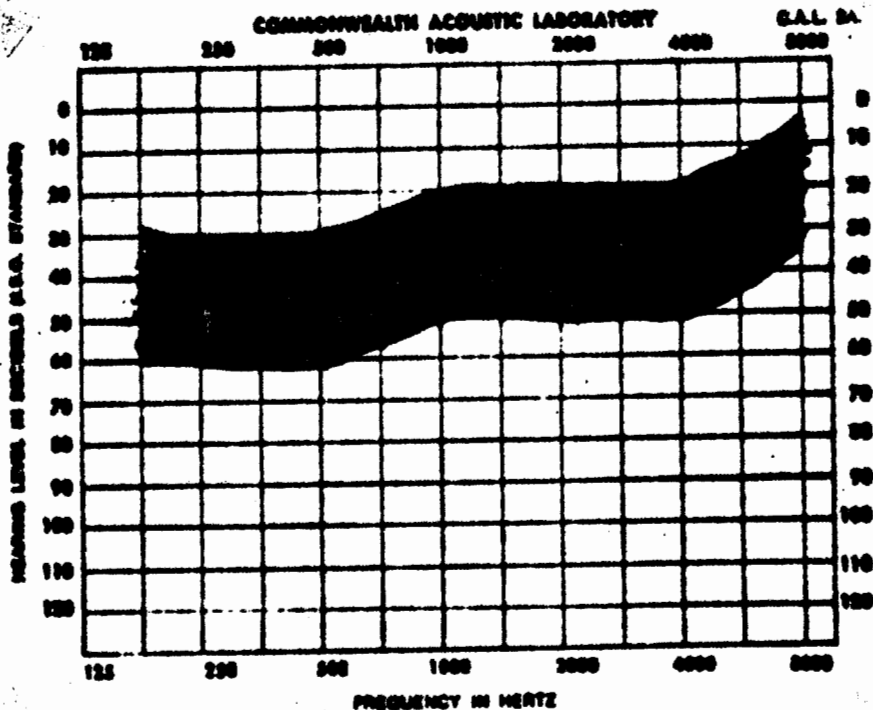
Taped exercise.

Choose approximately 12 words from this list:

- | | | | |
|----------|----------|-----------|-----------|
| 1. bark | 6. guard | 11. mark | 16. sark |
| 2. car | 7. harm | 12. nark | 17. tart |
| 3. darn | 8. jar | 13. park | 18. vast |
| 4. farce | 9. last | 14. qualm | 19. yarn |
| 5. chart | 10. bath | 15. raft | 20. shark |

Speech Spectrum

The speech spectrum shown has been converted dB re audiometric 0 and can be used to show the cause of trouble with high frequency consonants. By the use of overlays it should be possible to show the group the relation of their hearing loss to the speech spectrum. It should be emphasised that of the speech sounds the high frequency consonants are among the most easily seen.



YOUR EARS AND HOW YOU HEAR

Now that you have had your hearing impairment assessed and have been fitted with a hearing aid you are no doubt a little curious about how ears work. We will make an attempt to satisfy your curiosity.

To most people 'ears' are those adornments which stick out from the sides of the head. To those with hearing difficulties and those concerned with overcoming them, ears are much more than what can be seen on the outside. The external ear extends from the part you can see, down the ear canal and finishes at the ear drum. Not very much goes wrong with this part of the system. Occasionally people have infections in the canal and sometimes they have impacted wax blocking the canal. Some people have holes or perforations of the ear drum itself but only rarely do such conditions produce serious hearing disorders and mostly they can be overcome by medical treatment.

The next part of the ear that we come to is called the middle ear. It is an air-filled space with three tiny bones in it. Those bones, often referred to as the hammer, anvil and stirrup because of their shape, are designed to connect the ear drum, which incidently is a thin paper-like membrane, to the oval window which opens into the area which houses the tiny hearing cells. The middle ear may often be the source of the problem with many hearing impairments. Infections (otitis media), damage to the little bones, and a disease which restricts the movement of these bones and is called otosclerosis, are the main causes of loss of hearing within the middle ear. If the middle ear is the only part of the ear involved we say the person has a conductive hearing loss. Conductive hearing losses can sometimes be improved by surgical treatment and people with this type of loss usually have very good hearing for speech and other sounds through a hearing aid. They usually adjust quite easily to using a hearing aid.

Moving on, we come to the inner ear. This consists of two parts. The balance controlling mechanism and the hearing mechanism. We will concern ourselves with the latter but the close proximity of these two explains why some people with hearing problems have associated problems with loss of balance and giddiness. The hearing part of the inner ear is shaped like a snail shell. It is called the cochlea and contains large numbers of tiny nerve cells which convert sounds into electrical impulses which can travel along the auditory nerve to the brain.

These hearing cells in the cochlea are quite susceptible to damage from all sorts of things. Loud noises, especially over many years, various illnesses, some drugs and the aging process itself are probably the major causes of hearing loss in the inner ear. This type of hearing loss is referred to as sensorineural loss but is sometimes called nerve deafness. In fact, the auditory nerve and the brain are generally not involved in this type of hearing disability.

People with sensorineural hearing impairments frequently have difficulty understanding everyday speech, especially if there is any other noise around. They often complain that, while sounds are loud enough for them, they are not clear enough. Consequently hearing aids, which are amplifiers and make sounds louder, may not be able to

increase understanding of speech to the level that many people expect. Considerable time and patience may be required to adjust to an aid and to develop the ability to obtain maximum benefit from it.

Unfortunately, unlike many conductive hearing losses, sensorineural disorders are usually permanent and not able to be treated surgically. It is therefore particularly important for people with sensorineural losses to learn how to optimize the benefits of their hearing aid.

When NAL Audiologists test a person's hearing they use an instrument called an audiometer. It can carry out many operations. The basic ones are the audiometric threshold test in which you must listen for pure tones, or whistles, and the softest ones that you can hear are recorded on a form. The final graph is your particular audiogram. This tells the Audiologist the degree of your hearing loss and what type of hearing loss it is. The other test which is always administered is the speech hearing test in which you listen to lists of words or sentences and repeat what you think you hear. This test is useful in predicting the likely benefit of a hearing aid and in deciding which ear to fit. Your Acoustic Laboratory Audiologist would have discussed with you the degree and type of hearing loss you have. If there is anything more you wish to know, do not hesitate to ask when next you attend your NAL Hearing Centre.

SESSION B. Visual Communication for the Hearing Impaired.

Aims:

- (i) To introduce the concept of speechreading as opposed to lipreading.
- (ii) To make class members aware of the many aspects of visual communication and the importance of combining these to assist in communication.

Material to be Covered:

There are two major modes of communication for the hearing impaired - auditory and visual. These are present for all sighted members of the community but for the normal hearing person the visual mode is redundant in all but noisy conditions.

What is Visual Communication?

Can take many forms but for the hearing impaired includes - (i) reading; (ii) finger spelling and signing, both of these are unacceptable for most people who wish to continue communicating as they always have - orally; (iii) Lipreading. This is what most people regard as visual communication for the hearing impaired and it is true that by observing the articulators - lips, tongue and teeth - much information can be gained. There is however an unfortunate tendency for many to believe that by watching the articulators it is possible to obtain a full representation of the spoken message, this is however not true for a variety of reasons -

(a) Many of the sounds of speech are not visible on the lips, e.g. k, g. Only 1/3 of speech is visible in best conditions.

(b) Of those sounds that are visible many have one or more sounds which are identical visually, e.g. p.b.m. f.u. th th. w.wh.r. This is especially noticeable in spoken conversation, Berger has estimated that 48.8% of all words used in everyday conversation have at least one other word which is identical visually.

(c) Success in lipreading is much more dependent on speaker co-operation than is auditory communication. For example speakers who mumble, wave hands in front of their face, look down when speaking etc. are much harder to understand than the speaker who speaks clearly and distinctly.

(d) Speechreading is a "straightline sense" which obviously cannot be used except when the speaker is visible.

It must be remembered that there are many people who communicate very effectively by lipreading. This is possible because:

- (i) up to 50% of spoken English is redundant;
- (ii) by the use of context - many homophonous words and words not fully visible can be predicted by the semantic rules available in the portion of the message that was understood;
- (iii) Usually some conscious or subconscious knowledge of the relative frequency which certain sounds or words are used.

These factors are inter-related to a certain extent.

There are however many other visual clues available to supplement lipreading in order to gain as much of the message as possible.

Contextual cues originate from:

1. Gestures. These can be made with any part of the body but most involve the use of the head, shoulders, arms and hands. Some gestures can stand by themselves requiring no verbal content to express the message - e.g. beckoning finger for 'come', shrugging shoulders for 'don't know' etc. - but for the most part they accompany speech.

"Gestures are used to illustrate, to emphasize, to point, to explain or to interrupt; therefore they cannot be isolated from the verbal components of speech"

Roesch & Kees.

'Nonverbal Communication'.

The gestures serve to augment the spoken message in some way and may be very useful in gaining understanding of the message.

2. Facial Expressions. May be considered to be a special class of gestures. The number of facial expressions is limited and at a minimum offer clues to the psychological state of the speaker and his opinion of the subject matter.
3. Expression of Eyes. Like facial expressions can give some idea of how a speaker feels and their reaction to subject matter under discussion.
4. Posture. May furnish some information as to speaker's physical state - tired, interested, bored etc.
5. The physical environment in which the message is communicated.

"We know what the person will do when he begins to walk towards the pulpit in the middle of the penultimate hymn or what the traveller will do when he enters the doors of the hotel because we know the conventions regulating church service and staying at hotels"

R.S. Peters

'The Concept of Motivations'

These same conventions also regulate the conversations of people and quite often the message can be predicted as a result of the physical environment.

6. The general appearance of the speaker, including his build, his age, and his type of dress may also offer some contextual cues.
7. Object Association. "Activities such as a person taking a wallet from his pocket, opening it, and removing three dollars, provide information against which we interpret the spoken message"

Derek Sanders.
'Aural Rehabilitation'

It is obvious that none of the above areas by themselves can provide an adequate form of communication but used in conjunction with and as a supplement to lipreading they may serve to enhance the communicative process. In order to avoid the focusing of all attentions on just one area it is wise to stress that the process involves the use of all cues, it is 'speechreading' utilizing all these cues not lipreading.

Suggested Outline for Session 2. (Slides available).

1. Visual Communication - takes many forms: writing
fingerspelling and
signing
lipreading.
2. Lipreading: more than just lips - tongue and teeth.
Not a perfect replication of spoken English
 - (i) some sounds not visible
 - (ii) many sounds look the same
 - (iii) more dependent on speaker co-operation
 - (iv) straightline sense.
Overcome to a degree by
 - (i) redundancy
 - (ii) context
 - (iii) unconscious and conscious knowledge of relative frequency of use.

Other visual clues:

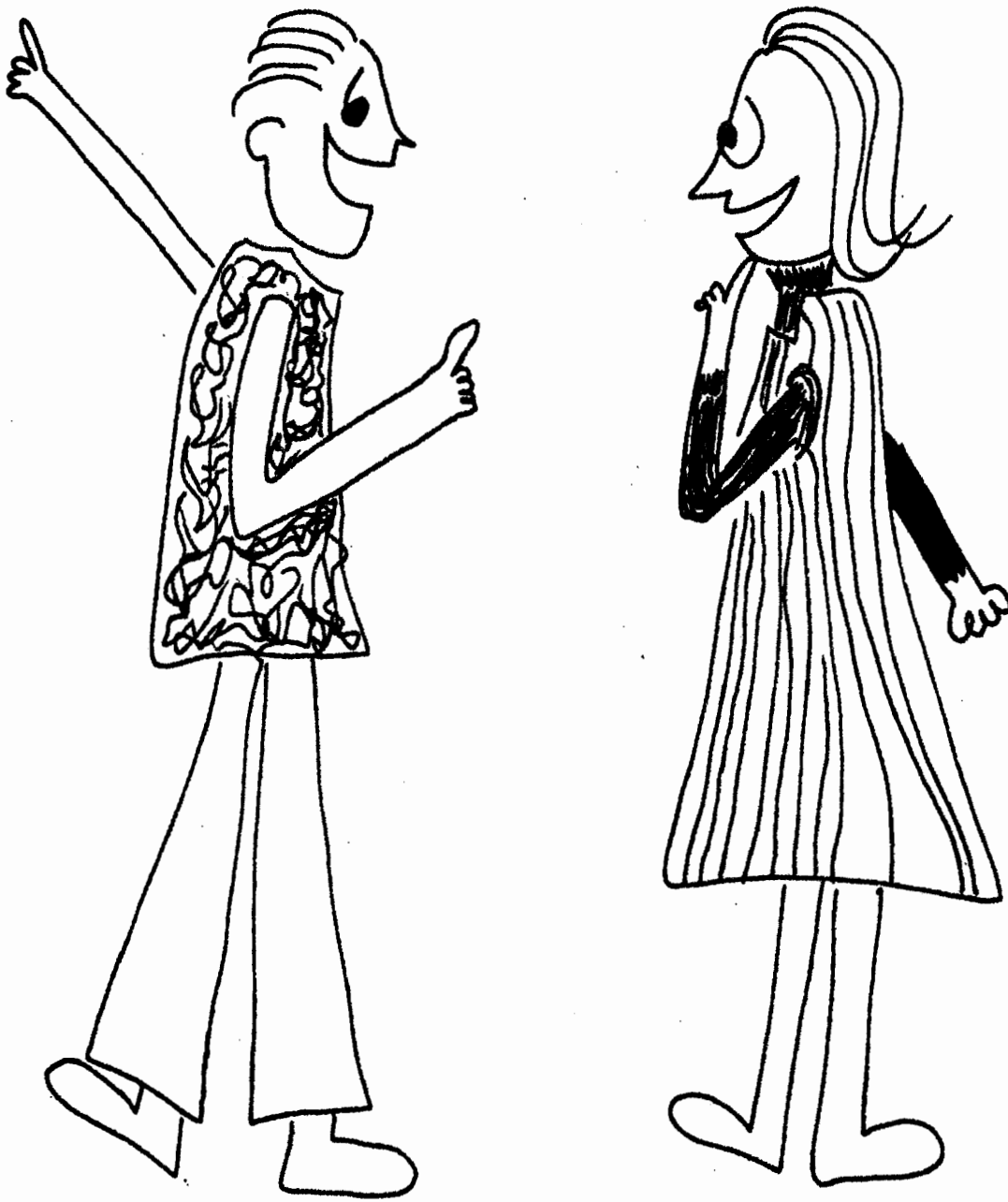
3. Facial expressions.
4. Expressions of eyes.
5. Gestures.
6. Posture.
7. Appearance of speaker.

8. Physical Environment.

9. Object Association.

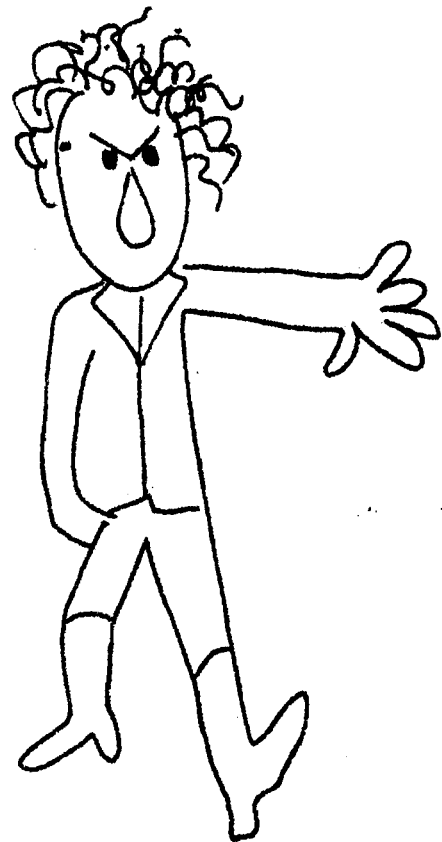
Conclusion

The session should be concluded with a brief summary of the topics covered bringing them all into the heading 'speechreading'. Stress that none of the sub-sections of visual communication can exist by itself but needs the others to ensure the reception of as much of the message as possible. This in turn has to be supplemented by the auditory signal in the case of persons with severer losses while the auditory signal benefits from visual supplements in the case of moderate losses.

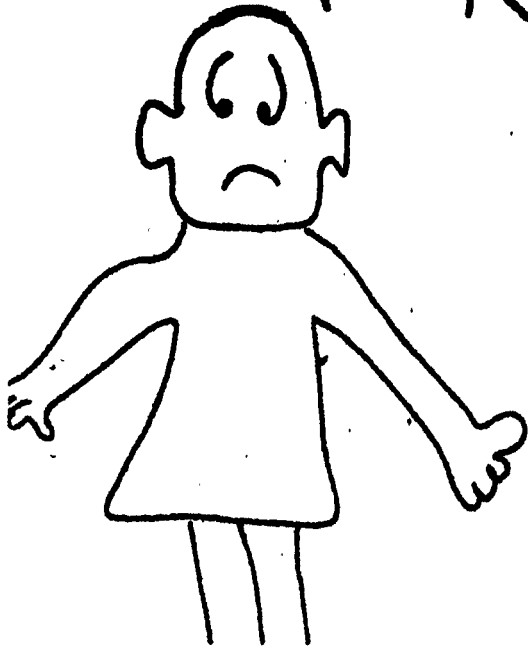
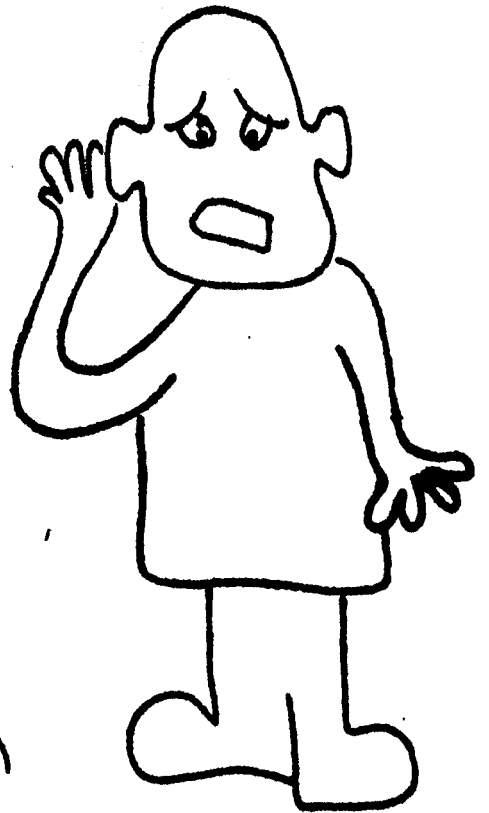


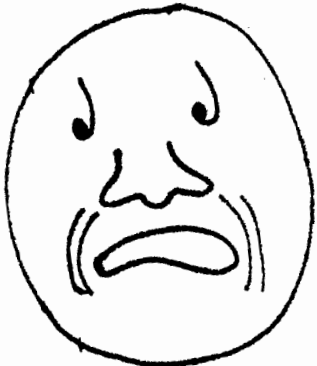
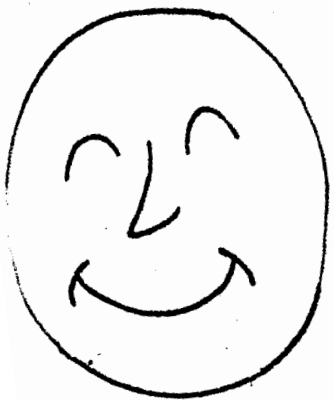
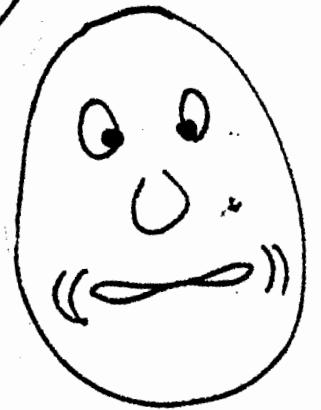
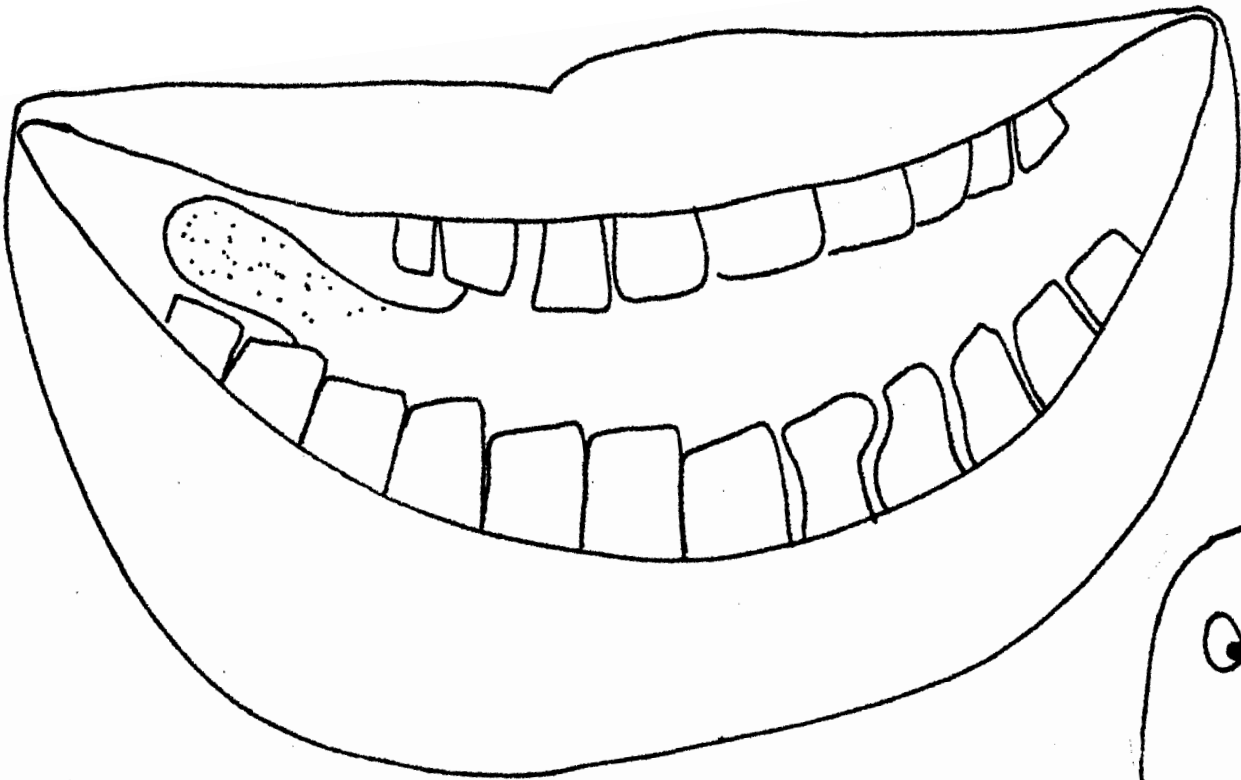
communication

POSTURES



GESTURES





SPEECHREADING

This section tells you how your eyes can help you to communicate more effectively. To most people this means only one thing, lipreading. But there are other ways hearing impaired people may use their eyes to communicate. Some people rely on notes written to them but that isn't much of an answer. It's a very slow method of "talking" to someone and can make communication boring and lead to people not wanting to talk to the hearing impaired person.

People who have been deaf all their lives sometimes "talk with their hands". I'm sure you've seen deaf people signing and spelling on their fingers. It's a good method of communication but it's probably not right for your needs. Most, if not all, of your family probably have normal hearing and want to communicate with you using the same ways they always have and this means speaking. So what you have to do is learn to use both your eyes and ears when you are talking with someone. This is speechreading.

Your hearing aids provide you with a lot of assistance but even so there will usually be some distortion and some gaps in what you hear. You have to find some way to fill in these gaps. The way most hearing impaired people adapt is speechreading.

But isn't that the same as lipreading?

Speechreading means a lot more than just "lipreading". Lipreading is a bad term because it seems to indicate that all you have to do to overcome communication problems is watch the lips. There is, of course, much to be gained from the lips but there

are also many other clues - which are all used in true speechreading.

One thing you have to remember is that except for a few very exceptional people, lipreading is a very imperfect way of communication. Only about $\frac{1}{3}$ rd of what is said can be seen on the lips. Some speech sounds, such as k.g. and ng, are invisible because the movements we use to make them are on the back of the mouth. Others such as p,b,m, and f,v, are easily seen but create problems because so many of them look the same. For example, say the following while looking in a mirror, park, bark, mark, Do they sound the same, do they look the same? Now try these fast, vast and way, ray, again, do some of these look the same.

Another problem is that many people worry that people will think they are staring at them. This is especially true if you fix your eyes rigidly on a person's lips. If you can relax and just look naturally at the whole person, not just the lips, you'll find it's a lot easier. At first, like all new things, this will be difficult but if you practice it will become second nature to you. Remember you need to watch, as well as listen now. Lastly you need to remember that most people prefer you to look at them when they are speaking, - it's not only more comfortable and natural it is also good manners.

You mustn't be discouraged by the limitations of lipreading, for when you use your hearing aid and your eyes together, both will help each other to sort out the message. Most people tend to say "but I can't lipread", but just think, isn't it always easier to understand someone if you can see them? Many people also tell us they hear better with their glasses on!

We've already said that there's more to using your eyes than lipreading, so, what else is there? How can you tell if

someone is happy, sad or angry? Usually you only have to look at their face. Watching for facial expressions is a very important clue. And what about their eyes - they can give you clues as well. Even if you only know how someone feels about what is being discussed you will find it a great help.

Other clues can be found in gestures. If someone shakes or nods their head you know they mean no and yes. There are other common gestures such as shrugging the shoulders ("I don't know") or beckoning with your finger ("come here"). I'm sure you know many others which have a definite meaning. Other gestures have no meaning but serve to point out the important parts of what is being said. All these are good clues to understanding communication and are certainly more than just lipreading.

Look at the way people sit and you can tell if they are bored, interested, tired or nervous. Even the clothes people wear can sometimes help you to understand a little more of what is being said.

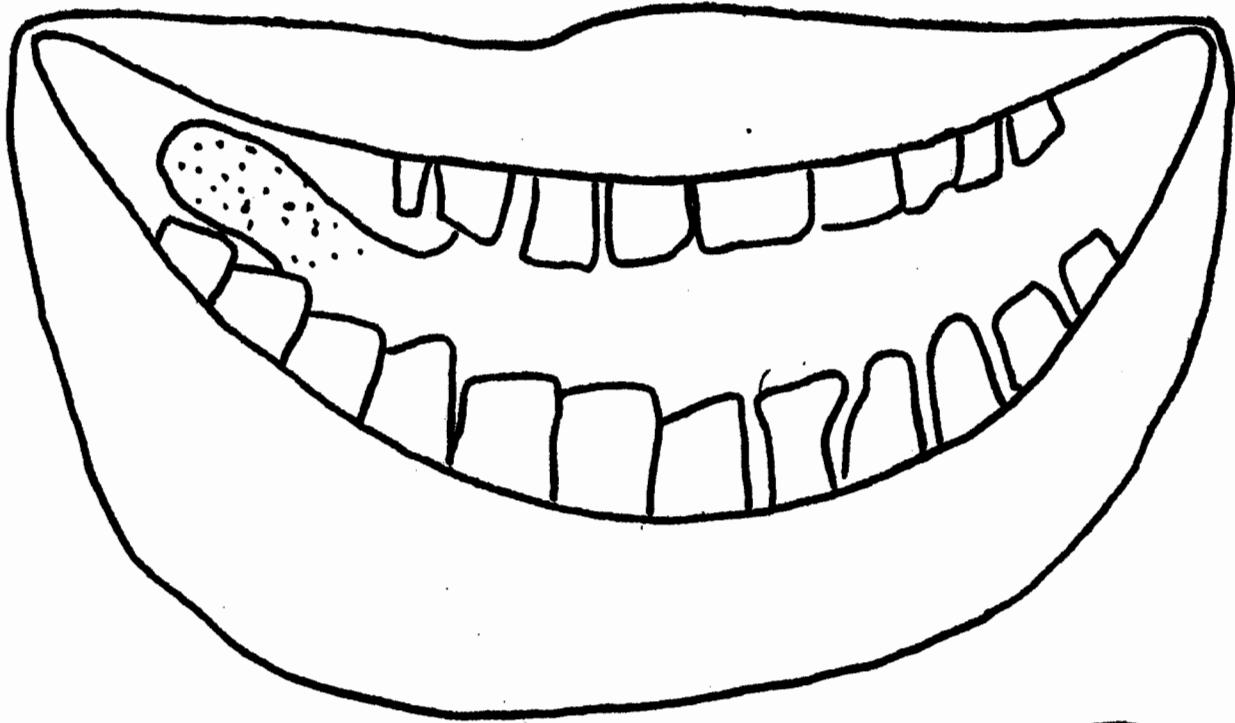
There are also situations where you can guess what is being said because of where you are or who you are talking with. When you meet someone in the street what do they usually say first of all? "Hello", "how are you" and things about the weather. The same applies with shop-keepers after you've bought something, they usually tell you how much it cost. If you don't understand them have a look at the cash register or the piece of paper they used to add up your purchases. There really is more to visual communication than lips moving.

The most important thing to remember is to try and use all the clues you can to help your communication. Not just your ears but your eyes as well. Develop an interest in watching all of a

person not only their lips. And remember that for hearing impaired
people

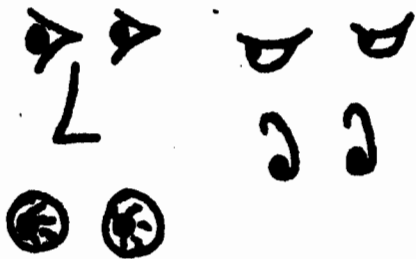
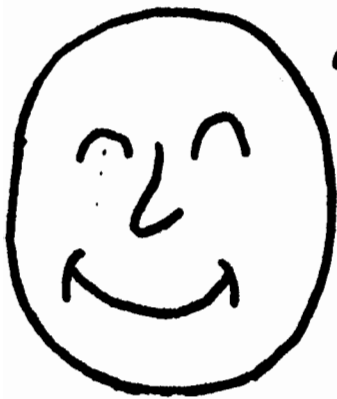
Looking plus listening equals communication.

WHEN PEOPLE TALK



**THERE'S MORE
THAN LIPS.**

**THERE'S
Faces,**



and EYES,



**and GESTURES,
and POSTURES,**

and MORE

SESSION C: "HEARING AIDS & ACCESSORIES FOR THE HEARING IMPAIRED"

Material to be covered:

Hearing Aids

What does a hearing aid do?

The system consists of a tiny microphone which picks up sound waves from the air and converts them into electrical signals, an amplifier which increases the strength of the electrical signals, a battery which provides electrical energy to operate the hearing aid, and a tiny loudspeaker called a receiver or earphone which converts the amplified signals back into sound waves and directs them into your ear through a specially fitted ear mould.

The hearing aid increases the loudness of the sound around you, and this is one of the ways a hearing aid helps to overcome your hearing loss.

Before the development of battery operated hearing aids hearing impaired persons used hearing trumpets (slide available).

Even a few years ago, hearing aids were cumbersome units with large components and heavy batteries. (Slides available).

Types of hearing aids.

Show slides, pictures or actual examples of the various hearing aids available from NAL. Explain why different hearing aids have to be fitted dependent on the type and degree of hearing loss.

What determines success with an aid?

- * type and degree of hearing loss,
- * appropriateness of the aid selected,
- * the manner in which the hearing aid is used,
- * the listening situation in which the aid is used,
- * the perseverance, patience and motivation of the user to adjust to the aid and obtain optimum benefit from its regular use.

Facts effecting aid usage:

- * need to adjust slowly to aid reproduction,
- * tone controls - when/where,
- * understand limitations of the aid,
- * volume settings.

Maintenance and Care of the Hearing Aid.

List faults and possible causes.

Caring for the hearing aid -

1. Avoid high temperature - glove box of a car, hair dryer, too close proximity to radiator etc.
2. Moisture - keep hearing aid dry.
3. Batteries - check regularly, keep stock of spares available.
4. For moulds - cleaning, describe suitable methods for each.
5. Avoid hard knocks.
6. Don't use hair spray while wearing aid.
7. If hearing aid is faulty bring along to NAL - DON'T attempt own repairs.
8. Always be sure to turn aid off before putting it away.

3.

Accessories for the Hearing Impaired:

Attempts to have as many examples of these as possible. Clients tend to take advantage of such equipment if they are shown how much benefit can be obtained.

1. Flashing alarm clocks - These can be obtained from the Adult Deaf Society in your State for approximately \$18. If possible obtain a sample to show clients.
2. Induction loops - For most elderly people induction loops are extremely valuable for watching television. The use of a video-tape in normal conditions and then through the induction loop should show its advantages.
3. Television aids - These are obtainable, usually very cheaply from commercial hearing aid firms.
4. Telephone Accessories - Probably the most important communication aid for the hearing impaired after the hearing aid. For this session it is important that two phones fitted with all options are available. - See attached sheet.
5. Light activated front door bell.
6. Transistor radio and earphones - Adaptor to fit hearing aid earphone which will fit mould.

This part of the session should be as informal as possible. Allow clients to use all the equipment and give details - addresses, phone numbers etc. if interest in any device is expressed

CONCLUSION:

Allow a time at the end for clients to ask any questions regarding hearing aids and accessories.

SUPPLEMENTARY AIDS FOR THE HEARING IMPAIRED

By G. Plant, Teacher of the Deaf, NAL and L. Goodall, Audiologist, NAL.

Read by D. Fiffeld, Audiologist, NAL.

TELEPHONE AIDS

- * Gliding Tone Caller - converts incoming ringing signals into a tone which glides up and down over a lower frequency range with greatest energy at 640Hz.
- * Change-over Switch - selects conventional ringing signal or gliding tone signal to indicate an incoming call.
- * Volume Control - variable control adjusted according to the hearing requirements of the hearing impaired and as easily readjusted for others. Maximum output approximately 120dB SPL.

N.B. The gliding tone caller signal is available only in Colorphones which include the volume control and changeover switch. The volume control is available, however, without the gliding tone signal. Telecom installation fee is \$20.00 with annual rental of \$9.00 for the gliding tone caller telephone and \$4.00 for the volume control only telephone.

- * Flashing Light Caller - if neither the ringing nor gliding tone signal can be heard, flashing lights can be installed to indicate an incoming call. The light on the telephone is ineffective unless the person is positioned close to the phone. One or more wall-mounted lights can be installed in the house according to the individual person's requirements. Telecom charges vary according to the number and position of lights installed.
- * Hearing Aid Coupler - can only be used in conjunction with a hearing aid fitted with telecoil facility. Installation fee of \$20.00 unless installed in conjunction with other telephone aids. Annual rental is \$0.30.

TELEVISION AND OTHER AMPLIFYING EQUIPMENT AIDS

- * Loop System - can only be used in conjunction with a hearing aid fitted with telecoil facility. As for the telephone 'hearing aid coupler' improves reception of the T.V. or radio signal as there is no interference from other background noises. The loop system can be installed for the whole or part of any room. Mini-loops are also effective for head and body worn hearing aids. Price varies according to the area to be looped and the labour charges of the technician, etc. installing the loop.
- * Infra-red System - utilises modulated infra-red rays emitted by the headphones. Standard unit has a maximum output of 104 dB SPL and a special model for the hearing impaired (the 'S' model) has an output of 113 dB SPL. The frequency response of the unit can be adjusted according to the purchaser's requirements. A switch/volume control regulates the intensity of the signal. The infra-red system is reviewed by N. Williams in the February 1976 edition of Electronics Australia. Price for the system is approximately \$120.
- * Headphones, Earphones and Other Aids - A variety of headphones, earphones, remote control units and additional speakers are available for use with T.V. and other equipment. Price varies according to the unit selected and the labour charges of the technician (if applicable).

ALARMS AND OTHER CALLING SYSTEMS

- * Light Flashing Alarm Clock - for those who do not hear the alarm ring a light flashing near to the face can be effective. The alarm system is available in a console with a naked bulb set alongside the clock or an especially adapted alarm clock used in conjunction with a bed lamp.
Clock on console. - \$18.
Clock/bed lamp - \$18 + cost of suitable lamp.
- * Tactile Alarm systems - if the light flashing alarm is not effective then a tactile unit may be more satisfactory. The vibrating pad can be placed under a pillow or, with a larger unit, under the mattress. The smaller unit cost is approximately \$40.

- * Sight Flashing Doorbell - the push button of an outside doorbell can be linked to special lights or ordinary house lights so that when the doorbell is pressed the lights flash on and off. This system can also be adapted to call attention from one room to another. Security systems in units and flats can also be similarly adapted. Price according to number and position of lights and technician labour costs.
- * Baby Cry Alarm - principally used for deaf parents, microphones are placed in the childrens bedrooms and elsewhere as required and are linked to a control centre with a flashing light indicator. The intensity of the signal is indicated by the rate at which the light flashes on and off. Purchase cost of \$40 but unit can be rented for \$10 per annum from Adult Deaf Society.
- * Safety Alarms - light flashing indicators can replace the conventional alarm bell to alert the hearing impaired to fire and other dangers. Obviously requires more than one light to ensure detection of the alarm.

Where more than one light flashing system is installed, coloured lights might be selected to indicate which system is operating, for example, red lights for the safety alarm, green lights for the doorbell system and so on.

Finally,

- * Hearing Wand - a hand held hearing aid with a frequency response of 80-3.5 kHz and gain/power of 40/120 dB SPL at 1 kHz. Features a switch-volume control and microphone-telecoil facility. Telecoil only models are also available. Particularly useful in hospitals, nursing homes, clinics, etc., for persons not fitted with a hearing aid OR for elderly persons unable to cope with a conventional hearing aid. Price approximately \$120.00.

Should any new supplementary aids come to your attention, the authors would be appreciative of advice on same and any available brochures.

SESSION D

A Session for Family and Friends.

This is one of the most important sessions and if time and space permitted it would be preferable to have members of the client's family attend each session to gain an insight into the problems of the hearing impaired. During this session it is attempted to show family members how they can help compensate for the hearing loss. Other sessions have stressed how the hearing impaired person can compensate but such a situation is too one-sided. Obviously the hearing impaired person cannot expect everyone he comes into contact with to make compensations for his hearing loss. But, within the immediate family such a situation may exist. We are concerned here with a two sided problem and both parties have to be shown how they can assist each other.

An awareness of the implications of the hearing loss and its consequent effect on hearing aid usage needs to be established. The material used in Session A may serve as useful aids for this purpose. The family members need to be made aware that hearing aids do not offer perfect correction and to expect a return to normal hearing is both unrealistic and extremely unfair on the hearing impaired person. To illustrate this the use of a tape such as "How they hear" or "The World of J.K. (when available) would be helpful. The attached sheets - "This is what it is like to be partially deaf, profoundly deaf, etc." is a very simple explanation of hearing loss and its effects.

It also needs to be recognised that the hearing impaired person is no longer capable of engaging in rapid conversational exchanges while carrying out other tasks at the same time. The family member needs to have the attention of the hearing impaired person in order to ensure the message gets through. The way this is done may influence the attitude of the person, no one likes to be constantly tapped on the shoulder or shaken to gain their attention. This needs to be discussed in order to ensure that the hearing impaired person is aware of the whole message and is not forced to come in mid-sentence with consequent missing of the message. The family need to be aware of the total problem and how best to communicate. Slower speech, better enunciation, the reduction of background noise and an effort to avoid rapid changing of conversational topics can be invaluable in re-establishing good communication patterns. The use of the poster "Tips for Talking to the Hard of Hearing" will serve to cover those areas which should be discussed.

Speechreading also needs to be covered and here again the family members have to be aware of the limitations and have realistic expectations. Speechreading alone is an imperfect method of communication but when combined with audition it can be an extremely useful adjunct to communication (see Session B for presentation ideas).

As a conclusion the use of a short film may be beneficial. The only film available from Central Office is "Listen", which could be made available as a video tape if necessary. Suggestions of other suitable films would be very welcome.

Any specific problems which arise should be discussed but use your own discretion if you feel this should be done in the group or individually after the session.

HINTS FOR GRANDCHILDREN -

when you speak to me ..



please don't look down ..

please move your lips ..

please don't shout ..

please look at me ..

please don't turn your back

TIPS FOR TALKING TO THE HARD OF HEARING.



Face the hard of hearing person directly, and be at the same eye level whenever possible. Don't shout — speak normally.



Keep your hands away from your face. Give him/her every chance to see all of your face.



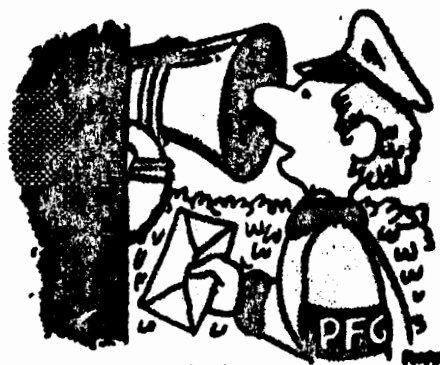
Reduce background noise — turn off the radio or television.



Be sure that light is not shining in his or her eyes.



If you are not making yourself understood, find a different way of saying the same thing.



Be aware that he/she may have difficulty understanding speech even with a hearing aid.

THIS IS WHAT IT'S LIKE TO WEAR A HEARING AID

(some sounds sound louder than others)



A person who suffers from a conductive hearing loss may find a hearing aid a great help, since it provides the amplification which is all that is needed.

With the sensory-neural hearing loss the problem is much more complex. Some amplification helps but the speech may be *distorted*. As can be seen from the illustrations above, I hear the consonants more clearly than the vowels, but as a hearing aid amplifies everything, I have to hear the consonants at an uncomfortably loud level in order to hear the vowels. What most people fail to understand, however, is that a point is reached where increased amplification actually *decreases* the amount of speech heard correctly because the speech becomes *distorted*. For this reason in particular it is *not* right to shout to a hearing aid wearer. He will have adjusted his aid to the maximum level which suits him and any increased amplification may not only cause him to hear less but may cause discomfort or even pain.

So please remember that in a *noisy environment* our problems are even *more acute*.

THIS ES WOD IS LI DO LIMREAT

(this is what it's like to lipread)



This gives some idea of why lipreading is so difficult, the trouble being that so many of the consonants look the same and some sounds, being deep in the throat, are just not visible at all. So you can understand that some people cannot master the art, though others, especially those with good eyesight and memory, and capable of intense concentration and frequent guesswork, are able to make good use of it. These are the difficulties when the speaker is standing within a few feet and is looking straight at you.

When you are in a group you don't even know who is speaking until you've looked at everyone and by then you've missed most of what's been said. Often the speaker's mouth is obliterated by a hand, a beard, a cigarette or a turn of the head. And as we've only got one pair of eyes, we can't do two things at once, like driving *and* lipreading the passenger by our side.

The following illustrations will help you to explain to such people what it is really like to be deaf, and why it is that for some, hearing aids and lipreading are of such limited use.

THIS IS WHAT IT'S LIKE TO BE PARTIALLY DEAF

(some sounds sound louder than others)

There are basically two types of hearing impairment, conductive and sensory-neural (perceptive). Some people may have a combination of the two, known as mixed deafness. A conductive hearing loss simply means that there is a fault in the conduction of sound waves from the outer ear, across the middle ear to the inner ear. Sensory-neural (perceptive) hearing loss means that the disorder is in the inner ear (cochlea) or hearing nerve which transfers the information to the brain.

Generally speaking, conductive deafness may be operable but sensory-neural deafness is not.

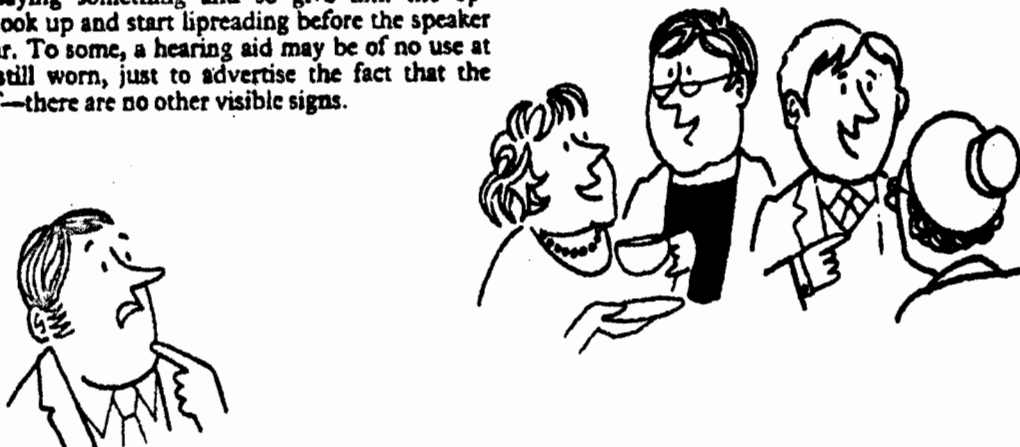
In the illustration above, you can see that I hear the consonants better than the vowels. This is because they are of a higher frequency than the vowel sounds. In most types of deafness, however, it is the vowel sounds that are heard most clearly.



--I- I- --A- I--- -I-- -O -E -RO-OU----- -EA-

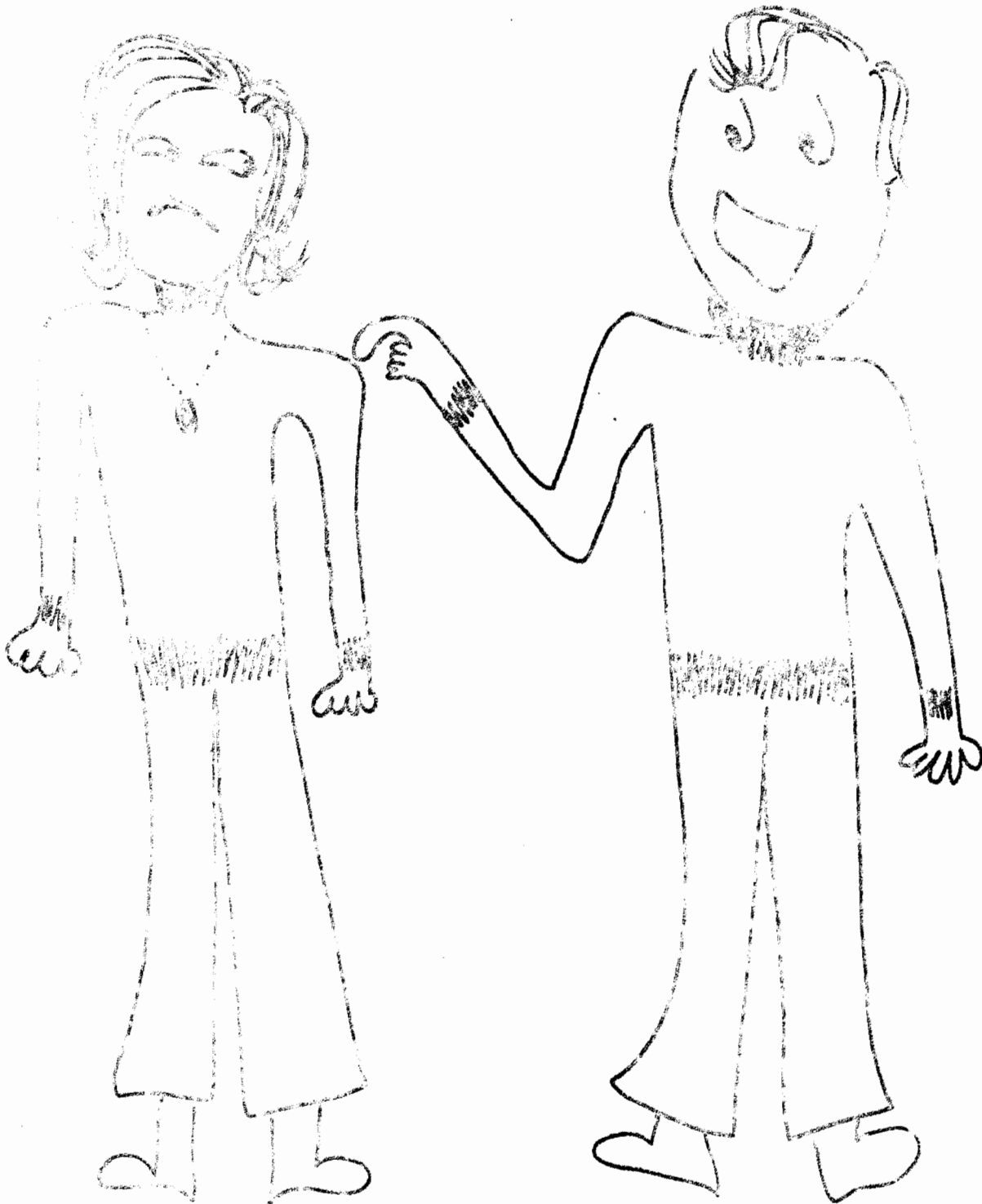
(this is what it is like to be profoundly deaf)

Anyone suffering from this degree of deafness will find it very difficult to follow speech at all. A hearing aid may be worn but it may only be to give the wearer a sensation of hearing sound of some kind rather than be left in total silence. It will sometimes help him to determine when someone is saying something and so give him the opportunity to look up and start lipreading before the speaker has got too far. To some, a hearing aid may be of no use at all but it is still worn, just to advertise the fact that the wearer is deaf—there are no other visible signs.

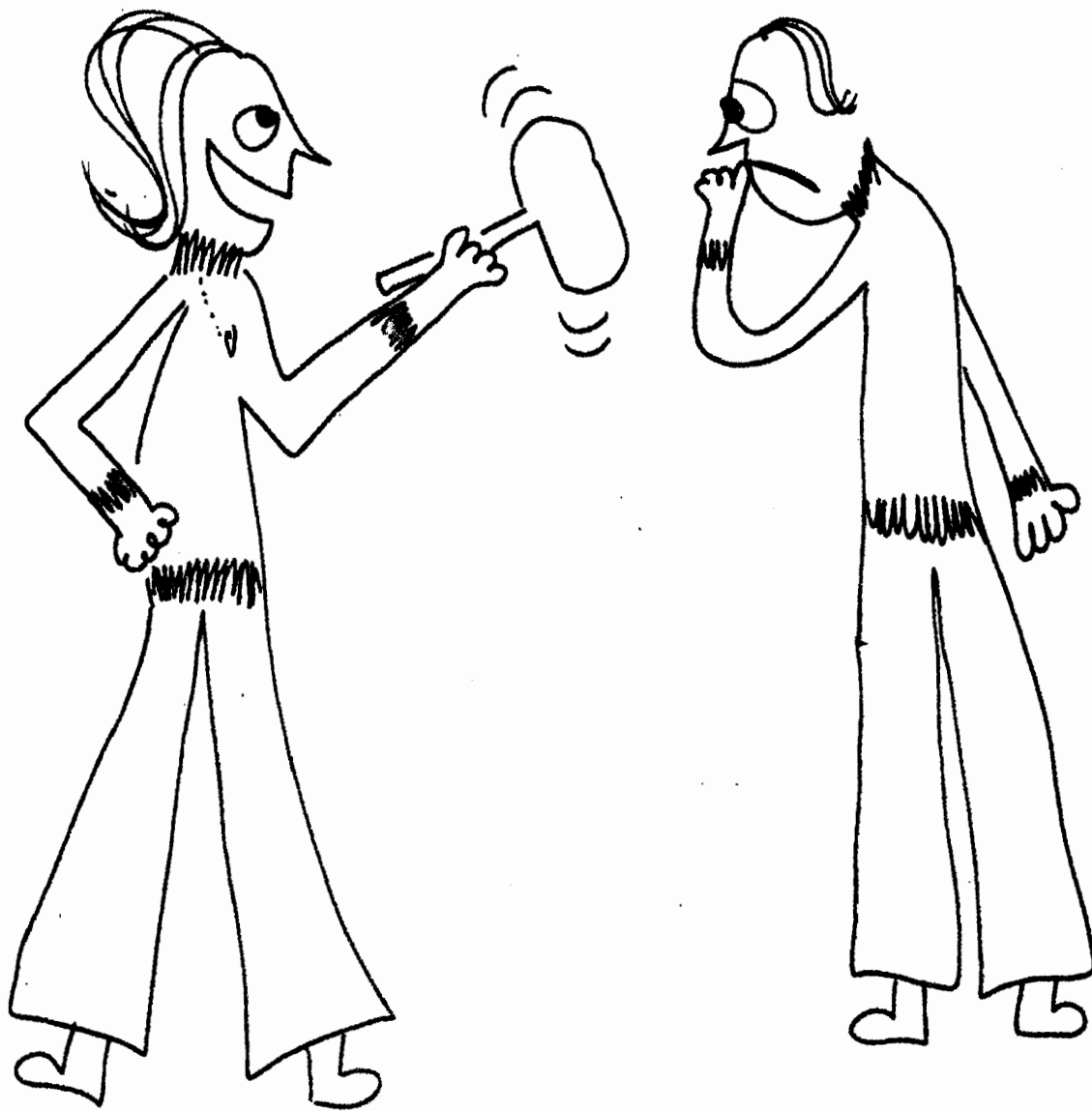




DON'T tap people on the shoulder
to attract attention

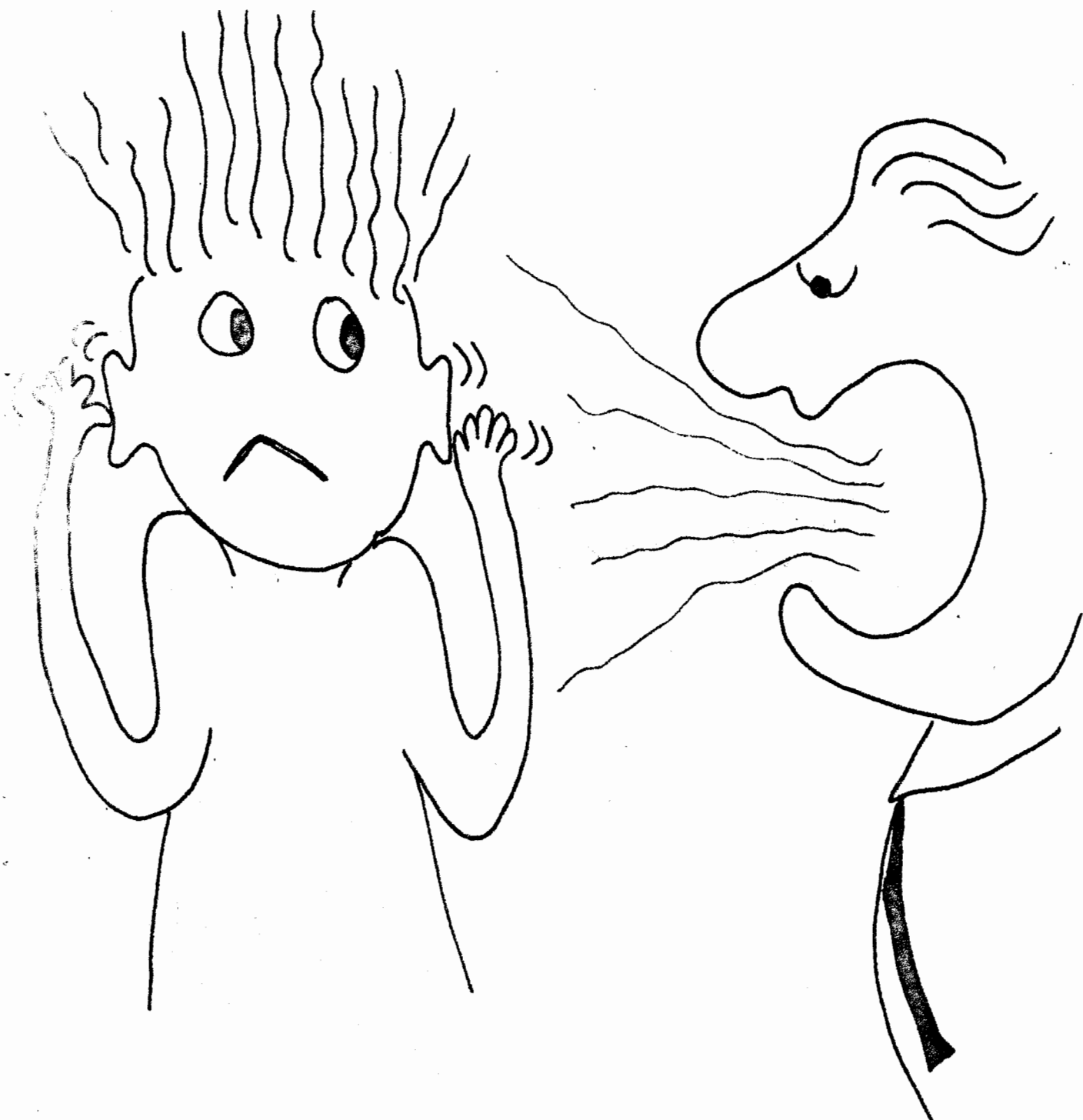


... they might tap you back





DON'T SHOUT!

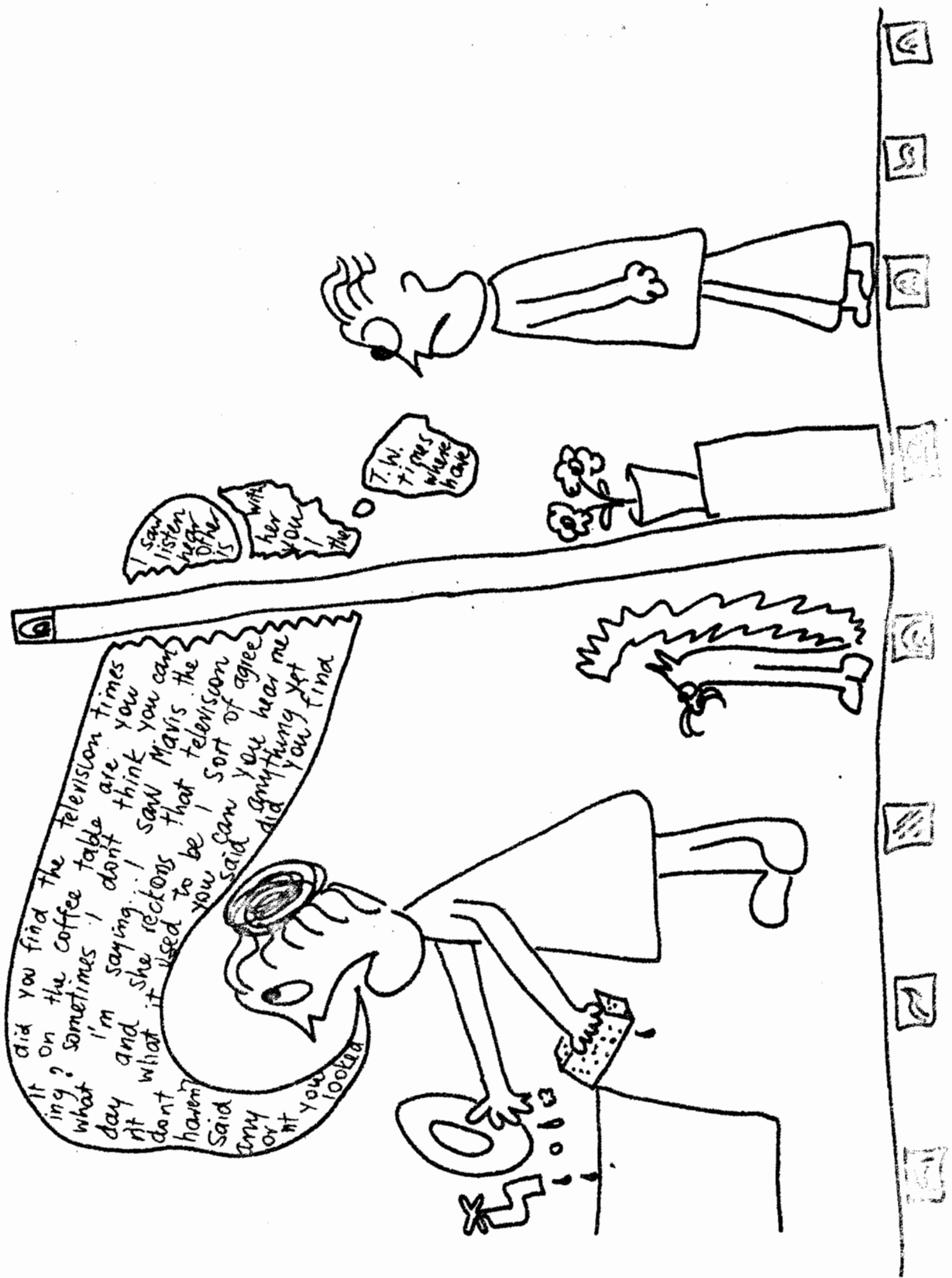




LIGHT should be on the **FACE** of the **SPEAKER**

- * it illuminates their face
- * makes it **EASIER** to **WATCH**





It did you find the television times
ing? On the coffee table are you
what? Sometimes I don't think you can
day and I'm saying... I saw Mavis the
it and she reckons that television
don't what it used to be. Sort of agree
haven't you said can you hear me
said any or it you anything yet
looked you find

I saw
listen
high
Dike
is
with
her
you
the

T.V.
Times
where
have

6

6

8

6

6

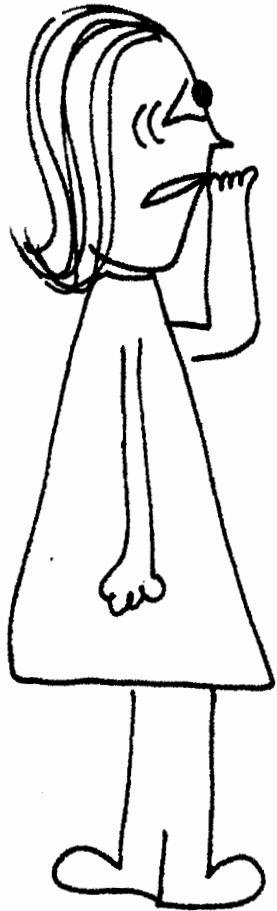
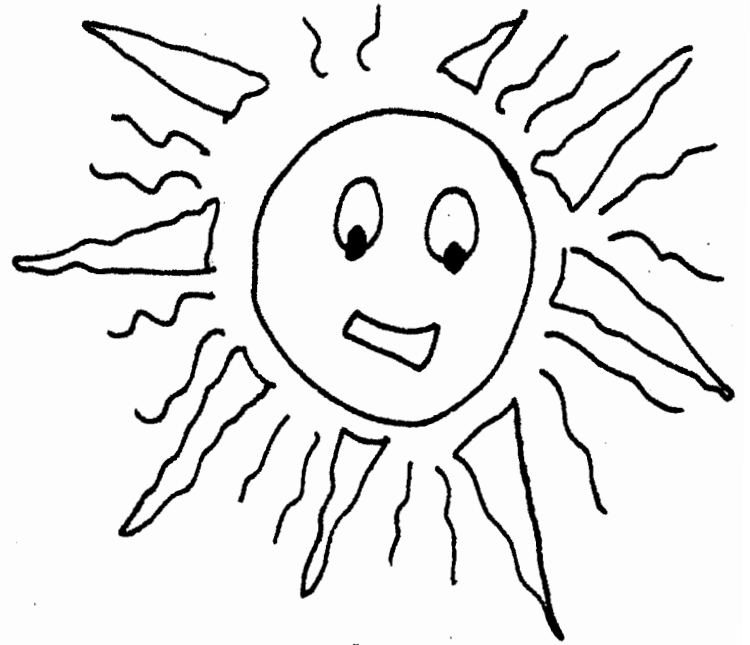
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How can I help?

Some notes for

FAMILY and FRIENDS.



MY TALE OF WOE

I'm Very Grateful - I think!

I can now hear, with the help of an aid. But, do all floorboards creak? Water, be it from the tap or toilet flushing - is it really so loud? Oh please, don't put your cup down so hard on the saucer. The clatter of washing up and the stacking of dishes - isn't it nerve wracking? Has newspaper always been so noisy? I wonder why venetian blinds aren't made of rubber - something less shattering. What on earth is wrong with the washing machine, the vacuum cleaner, mixmaster, blender, is that really the normal sound? Heavens, how long has the refrigerator run like that? Why do we have so many clocks in the house?

Dare I take another taxi if they will persist in having their two-way radio run so loudly? Oh no, not another semitrailer - how can you bear this traffic each day?

Why do people raise their voices like that in a bus?

I wonder if the motor is being serviced, it sounds odd!

Isn't this a noisy reception room? Must the fans be on? Could the air-conditioning be quietened? Help, why are they clapping so loudly? Please dear, must the radio be so deafening? That television volume is far too high! Darling, I didn't remember, has a kiss always sounded like that? Please, don't shout so! I can hear.

I'm grateful - I think!!

P.S. And that just touches on the fringe of bewildering sounds!

It's very difficult for a person with normal hearing to appreciate the problems of the hearing impaired. You can close your eyes and pretend you are blind but you can't close your ears and become hearing impaired. Another difficulty arises because hearing impairment is invisible. You can always tell if someone is blind or crippled but often the only way you can find out someone is hearing impaired is to talk to them. It is factors such as these that lead us to underestimate the problems of hearing impairment.

This chapter is designed to help you, the family and friends of the hearing impaired person, understand the problems and offer ways you can help overcome it.

You are probably reading this chapter because someone you know has just been fitted with a hearing aid. Maybe you, like so many hearing impaired people also do believe this will solve all their problems. Unfortunately this is not true in most cases. Unlike spectacles, which often restore normal or near normal sight to the wearer, hearing aids rarely restore normal hearing. A common complaint of many aid wearers is that they can hear but not understand. The hearing aid can make sounds louder but often the message is broken or distorted because of the nature of the hearing loss. The hearing aid can only make the sound louder it can't make it clearer. As a result many new aid users are very disappointed and wonder if it is worthwhile wearing it. Adjusting to these new sound patterns is a long term project and the new aid user needs all the help and encouragement you can offer.

Another factor which can lead to discontent with the hearing aid is that it amplifies everything, background noise as well as speech.

Background noise may in fact be louder than the speech and as a result make listening an extremely difficult task.

Some aid users also find they are unable to adjust their hearing aids to a volume setting that is comfortably loud. The aid seems to sound either too soft or too loud. This may be the result of what is known as 'recruitment'. Many hearing impaired persons suffer from recruitment and as a result are very sensitive to relatively small increases in loudness. They may find that a level of loudness just slightly above where they can't hear at all, irritatingly loud or even almost painful. This is why many hearing impaired persons, especially when they are wearing hearing aids seem so sensitive to raised voice and other loud noises.

Another common misconception many people have is that if the hearing impaired person can't cope with the hearing aid they can always learn to lipread. The popular idea is that a trained lipreader can see on the lips everything people with normal hearing can hear. Again this is not true. When we speak the movements we make with our lips, tongue and teeth are designed to make the various parts of speech sound different, not look different. Many speech sounds look exactly the same, for example say park, bark and mark whilst looking in a mirror. Do you notice they all look the same? Other speech sounds are almost invisible.

As a result of these and other related factors even the best lipreaders only pick up about $\frac{1}{3}$ of what is said. But this is usually enough to understand the things talked about. Lipreading, or more correctly speechreading for we look at more than just the lips, however, is usually used along with the sound patterns provided by the hearing aid. These two combined may enable the hearing impaired

person to receive most of the message. For the hearing impaired person, listening plus looking is the key to effective communication. Speechreading can't overcome all the communication problems of the hearing impaired but it can be of great assistance when used in conjunction with the hearing aid. Remember most hearing impaired people hear better when they have their glasses on.

What can you do to help?

Now you've got some ideas of the problems facing people with impaired hearing you would probably like to know how to help. There are some good suggestions in 'Tips for talking to the hard of hearing' and the most important of those is this. When your talking to someone with a hearing loss make sure they can see you clearly.



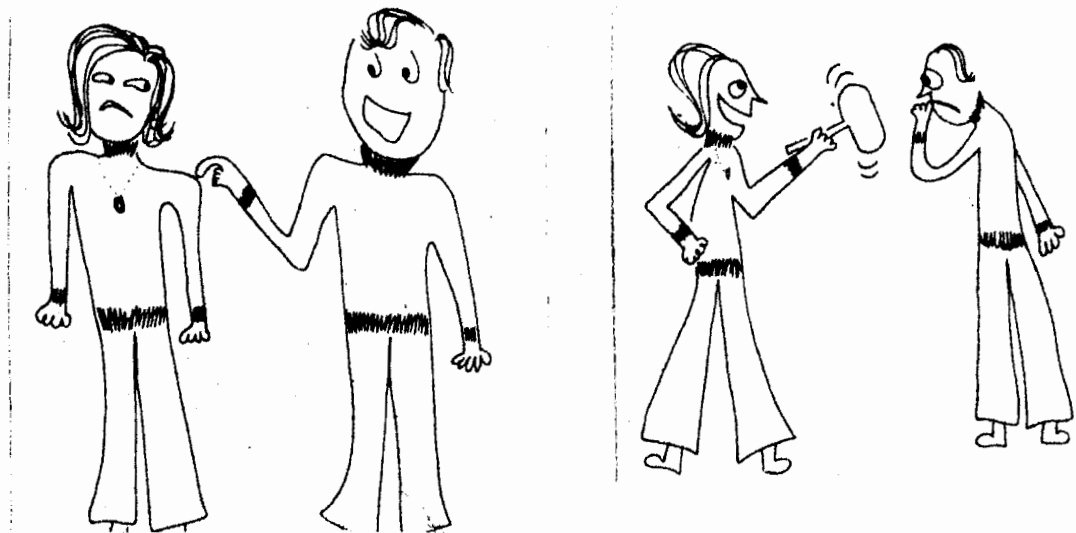
In other words don't try and talk to them from another room. If you do they probably won't hear you and even if they do won't be able to understand what you're saying. Just remember give them every chance to see your face clearly. If you remember only

this you'll find it much easier talking to the hard of hearing.

'That's all very well but he can hear when he wants to'

How often do people say this about the hard of hearing? There are of course some people who deliberately don't hear what is said to them, we've all done it at some time. When you're watching an interesting programme on TV you never hear requests to go and cut the lawn. But for most hard of hearing people it is the result of misunderstanding. Quite often hard of hearing people don't know

you are talking to them. The result is that they don't concentrate on what's being talked about, Make sure they know you're talking to them, but remember one thing don't tap people on the shoulder. They might tap you back.



There are other ways of attracting attention if you can't think of any ask the hard of hearing person for suggestions. It's just that tapping can become very annoying and should be avoided if at all possible. If there are still problems please remember that sometimes, especially when people are tired, concentration can be very hard.

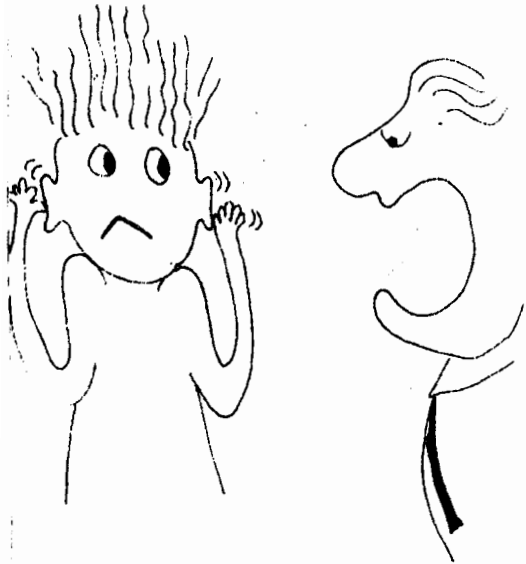
Another related problem here is concerned with background noise. This doesn't mean the radio and TV but includes things such as clattering tea cups and even knives and forks. If you read 'My Tale of Woe' again you'll find how many different sounds can annoy the person wearing a hearing aid. Obviously people will find it much harder to hear when there is noise.

How should I talk to the hard-of-hearing?

In one word, normally. But what is normal? It means speaking naturally and this should be distinct and clear. Above all don't shout. Remember that with a hearing aid this can cause great discomfort.

DDNT SHOUT!

5



Sometimes it helps to speak a little slower but not too slowly, this will make understanding even more difficult.

Where should I stand when talking to the hard of hearing?

Where they can see all of your face. If at all possible try and be on the same eye-level as them at all times. In other words if they are sitting you sit, if they are standing you stand and remember face them at all times. Also try and be in a position where light is shining on your face, it makes it much easier to speechread. If the sun or a light is shining in their eyes it will be so much harder to understand you.



What else can I do?

If you follow the advice given in this section it will make communication with the hard of hearing a lot easier. If you can be patient and sometimes this is hard, communication will become so much more enjoyable as well. Communication means people talking with

each other and if you can help make this easy and enjoyable, the hard task facing the hard of hearing person will become a lot less trying. It won't only help the hard of hearing it will also help you.



HEARING TACTICS

"Those methods used by someone suffering from a hearing impairment to solve the problems of his daily life - the practical, technical and psychological problems caused by the handicap".

L. von der Leith

The development of a "hearing tactics" strand in the Hearing Aid Orientation Course should be seen as being of prime importance. It is suggested that 10-15 minutes be devoted to this area in each session. There is an enormous amount of material which could be covered in this area but it is probably better to aim at covering a few areas comprehensively. Much of the material covered is 'commonsense' but you should not assume all people have arrived at the answers to help overcome their handicap. Again, don't treat this area as a lecture situation, hearing tactics is a very practical area and you should endeavour where possible to involve class members in the material. Give people the opportunity to experience different situations such as observing a speaker at different angles, practice asking people to repeat things, etc. Above all encourage clients to tell of their own experiences, a mutual sharing is far better than the lecturing approach. The ultimate aim should be for the audiologist to introduce a topic and then let the class discuss and work through the problem themselves. If you can reduce your role to that of recorder, the aims of hearing tactics will have been accomplished. It needs to be "those methods used by someone suffering from a hearing impairment" not the observations of someone with normal hearing. You may have valid points to contribute and should if you feel the discussion is not going as intended but try to keep the session of hearing tactics as "class centred" as possible.

Suggested Material:

The material to be covered would best be that material introduced by the class members - their problems, needs, etc. This aim, however commendable, is probably not attainable especially in the first sessions where people are reticent about volunteering information. Try to encourage class members to tell of situations where they experience difficulty but if necessary introduce the topics yourself.

Suggested Topics:

1. Where do you experience most difficulties because of your hearing handicap?

This obviously varies from case to case but most people with hearing losses experience great difficulties in noisy situations, where more than one person is speaking, etc. Only limited relief can be gained in these situations but such factors as increased concentration on visual cues, positioning to ensure best view of speakers, manipulation of hearing aid volume/tone controls, etc. Encourage class to tell of how they overcome the problems - if they indeed do - and list and discuss these.

- 2 -

Meetings - Again encourage personal observations and attempt to gain such hints as:

- (i) gaining a copy of agenda so you are aware what is being spoken about;
- (ii) sit in a position which is comfortable and offers the best view of the speaker;
- (iii) sit next to someone who is taking notes and is prepared to let you see them (see section on positioning);
- (iv) investigate possibility of the meeting place having an induction loop installed;
- (v) in smaller meetings inform people of hearing loss so as they are aware they have to speak clearly - this will only work with a limited number of people, but it is worthwhile.

Theatre -

- (i) induction loops;
- (ii) correct seating;
- (iii) some theatres have "deaf aids" available which can be obtained by asking when purchasing the ticket;
- (iv) if possible have an idea of what the film/play is about, it is always easiest to understand when you are aware what is being talked about. This can often be obtained from film reviews and can prove to be a great assistance.

Church Services -

Much the same factors as are covered under meetings. Sit in a comfortable position and try where possible to have an idea beforehand of content of the service especially the sermon. It is not necessary to have a verbatim account of the sermon; but a few key points may be all that is needed.

2. Positioning.

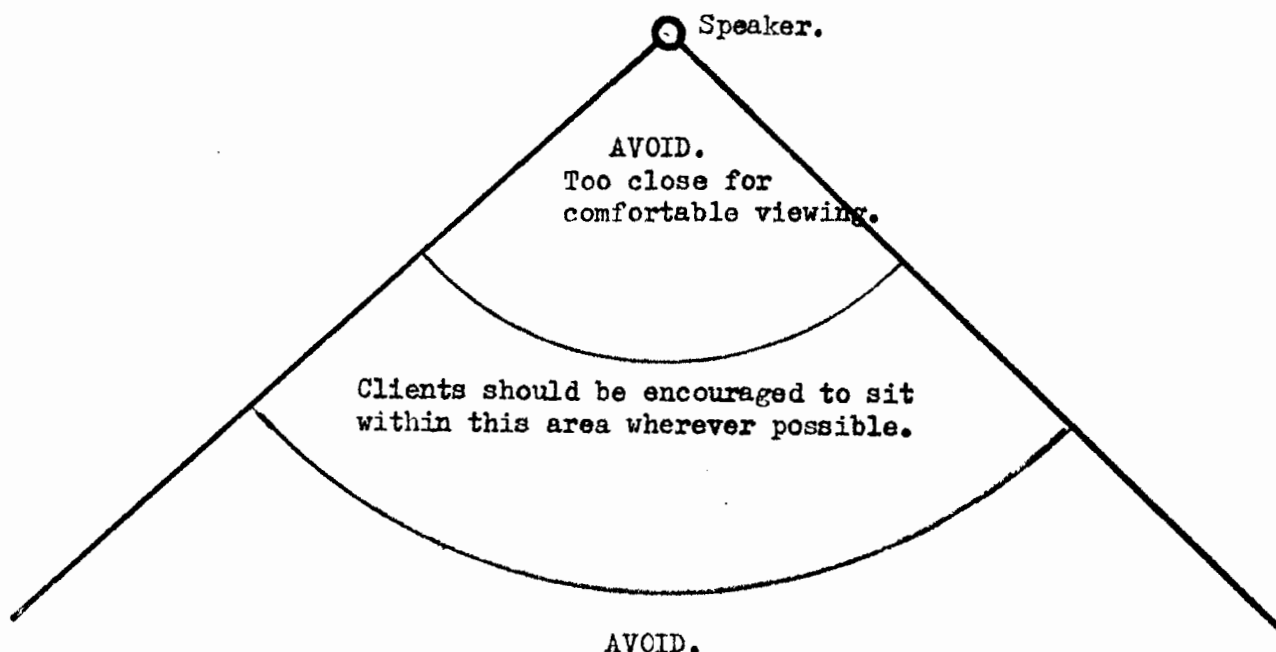
When talking to people attempt to:

- (i) be on same level where possible - don't sit while speaker is standing and vice versa;
- (ii) try to ensure light is shining on the face of the speaker. This not only illuminates the speaker but also makes viewing conditions easier. Nothing is harder than trying to watch a speaker standing with their back to the sun or standing in front of a window with the light streaming in behind them;
- (iii) attempt to keep speakers within a 45° angle wherever possible;

3.

- (iv) attempt to see speaker face on;
- (v) select most beneficial position and sit there.

Attempt to encourage class members to experiment with different seating positions and see which offers then the best possible position. If necessary arrange chairs in poor positions and ask class to rearrange. Obviously the best seating arrangement is a semi-circle facing the speaker but remember to avoid trying to speechread in profile - it is extremely difficult.



3. Speaker Variables.

It is not enough to be aware that some people are more difficult to understand than others, the hearing impaired person needs to be aware what is causing the problem. Many people do not articulate properly (mumble), speak with the head lowered, put hand in front of mouth, eat or smoke while speaking, etc. If the client is aware of what the speaker is doing he has much more chance of overcoming the problem by compensating or asking the speaker to change his speech habits whilst speaking to the hearing impaired person. Other problems can also be covered but the factors relating to positioning are probably all relevant here.

It may be useful if the audiologist deliberately does some of the things and encourages group to request him to speak properly. This can lead on to the next area.

4. Asking People to Speak Correctly.

Far too many hearing impaired people adopt an aggressive attitude in asking people to speak correctly. The result is usually the person speaking reacts negatively and nothing is accomplished. If you can encourage the clients to practice how to ask people to change their habits it will be worthwhile. Try to stress that communication is a two-way process and therefore two people have to compensate not just the one. The hearing impaired person cannot expect people to compensate for his disability unless he makes them aware of it. This is one of the hardest things for hearing impaired people to do so again practice in how to explain the problem if needed.

5. Repetitions.

Another problem area is getting people to repeat what they have said if it is misunderstood. This can quite often lead to situations such as

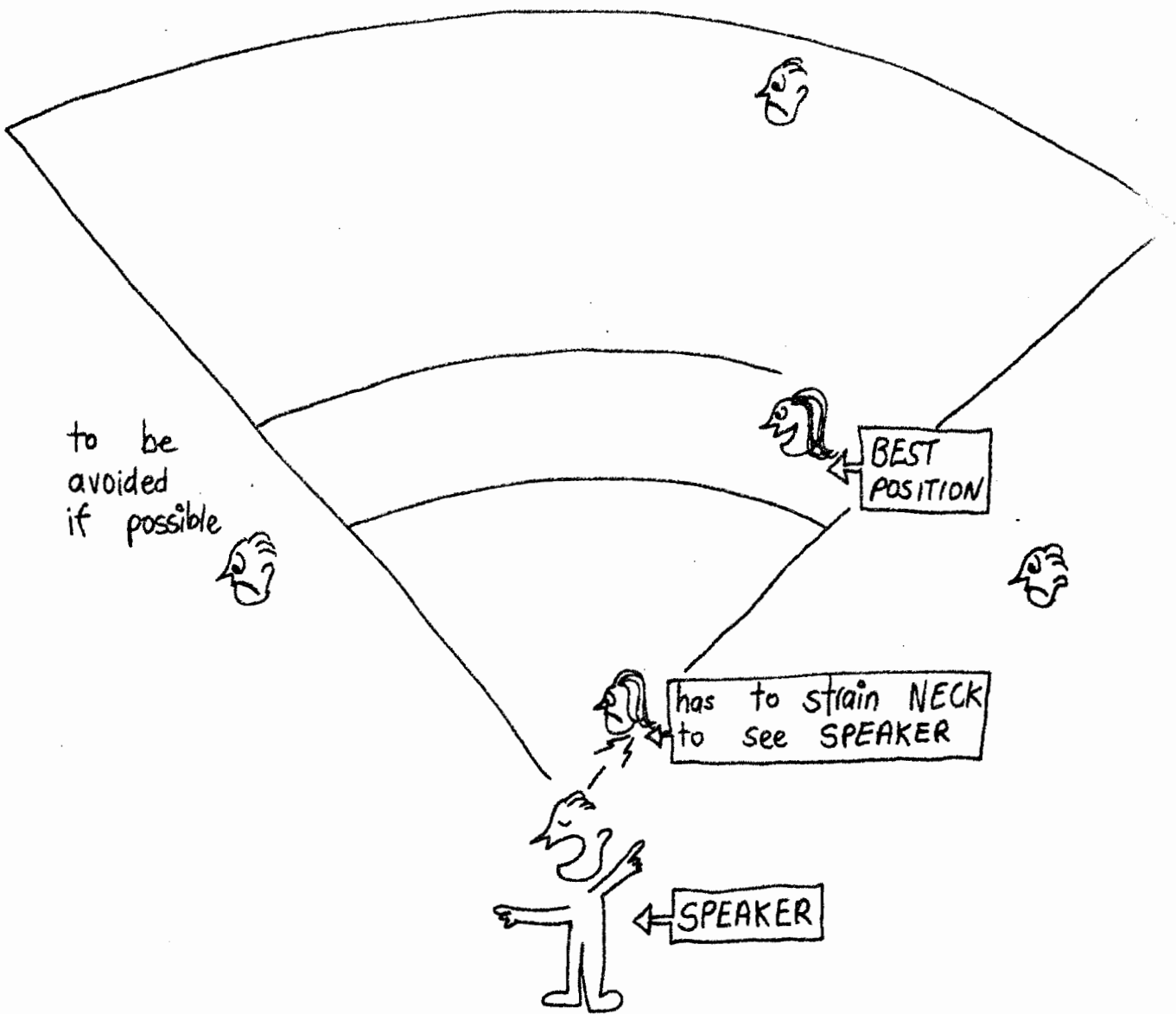
Do you want a cup of tea?
DÓ YÓU WÁNT Á CÚP ÓF TÉA?
DÓ YÓU WÁNT Á CÚP ÓF TÉA?
CÚP ÓF TÉA, TÉA!
TÉA! (usually accompanied by gesture of drinking tea).

It is better if repetitions can be avoided. Pat Pengilley suggests that a question such as "Did you say" is better. The answer is short "yes" or "no" but unfortunately this is not always possible. Where it is not applicable encouraging people to revise their sentences is a great help. Again the method of doing so has to be discussed and if necessary practised.

Conclusion

The pioneering work in Hearing Tactics was conducted in Denmark by a team led by Lars von der Leith. Much of their material arose out of a questionnaire sent to hearing impaired people to survey their problems. The questions covered may provide you with starting points in your Hearing Tactics lessons.

1. What problems crop up in your daily life because of your hearing handicap?
2. What is your reaction to these problems?
3. How do people around you react to your problems?
4. What "solutions" can you suggest to overcome situations which



GUIDE TO RELAXATION PRACTICE AT HOME

Below are some suggestions for practice at home that may help you to learn to relax more than you do at present, particularly in those situations (such as in groups of people) in which you tend to become tense -

Find a quiet comfortable place, for example, a soft, deep chair, or on top of a bed, and sit down and make yourself comfortable.

Take long, deep breathes. While doing this, repeat silently to yourself, "relax, relax", saying the "re" on the inwards breath and the "lax" as you breath out.

Then concentrate on each part of your body, one part at a time (right from the tips of your toes to the top of your head) and try to consciously make each part feel relaxed, and heavy, allowing the tension to gradually flow out of the muscles. At the same time, remember to say "relax" as you breath deeply and regularly.

If you have access to it, soft music being played while you follow the above procedure may also help, though it is not necessary. Also, relaxation tapes can be purchased commercially.

Some people find it helpful to visualize (for example, in the country or on the ocean), whilst following the procedure outlined.

NOTE: It is important to realise that people can make themselves relax in varying degrees and not everyone can expect to learn to relax completely. So do not be discouraged if you feel that you are not learning to relax as much as someone else. However, it is also important to realise that you can only learn to achieve your full potential as far as relaxation is concerned through

practice - so don't give up if at first you feel you are not relaxing.

Some Community Health Centres (see under State Government in the telephone directory) hold free relaxation courses, available to anyone who is interested.