Facts You Should *Know* About Your Dentures

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FOREWARD

This booklet has been written for the purpose of providing information to patients about complete dentures. It is a comprehensive discussion of denture problems, and is intended to assist the dentist to inform patients about their dentures. Regardless of what many people say, dentures present problems for all patients and some will have serious problems which may continue to plague them for a long time. The use of this booklet and advice of your dentist will provide solutions to many denture problems.

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TERMINOLOGY

Since denture service invariably occasions more discussion than other types of dental work, one should know something about the terminology.

RIDGE — What remains of the jaw bones after all teeth have been removed is referred to as the "ridge" or the "residual ridge".

DENTURE — The term "denture" refers to an appliance replacing missing teeth. When all of the natural teeth have been replaced, the term "complete denture" is used. In other words, a person who has lost all of the upper teeth would wear a complete upper denture, while one who has lost all of the lower teeth wears a complete lower denture. However, most dentists refer to complete dentures simply as dentures. The words "upper" and "lower" are frequently heard in lieu of their more technical terms "maxillary" and "mandibular".

DENTURE BASE — The base of the denture includes everything except the teeth. The flange of an upper denture is that part of the denture base which extends into the fold of the cheeks and the upper lip, while the flanges of a lower denture are two in number and are referred to as the outside flange and the inside flange. The outside flange of the lower denture is similar to that of the upper denture flange in that it extends into the folds of the

cheeks and the lower lip, while the inside flange extends to the mouth between the tongue and the ridge. It is well for you at this time to remember the inside flange of a lower denture because you are going to learn much more about it.

ADJUSTMENT — The term "adjustment" has a rather broad meaning in dentistry. It implies that your denture or mouth needs attention, and you must return to the dental office for the necessary service. Several of these adjustments are usually necessary for patients wearing new dentures.

SETTLING — The term "settling" is used to indicate the dentures have changed from their original position in relation to the tissues. The pressures applied to the teeth and the nature of the foundation upon which the dentures rest will cause them to settle. An upper denture will settle upward and backward, while the lower denture settles downward. In appearance the settling of an upper denture is noticed in the upper lip, and that the teeth tend to move up and out of sight. The overall effect from settling is easily detected from a profile view, because the nose and chin are closer together. Settling is a continuous process and the amount is dependent on the changes that are taking place in the mouth. It is greatest during the healing period following extractions, and even though the amount of change reduces

following complete healing, it is important to remember these changes continue throughout life.

THE GUMS — The gums, which is pronounced as the "gum" in chewing "gum", in general, represent the tissues covered by the dentures. The ridge is that which remains of the bony structure that once held the natural teeth in place. The teeth used are either of porcelain or plastic, and there are indications for the use of each. Your dentist will make the decision which material is best for your dentures.

There are some fundamental differences between dentures and natural teeth, and the failure of many people to realize this can result in serious trouble. Each natural tooth is held firmly in position by a strong, bony socket. All of the pressures applied to natural teeth are transferred through the roots and into a strong bone structure. Dentures, however, rest on soft tissues and any force applied againt the denture teeth is transferred to the soft tissues. Instead of each tooth being held firmly in individual sockets, dentures have fourteen teeth on each denture base. These bases are easily moved or shifted because they are resting on tissues in the mouth that are movable. This is quite different than having twenty-eight natural teeth held securely to the bone.

People with natural teeth are able to exert

tremendous pressures against anything between the teeth. The average person can bite with forces approximating two hundred pounds of force. With dentures, the average drops to about twelve pounds per square inch. Dentures deprive one of a major portion of their original biting, and for the sake of comparison, it can be said that dentures are only about five to ten percent as efficient as natural teeth.

The problem of keeping an upper and lower denture in place is not easy. One of the factors that helps to hold dentures in position is a physical phenomenon referred to as interfacial surface tension, such as the way two pieces of wet glass stick together. However, this factor by itself is usually not sufficient to maintain the dentures in position for normal use. The other factor is that of a partial vacuum. The seal area of an upper denture that permits the creation of this partial vacuum is located at the back border of the denture base. The seal of a lower denture is established when the floor of the mouth is in contact with the inner flange of the lower denture. Since the floor of the mouth is controlled by the movements or positions of the tongue, maintaining a good seal for the lower denture is often difficult and in many cases impossible. It is a generally accepted fact that in order for a patient to enjoy the benefits of so called well-fitting dentures. the dentures must be capable of creating a

partial vacuum. Dentures are an integral part of the functions of the mouth, chewing food, sucking, swallowing, vocalizing, and speech.

If you have denture problems, your dentist and this booklet can be very helpful.

In constructing dentures, your dentist now has to depend on you and your ability to adjust in order that these dentures can function effectively. No two mouths are exactly alike. Many mouths present difficulties that will limit your dentist's ability to construct dentures. Patients have conditions in their mouths that make it extremely difficult to adjust to dentures. Nevertheless, patients expect their new dentures to look good, to wear them with comfort, and to be able to eat almost everything.

Unfortunately, dentures may be a very trying and discouraging experience for many patients. It must be kept in mind constantly that dentures have been constructed to replace a lost organ of the body, much the same as an artificial leg replaces a lost limb. Dentures are not securely held in position like natural teeth and can easily be displaced. Nevertheless, most patients enter their first denture experience fully expecting that they have simply exchanged their own teeth for something as good or even better. Nothing is further from the truth. Regardless of what you have heard in the past, the simple fact is that learning to wear dentures is not easy. It is estimated that about

twenty-four million people in this country are wearing dentures and to many dentists this means about eight million people are in trouble.

SOURCE OF TROUBLE — There are two very common sources of trouble; one is a difficult mouth structure and the other is the patient's ability to adjust to the new dentures. Let's consider the first source of trouble, which is a difficult mouth structure of physical conditions in the mouth which make it difficult to construct dentures. Among these problems are: the size and shape of the ridges, the type of soft tissue, excess loss of bone, the relationship of the ridges one to the other, the presence or absence of normal saliva, the presence of severe undercuts, especially in areas that are difficult to alter, the relation of the hard palate to the soft palate, and many other undesirable conditions too numerous and too technical to discuss at this time. Observation reveals that no two mouths are exactly alike, and therefore, no two dentures are exactly alike. Since this is true, no two results can be identical.

This brings us to the second source of trouble which is the patient's inherent ability to adjust to the new dentures. There is no way to measure ability to adjust to something new and entirely different, such as dentures. It remains an unknown factor until the patient is actually wearing the dentures.

Some patients will ask, "Why wasn't I in-

formed about conditions in my mouth that are undesirable or apt to cause trouble?" It is a logical question, but the answer is not always an easy one. First of all, your dentist may be one who has found by experience that patients do not like to be discouraged about their new dentures. Also, too many patients feel that all mouths are about the same, and therefore attempts to explain difficult conditions are often treated as alibis. There are two other very important reasons why some patients may not be informed about some of their month conditions. First, a careful examination of the mouth does not always reveal conditions that may later cause difficulties with the wearing of the finished dentures. Second, some patients have difficulties with certain conditions that apparently do not cause trouble for other patients. Being human and vulnerable to wishful thinking, most dentists will hope for the best.

One must face the fact that it is not possible to judge accurately how well a patient will or will not get along with his new dentures. There are so many uncertainities involved that it becomes an almost impossible task to predict many of the immediate problems that may confront new denture patients. Since this situation is well known to all dentists, we will consider the most common problems that present themselves.

YOUR APPEARANCE WITH DENTURES

For the most part, appearance is not a serious problem. The majority of patients are usually pleased with their new dentures. The materials and the methods of shading and coloring have been improved so much that they greatly enhance the appearance of the new dentures. Because of this, many people today are wearing dentures unknown to even their close friends.

There are, however, some patients who do not present a pleasing appearance with their new dentures. Sometimes this is difficult to explain, but nevertheless, one must accept the fact that some people are not going to be happy about their appearance. We are all aware of the fact that many people wear their clothes well or seemingly look good in anything. To some extent, the same thing is true of people who wear dentures. The dentist has been trained to select the teeth as far as size, shape and color are concerned. His choice will be to produce a denture that harmonizes with the patient's face. The patient can help by furnishing old photos which show the natural teeth and by expressing opinions as to what one considers attractive or undesirable in the appearance of teeth. An appointment is usually held for the patient to see how the dentures will appear. At this tme, the teeth are in wax and can be moved. Please be candid and helpful to the dentist at this appointment.

SPECIFIC REASONS FOR POOR APPEARANCE

Some patients have very short and active upper lips. This condition results in an excessive amount of the denture being exposed during normal lip activity. To complicate matters, some patients with a short, active upper lip have a prominent bony ridge. The esthetic results with this combination are usually not good. Also, the patient with the long inactive upper lip creates a problem since this patient doesn't show teeth even with a wide smile. People with a long, inactive lip often look as though they had no teeth in their mouths. Some people have extremely large mouths which are completely out of proportion to the rest of the face. Dentures in these people may be conspicuous every time they open their mouths. Those with abnormally receding chins or with abnormally prominent chins often present conditions that make a pleasing appearance difficult. Some patients insist that their own teeth were small, white and did not show very much. Nothing looks more artificial than denture teeth that are too small or too light in color. Listen to the suggestions of your dentist - remember he wants to improve your appearance.

Then, of course, every dentist is confronted with patients who want to look much younger than they are. These patients seem to be laboring under the impression that a general face-lifting can be accomplished with dentures. In an effort to try to remove all the wrinkles from around the mouth, denture teeth are often placed far from their natural position. All of this usually results in an unnatural appearance and in some mouths can cause tissue damage.

It is only natural for people to want to look their best with new dentures, and dentists are equally concerned about restoring mouths to their normal appearance. To attempt anything else is expecting more from dentures than is ordinarily possible.

FULLNESS

Dentures of necessity feel more of a mouthful than natural teeth. The outside flanges that are necessary to help hold the dentures in place will create fullness in the cheeks and lips. The inside flanges of the lower denture and the roof of the upper denture will have a tendency to crowd the tongue. However, this feeling of fullness usually passes within a day or two, and the tongue soon learns to carry out its numerous functions with little difficulty. Occasionally, your dentist will want to make an adjustment for fullness on the day of delivery,

but since fullness usually disappears within two or three days, it is best to wait before asking your dentist to reduce certain areas.

SPEECH

Speech is one of the most useful functions of the oral mechanism. In general, it can be said that dentures seldom interfere with speech. During the first day or two, some patients sound as though they have a mouthful. Some have trouble with their "s" sounds and should practice on some of the troublesome words. When one has new dentures, it seems that almost everyone is listening for some speech defect. The truth is that very few people have perfect speech, even with their own teeth. The body structures that create speech are among the fastest and most accurate we possess, which accounts for the relatively easy adjustment of the speech. If it appears that you have developed a speech defect with your new dentures, there is always the likelihood that it will improve with time. If one feels something should be done about a speech problem, a speech therapist should be contacted because this is not primarily a dental problem.

INSTRUCTIONS ABOUT WEARING NEW DENTURES

There will, of course, be some variations

of opinions, and it is possible that your own dentist would like to give different directions for your particular mouth. However, under ordinary conditions, wear the new dentures until mealtime and remove until you have finished eating. Place them back in the mouth and wear them until retiring. Remove from the mouth and place the dentures in a container with water or a denture-cleaning liquid. You should be warned at this time that whenever dentures are removed from the mouth for any length of time, they must not be allowed to dry, because the plastic base undergoes some warpage; therefore, when they are removed for overnight, some provision should be made for keeping them wet. Place the dentures in the mouth in the morning and have a breakfast consisting of entirely soft foods. Remove the dentures for cleaning and place them back in the mouth. If it is comfortable, try eating your lunch, remembering that you should remain on a soft diet. If your mouth develops soreness, remove them as soon as it is practical and allow your mouth to rest. If the soreness continues to get worse, leave them out until you are able to see your dentist for the necessary adjustment. If it has been necessary to leave them out for a period of time, be sure to place them back in your month a few hours before your dental appointment, so that the dentist can see the soreness. Some dentists

refuse to adjust dentures unless they can see the exact area involved. This is because it is difficult for patients to indicate the exact area needing adjustment. It is to your advantage to wear the dentures to the dental office for any adjustment.

It is necessary that your dentist be able to see that area of soreness if you expect an accurate adjustment.

BAD CHEWING HABITS ACQUIRED BEFORE DENTURES

There are two habits some patients acquire before they have dentures, and the continued use of them with complete dentures is very undesirable. Before losing all of one's teeth, many patients keep their upper and lower front teeth long after the back teeth have been lost. Of necessity, they acquire new habits of chewing. Chewing any of the food on the front teeth is not normally a natural function. This requires that some of the soft structures of the mouth that participate in the function of chewing, such as the tongue and the cheeks, learn new habits. These habits, while necessary when one had only the front teeth to use, are detrimental when complete upper and lower dentures are made. Chewing of food with dentures should be done with the back teeth. Attempting to chew food on the front teeth of dentures will dsilodge them and create soreness. The

average patient will require time and perseverance to break this habit of chewing on the front teeth. However, there can be no compromise with this habit; it must go if one is to enjoy successful denture service.

The other bad habit results when one wears an upper denture with only the lower front natural teeth left. Not only are the unnatural chewing habits developed, but some develop the habit of holding the upper denture in place with the tongue. An upper denture in contact with only the lower front natural teeth will become loose, and continued use under these conditions may cause bone damage to the front of the upper ridge. To prevent the upper denture from dropping, many patients actually hold it in place with the tongue. This habit is possible because of a clever adeptness of the tongue due to its speed and power. It is interesting to watch the tongue in this unusual function and to observe the control many people have of the tongue muscles. However, this is a habit that will create difficulties when these patients have upper and lower dentures. The continued use of this tongue habit will dislodge the lower dentue. With new dentures, the upper denture will usually stay in place without the aid of the tongue, and the tongue must be retrained to remain in a normal position in relation to the lower denture.

SHOULD YOU WEAR YOUR DENTURES OVERNIGHT?

Many patients find it is more comfortable to wear their dentures at night, while others prefer to remove them. Your dentist can advise you since the decision is based on possible damage to your mouth. Some people find a tendency to clench the teeth together or "grind" the teeth during sleep - this is very destructive to the supporting tissues, and such patients will be advised to remove at least one denture in preparation for sleep. Also, some patients will find it very uncomfortable to sleep without the dentures. If the mouth shows no irritation, such patients will be advised to replace the dentures after cleaning.

CARE OF THE SUPPORTING TISSUES

It is important to care for the tissues supporting the dentures. Failure to do so will result in more "shrinkage" of the jaw bones, irritation, swelling, and soreness of the soft tissues. Any persistent irritation is a hazard, and should be avoided.

During chewing, the dentures do move, and tiny food particles carried in the saliva will be found under the dentures. The resulting partial digestion of these bits of food under dentures produces an irritation to the tissues. This is avoided by removing dentures after

each meal, where possible of course, and cleaning the dentures with a brush, soap and water. The tissues should be stimulated as well as cleansed. This is best accomplished by using a soft-bristle toothbrush softened by warm water and gently massaging the denture bearing areas. Finger massage of the remaining ridges is considered helpful to stimulate circulation and maintain healthy tissues.

INSTRUCTIONS ABOUT EATING

There are some habits of eating one will have to change, and of necessity there are new habits one should acquire.

Those who feel they can continue blissfully along with dentures as they did with natural teeth are in for a rude awakening. Learning to eat with new dentures usually requires time and patience. There are, however, some relatively simple instructions that can prove very helpful, especially for those who are having trouble.

First, before attempting to take food into the mouth, bring the teeth together and swallow. This function will seat the dentures and bring the tongue to a normal position. Next, open your mouth slowly and only wide enough to receive small quantities of food. Chew the food slowly on the side which seems the most natural or that side which is easiest. Most people find it much easier to chew on

one side than on the other. Observations indicate that half the people chew on the right side and the other half on the left side. So there seems to be no logical reason for changing chewing sides, now that one is wearing dentures. Chewing food with dentures can be much easier if you learn to move the lower jaw in a straight up and down movement. With natural teeth, the lower jaw usually moves to one side which permits more shearing power between natural teeth. However, with dentures, this shifting of the lower jaw tends to unseat dentures. There is also the big question of how much shearing stress your dentures can withstand without dislodging them or creating unnecessary damage to the mouth. You will find that the straight up and down movement of the lower jaw is sufficient for the satisfactory chewing of most foods. Avoid foods which are hard, tough, sticky, or require considerable chewing. Vegetables should be cooked. Doughy foods such as bread, biscuits, buns, etc., will stick to dentures and should be eaten in conjunction with liquids. Meats should and can easily can be prepared in ways that will minimize the necessity for hard chewing.

One of the eating habits that must be changed is the way in which people ordinarily eat sandwiches, apples, cookies, etc. People with natural teeth will bite into certain foods only enough for the teeth to hold it while they

break off the part that has been placed in their mouths. An example of this is biting into a sandwich. To prove this to yourself, have someone with natural teeth eat a sandwich and watch closely. Part of the sandwich is placed in the mouth and the teeth are closed into the sandwich only enough to hold it securely, and then with the hand, the sandwich is pulled away from the mouth, resulting in a tearing action. This pulling and tearing action which is possible with natural teeth will dislodge most dentures. There are some patients who can tear off food and not dislodge their dentures, but this is not true for the greater majority. For those few who can, there always remains a question of whether or not they are causing unnecessary tissue damage. In any event, you are well advised to avoid tearing habits and to develop habits that are more suitable to your present conditions. Since sandwiches are a standard food for so many people, we will explain the best way for you to learn how to eat them. At first, avoid sandwiches that are made with sticky (peanut butter) or hard to chew (hard salami) foods. Cut the sandwiches into smaller sizes than usual. Close your mouth and swallow, open and place a small portion into the mouth. Hold the sandwich against the upper front teeth or the lower front teeth, whichever is most comfortable, and then

slowly bring the teeth together through the entire sandwich, at which time you can pull your hand away from your mouth. Eat slowly at first, and in a short time, you will find yourself quite proficient. Very few people will ever know that you have changed your habits of eating a sandwich. Later you can try sandwiches with some of the more difficult sandwich fillings. If you are able to handle them, do so in moderation. If eating sandwiches continues to remain a problem with you, cut them into bite-size pieces.

Remember, just as the person with an artificial leg doesn't expect to enter a foot race, with artificial teeth, you can't expect to do what you did with natural teeth.

VEGETABLES AND FRUITS

Leafy vegetables are very difficult to chew, in spite of what many denture patients tell you. They are difficult even for people with natural teeth. If you want to eat leafy vegetable salads, the ingredients should be reduced to very small pieces.

Many patients express the desire to eat corn on the cob, some are waiting for a fresh, juicy apple, others want celery. These are natural desires, but unfortunately, such foods should be off limits to denture patients. It can be said without reservation that all vegetables

should be cooked. Many of them are simply too hard to chew in the raw state. Hard fruits are also out. You must realize that dentures at their best are only a fraction as efficient as natural teeth, and they can be dislodged very easily. Therefore, anything that requires you to open your mouth wider than ordinarily or exert greater tnan normal pressures should either be excluded or you should be prepared to make a sensible compromise. In other words, you can eat corn, but not off the cob, apples, but in slices, celery that has been cut into small pieces, etc. No one is trying to tell you that you can't do these things, only that it is foolish to try, and much more foolhardy to continue.

You can easily abuse your mouth with dentures, and while it is practically impossible to measure accurately the results of this continued abuse, it is equally true to say that you may be headed for more serious troubles if you disregard reasonable advice from those who have a better understanding of your problem.

TROUBLE WITH LIQUIDS

Some patients complain that their dentures loosen, especially the lower denture, when they attempt to swallow liquids. This is because many people momentarily will hold a liquid

in the mouth for the purpose of tasting. This complaint is usually not associated with drinking water, but rather with coffee, tea, or some beverage they like to taste. If you are in the habit of holding the liquid in your mouth long enough to taste, you will invariably loosen the dentures. It is usually the lower denture that is causing the most trouble. In order to overcome this, you must break the habit of momentarily holding liquids and keep the function of swallowing continuous. This simply means as soon as the liquid fills your mouth, you should swallow. The process of getting the liquid into your mouth and down your throat must be continuous without any break in the continuity of the function.

TASTING FOODS

Occasionally, someone will complain that food does not taste as good with dentures as without. While this complaint may be justified, there is nothing that can be done about it. Most of the taste buds are located in the back of the tongue, and the actual tasting of food takes place in this part of the mouth so dentures should not affect the taste of food. However, since plastic is a very poor conductor of heat and cold, and does cover the palate, the change in temperature perception is often confused with a change in taste.

FOOD COLLECTING UNDER AND AROUND DENTURES

Many patients will complain that food collects under their dentures and the usual implication is, of course, that the dentures are not fitting as well as they should. This, however, is not true and an explanation can easily clarify why all dentures will collect food between the dentures and the gums. If a patient with natural teeth were to chew an ordinary cracker and then swallow the necessary two or three times, we might assume that his mouth was free of all of the chewed cracker. However, when the patient is asked to open his mouth for examination, it will be found that some of the cracker is still in the mouth. The average person would not think of eating a sandwich while sitting in a dentist's reception room waiting to have his teeth examined or worked upon. The reason being that when patients are confronted with the problem of presenting themselves with a clean mouth, they realize that simply swallowing is insufficient, and, therefore, they avoid eating before arriving for dental work.

Swallowing food is a function that starts in the mouth. The tongue, in a sweeping movement backward, starts the food on its way. Any food that by its nature will spread or float around the mouth, into the cheeks

and around the teeth, will not be picked up on one or even several movements of the tongue. In order to clear the mouth of all of the food, one would have to rinse thoroughly. This is true for all people with their own natural teeth.

When patients have dentures, they are confronted with the same problem in swallowing food that existed when they had their natural teeth. But now with dentures, a new area has been added where food will collect. Food that normally drifts into the floor of the mouth or onto the cheeks will find its way under any lower denture, while upward and backward movements of the tongue, as in swallowing, will force food under any upper denture.

Many patients complain of food collecting around their dentures during or after eating. This is quite true, because food will adhere to plastic surfaces much easier than to mouth tissues. The tongue plays a major role in keeping the natural teeth free of food. One of its most common functions is to place the tip of the tongue between the teeth and the cheek and sweep the food forward to the corner of the mouth where it is delivered to the top of the tongue to be swallowed. This movement is greatly restricted by the presence of a lower denture, and, therefore, it is impossible for the tongue to cleanse the mouth efficently.

People wearing dentures are far more con-

scious of food collecting in their mouths than those with natural teeth. This is because the denture flanges occupy space where normally food would collect. The only practical solution to this problem is to check your eating habits. Try eating smaller amounts more slowly and make certain to clear your mouth as well as possible before taking more food.

So, if you are unhappy or complaining about food around or under your dentures, you are experiencing a condition that is normal for anyone wearing dentures. It only serves to warn you of the need for cleaning your dentures as often as it is practical to do so.

SALIVA

Saliva is very essential to normal mouth functions. It seldom is noticed when natural teeth are present. The flow of saliva is normally stimulated through the sense of smell or when food is placed in the mouth. The insertion of dentures will ordinarily increase the flow of saliva for a few days. Some people are very much aware of this increased flow of saliva while others never comment. Excessive saliva may continue in some mouths for a prolonged period of time, but there is nothing that you or your dentist can do about it. In time, it will return to normal.

SALIVA COLLECTING UNDER THE UPPER DENTURE

After the dentures have been worn for some time and everything seems to be progressing normally, some patients will continue to complain about saliva that collects under the upper denture. The complaint is justified because salivary glands are present in tissues that are covered by the upper denture. However, the shape of some ridges allows the saliva to be trapped in the front part of the denture, and this is annoying to some people. The only way to get rid of the saliva is to remove the denture and rinse it with water. During the normal function of swallowing saliva, the first thing that one does is to bring the teeth together, and with the lower jaw braced against the upper jaw, the actual swallowing starts. The fact that this is done several hundred times a day keeps the dentures free of the saliva that normally collects under them. The majority of people are able, by means of this function, to express saliva from under surfaces of their dentures. It is interesting to note that if the saliva that collects under dentures were not expressed hundreds of times a day, it would be impossible to hold the dentures in place.

GAGGING

Some patients are troubled with gagging, and most of it is just a temporary condition. However, it is possible that for some it will always be a problem. Apprehension will cause gagging, and some patients gag because of a large mass of material in their mouths. Since gaggers fall into several classifications, one should consider them individually.

First, there are patients who gag when the impressions are being taken, because of bulkiness of the impression material. The normal thickness of the finished dentures usually eliminates this gagging.

Second, some patients gag with their new dentures and usually insist it is because the upper denture extends too far back in the mouth. This may or may not be the cause. Your dentist will reluctantly shorten the back border, but there will come a time when we will definitely hesitate to do so. After each adjustment to the back border of your upper denture, allow it a few days' trial before having it trimmed further. If considerable trimming becomes necessary, you must realize your upper dentures will become loose. Situations like this may be avoided if you yourself try to overcome the gagging. Some patients find the presence of a hard candy in the mouth such as a mint or a lemon drop relieves the tendency to gag.

Third, there are patients who experience a momentary gagging every time they place dentures in the mouth. Tension, anxiety, and fatigue are other factors producing a temporary tendency to gag. For some people these conditions may continue indefinitely.

Fourth, some patients never seem to overcome gagging and as a result are unable to wear dentures. Some gag with the lower denture and, therefore, wear only the upper denture. Observations show that most chronic gaggers have retracted tongues, and many can be helped if a normal tongue position can be acquired.

SORENESS

In defense of all dentists who make dentures, it can be said also that too many patients associate a good denture with one that needs little or no adjusting and by the same reasoning believe that one needing several adjustments is not well made. Nothing is further from the truth. Soreness usually goes hand in hand with new dentures, and statements by patients to the contrary would have to be considered extremely unusual or evasive, or the result of forgetfulness. The extent of impressions is limited by folds of soft tissue and variable landmarks. In some mouths, the landmarks are difficult to see, while in others they

completely disappear. In other areas of the mouth, the dentist has had to use his own judgment in determining the extent of the impression. These conditions, plus the fact that all new dentures settle and all tissues do not accept pressure in the same manner, explain why one may have soreness which will require adjustment of the appliance.

Whenever soreness exists, allow the dentist to see you and make the appropriate adjustment. He is the only person trained to identify and correct the cause. Ignoring a soreness is flirting with danger, and attempting to correct the problem yourself is tamperng that can be expensive both in time and to your health.

CHEEK BITING

Biting the cheek with new dentures is common. It in no way implies that the teeth are too wide or incorrectly positioned. It can be the result of flabbiness of the cheek muscles, which the dentures will help overcome in a few days. Sometimes when denture teeth have been adjusted to your own chewing patterns, the outside borders of the teeth may be sharp which can cause cheek biting. If the condition becomes troublesome, your dentist will round over the outside edge of the lower teeth. For some people, it may be necessary to do this two or three times.

TESTING THE FIT OF A NEW UPPER DENTURE

When you grasp the front teeth of your upper denture with your fingers and apply pressure, any well-fitting denture can be moved. Patients seemingly forget that the denture is fitted to a soft tissue foundation. Any solid mass that rests on a moveable foundation will change position when pressure is applied. Movement is possible because the denture is resting on a foundation that gives under any pressure. The extent of the movement will vary and depend entirely upon the amount of moveable tissues

CONTACT IN FORWARD PART OF UPPER DENTURES

Some patients complain that the front part of the upper denture does not contact the tissue. With new dentures, it is very unlikely that this condition would exist. The patient's ability to judge whether or not the denture is in contact is limited by the sensory nerve supply to this area. This simply means that there are not enough nerve endings in this area to indicate to you that the denture is in contact. Your dentist can easily determine by a disclosing material where tissues contact the denture.

BURNING SENSATION

Occasionally patients will complain of a burning sensation in the roof of the mouth. This appears to be much more common with women. Sometimes the burning sensation appears shortly after the delivery of the denture, or sometimes it may be weeks before this problem occurs. Most patients report that it disappears when the dentures are removed from the mouth. There is no question of the discomfort that this condition creates. While the burning sensation undoubtedly has been triggered by the denture, it obviously involves a nerve condition beyond the control of any dentist. As yet, no specific cure is known. Observations indicate that it will continue for a few months or as long as two years and then disappear. Consulting a physician is indicated.

DENTURE TEETH THAT CLICK

The majority of the people who click denture teeth are not aware of this condition. The clicking of denture teeth, unlike clenching, is usually not damaging to the mouth. Clicking usually bothers others far more than it does the patient. There are three factors that can lead to the clicking of dentures. First, there are those who do so as a result of nervousness. The patient, often being unaware of this, will

resent or even deny they are guilty of clicking their teeth, and the only sensible treatment is self discipline. The second, and perhaps the most common cause, is a loose or floating lower denture. The looseness is usually the result of a retracted tongue position. Here again, many patients are not aware of this clicking, and it can occur in all age groups, but is definitely predominant with older people. The dentist is faced with a situation for which he can probably do very little to help. The third factor is age and disease. Some older people develop tremors or lose some of their muscular control. When clicking occurs in this group, there is nothing a dentist can do to help. Since most people click their teeth unknowingly, criticism may cause them frustration and embarrassment.

FACTORS THAT LIMIT EFFICIENT OR COMFORTABLE DENTURE SERVICE

There are, of course, many factors that limit the effective service of dentures. The most common is a loose lower denture, which is discussed in detail in another chapter. To enumerate all factors would be too time-consuming and technical. However, there are some problems that warrant discussing.

Many patients think complete dentures should be as efficient as the natural dentition.

Such is never possible, and one observation will illustrate the reasons. A person with healthy teeth and supporting tissues is capable of exerting at least twenty times the force that a patient with dentures can exert. Thus, it is apparent that crushing and shearing forces are not as strong and effective as those in natural teeth, and the patient wearing dentures cannot realistically expect to perform as efficiently as one with natural teeth.

Another problem is the patient who has no lower ridge. The ridge is flat, and the lower denture has no outside flanges. These patients must learn to accept more limitations than normal. The denture can easily be displaced and learning to chew in a straight up and down stroke is absolutely essential. Such a patient should accept changes in selection of foods to accommodate the impaired condition which exists.

An increasing problem is the clenching of the teeth during the day. It occurs in all age groups and creates chronic soreness which can result in an amazing loss of bone in a relatively short time. Many patients will insist they are unaware of clenching. Some do it only under certain conditions, or at certain times of the day. Some say they do so because the dentures are loose. But whatever the reason, it must be stopped if one is to avoid serious damage to the mouth. Returning to

your dentist for adjustments provides only very temporary relief, and the time will soon come when he can no longer help you. People who clench their teeth are presenting their dentist with a problem ordinarily beyond his ability to control. If he were to treat this as strictly a dental problem, one would be told to keep the lower denture out. Not wearing the lower denture would prevent clenching. If you refuse to do this, you must either break the habit or suffer serious consequences. If you have made a sincere effort to avoid clenching, but to no avail, you should see your physician.

The last problem is chronic soreness of the lower ridge with patients whose alcoholic intake is beyond their own individual tolerance. We are not discussing alcoholism, but a large group of people who drink more than average. For reasons too technical to discuss here, it is a fact that the tissues of the mouth will suffer when some people drink alcoholic beverages in excess. The soreness is usually more acute if there has also been a considerable loss of the ridge. Here again the problem is common to all age groups, and all types of mouths. How much or how often you drink is not for a dentist to say, but if you are one of the many who are suffering from chronic soreness of the lower ridge, check your drinking habits. Moderation may be your only solution to successful denture service. Here is another ex-

ample of a dental problem beyond control of a dentist. Consultation with your physician is indicated.

PRESSURE ATROPHY

Pressure atrophy (shrinkage of tissues) is a condition that exists because the mouth tissues are unable to withstand the normal pressures of dentures. The tissues covered by the dentures appear discolored and sometimes blotchy. Usually, this condition is not associated with pain or discomfort. The cause or causes are unknown, and occurs only when the tissues are subjected to pressures. Treatment consists of reducing to a minimum all pressures against the dentures. A soft diet in conjunction with a good cookbook can be very helpful, because a well-balanced soft diet is essential. Response to treatment is slow, and it may be necessary to remain on the soft diet for an indefinite period of time.

SNEEZING, COUGHING AND YAWNING

Sneezing and coughing by their very nature create abnormally high air pressures against dentures and as a result can easily dislodge them. Yawning will create muscular pressures against dentures which is also capable of dislodging them.

While many people will maintain that their

dentures do not dislodge during any of these three functions, it is safe to assume that the majority experience looseness. One cannot expect dentures to remain in place during sneezing, coughing or yawning. One may cover up the problem by placing his hand over his mouth. This is not only a sensible precaution, but also the polite thing to do.

LOOSE LOWER DENTURES

Loose lower dentures are probably the most common complaint of patients concerning their dentures and a problem about which much misunderstanding exists. Very often when lower impressions are taken, they resist removal because of the adhesive qualities of the impression materials. The patient may expect the same quality in the new denture. However, the plastic of the finished denture does not possess the same adhesive qualities as impression materials, and, therefore, removal of the finished denture in no way compares to the removal of the impression.

The word "tight" should never be used in reference to lower dentures, because they are not tight in the sense that we commonly use the word. A person enjoying successful denture service has a lower denture that stays in place during most of the mouth functions. It is in no sense tight. People getting along well with

lower dentures have no problem removing them. They are essentially dislodged by the tongue and can be removed from the mouth with no effort.

Tongue position is one of the most important factors in creating stability of the lower denture. Examination of mouths disclose that 70 to 75 percent of the people have normal tongue positions, and 25 to 30 percent have retracted tongue positions. These retracted tongue positions are also referred to as awkward, undesirable, or poor tongue positions. If you have a retracted tongue position, you will not have what most dentists refer to as the "knack" of wearing a lower denture successfuly. If one had the opportunity to observe tongue positions, the routine procedure would be as follows: Ask the patient to open only wide enough to accept food. If you see the top surface of the tongue and only the tops of the teeth, you are looking at a normal tongue position. (See Fig. 1 and 2, page 37.) On the other hand if you see the tops of the teeth, the inside surfaces of the teeth, the floor of the mouth (that part of the mouth below the teeth), and the tongue at the back part of the mouth, you are looking at a retracted tongue position. (See Figs. 4 on page 39, and 6 on page 41.) The importance of tongue position is not only helpful for the tongue in carrying out its many functions, but it also

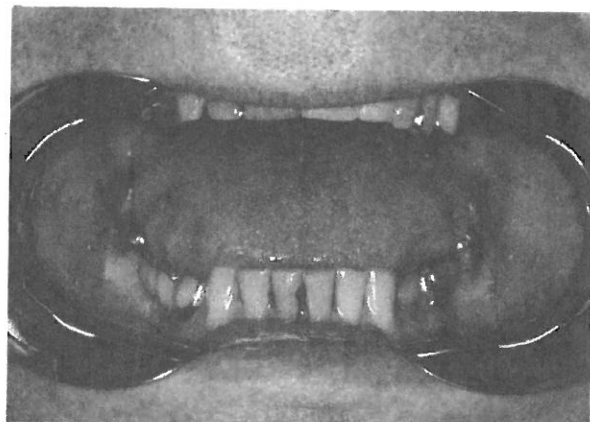


Figure 1

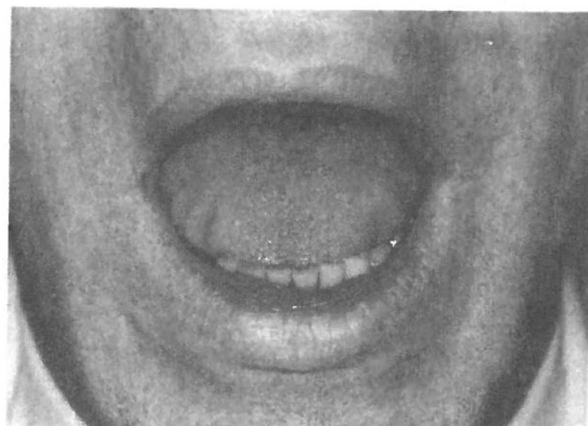


Figure 2

indicates the position of the floor of the mouth. In order to create a seal or establish a partial vacuum in the lower denture, the inside flange of the denture must be in contact with the floor of the mouth. (See Fig. 7 and 8, page 42.) When the tongue is in a retracted position, the floor of the mouth is downward and out of contact with the flanges of the lower denture. Thus, the seal is not available and the denture is loose, and as many patients say, "it floats". Retracted tongue positions can prevent succesful denture service even with the best constructed dentures. A normal tongue position is one of the most essential ingredients necessary to stabilize (hold in position) a lower denture. Without stabilization, lower dentures cannot satisfactorily carry out their normal functions and invariably will be a cause of soreness of the lower ridge.

The pictures on page 37 show the position of what dentists ordinarily refer to as a "normal tongue position". Fig. 1 was taken using lip retractors which gives one a better view of the inside of the mouth. Fig. 2 illustrates that when the mouth is opened about the amount which is necessary to accept food, one will see the top of the tongue and only the top surfaces of the teeth.

The pictures in Figures 3 and 4 are of the same patient and were taken using lip retractors to give better views of the inside

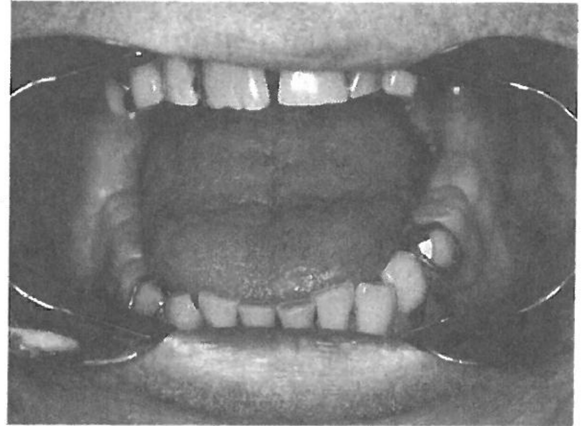


Figure 3

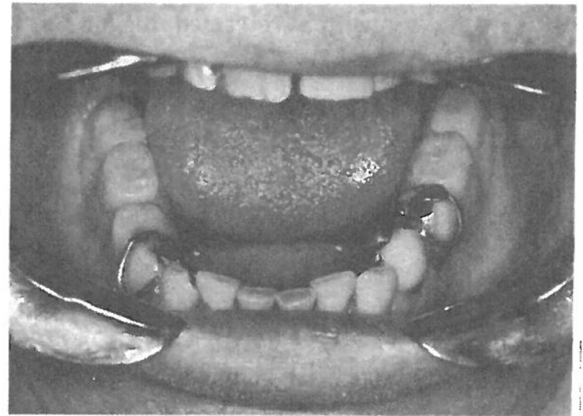


Figure 4

of the mouth. Figure 3 illustrates a normal tongue position, while Figure 4 illustrates a retracted or awkward tongue position. Note that in Figure 4 the tongue is backward and downward, and the floor of the mouth can be seen along with the inside surfaces of the lower teeth. People who normally use a retracted position as the rest position for their tongue (approximately twenty-five percent of the thousands of patients that have been examined) have difficulty in stabilizing the lower denture. This is because when the tongue is downward and backward, the floor of the mouth is down. The seal of a lower denture is established between the floor of the mouth and the inside flange. When the floor of the mouth moves downward, as is the case with a retracted tongue, it becomes impossible to create and maintain a seal for the lower denture, and it is easily displaced.

Figures 5 and 6 are pictures of the same patient demonstrating a normal tongue position, as in Fig. 5, and a retracted tongue position as in Fig. 6.

Figures 7 and 8 are pictures of a patient wearing upper and lower dentures.

In Fig. 7, the tongue is shown in a normal position. A pointed instrument has been placed between two front teeth of the lower denture. When an upward pressure is applied under these conditions, the lower denture will offer

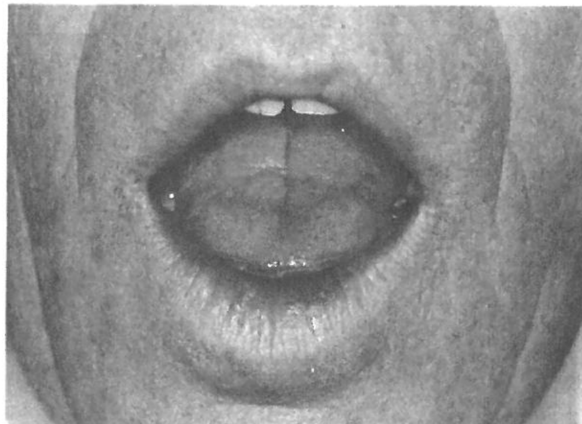


Figure 5

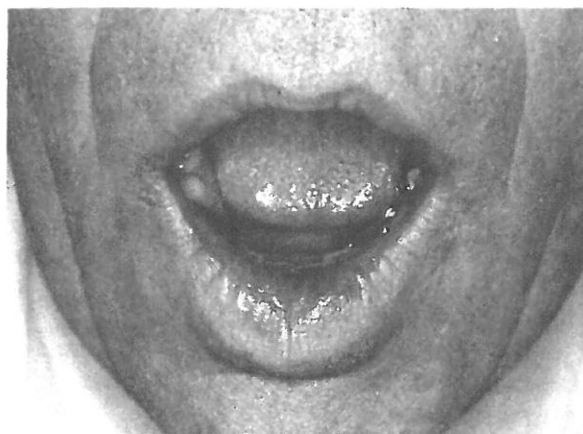


Figure 6

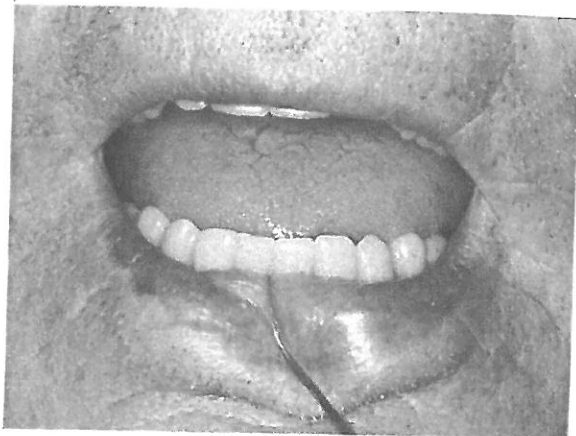


Figure 7

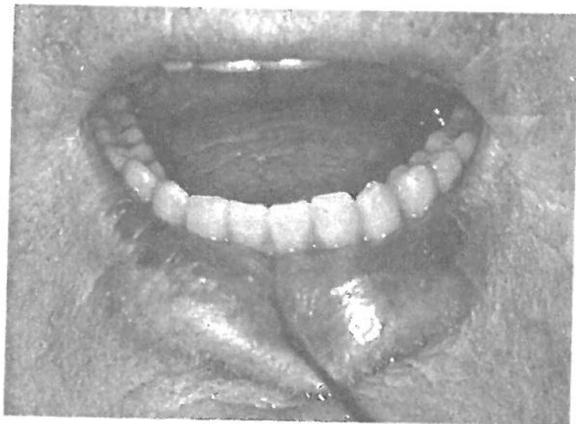


Figure 8

resistance to being displaced.

Fig. 8 is a picture of the tongue in a retracted or awkward position. Under these conditions the lower denture is usually displaced with little effort.

If you wish to demonstrate this on yourself, use the following instructions. First, obtain a wooden match or something similar which can be used in place of the instrument in the illustration. The use of a hand mirror to watch the tongue position is also advised. Close the mouth and swallow, then open slowly with the tongue in a normal position, filling the floor of the mouth. (This may require some practice.) Place the piece of wood between two of the front teeth and apply an upward pressure. (NOTE: Do not use your thumb or finger in place of the piece of wood because this would push the lower lip downward and could easily break the seal in this area.) If at any time during this experiment the tongue moves from a normal position, be sure to start the entire procedure over. If the experiment is successful, then drop the tongue downward and backward and see how easily the denture moves out of place. Keeping the tongue in a normal position is commonly referred to as the "knack" necessary to master the lower denture. It is this simple, but it may require a great deal of practice for you to become proficient in developing a normal tongue position.

HOW TO ACQUIRE A NORMAL TONGUE POSITION

Everyone is born with a normal tongue position. Retracted tongue positions develop early in life and apparently are acquired through habit. When people have their natural teeth, an awkward or retracted tongue position does not interefere with ordinary mouth functions. However, when natural teeth are lost, a retracted tongue position may prevent a successful adjustment of dentures. For those who are interested in helping themselves to enjoy satisfactory denture service, one must make the effort to acquire a normal tongue position. It is interesting to note that television performers who are good speakers or good singers always have a normal tongue position. Observing them perform will help one to learn what is meant by a normal tongue position.

If one attempts to establish a normal tongue position while watching in a hand mirror, he will note that when the tongue is in a normal position, the lower denture stays in place better. (See Fig. 3 on page 39 and Fig. 5 on pg. 41.) If this suggested type practice does not help to maintain a normal tongue position, there are a series of four tongue exercises which have been used with a great deal of

success. Tongue exercises have been used for years by many speech therapists, and these four exercises were selected to enable one to make an intelligent effort to acquire a normal tongue position. To learn these exercises, some dentists refer their patients to speech therapists, others prefer to direct the exercises themselves, while many believe it is better for the patient to work with the exercises alone. Any of these methods are acceptable and satisfactory. The main point to remember is that a retracted tongue position is the patient's problem, and efforts to correct it can be made only by the patient. Since correction requires time and effort, some people will never try. Another unfortunate situation is that some will put forth the effort, but because of their inability to re-adjust or retain muscles, their results will not be entirely satisfactory. However, since this is a serious problem for the patient bceause it affects the retention of lower dentures, one has much to gain by any effort made to acquire a normal tongue position.

INSTRUCTIONS FOR TONGUE EXERCISES

These exercises are not complicated, but you may find yourself very awkward at first. The lower denture should be removed and the exercises practiced about five minutes in the morning and five minutes in the evening. At

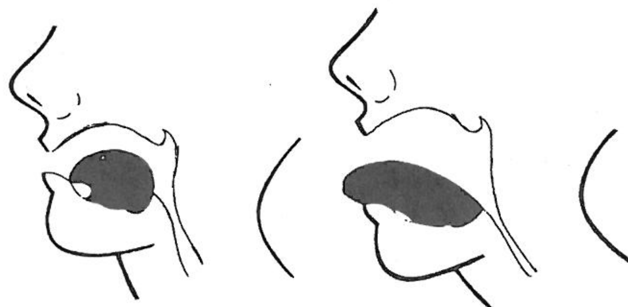
first, certain parts of the tongue may be sore, but in a short time, this soreness leaves, and the exercises can be practiced as often as one may desire. The time required to acquire a normal tongue position will vary with each individual. Experience has shown that satisfactory results can be obtained in three to four weeks. It is only natural to expect younger patients to respond more rapidly than older patients.

Remember that those who enjoy successful denture service are usually endowed with normal tongue positions. If you have a retracted tongue position, it is no fault of your dentist, and unfortunately he can do nothing but talk to you about it. If there is anything to be done about it, you must do it yourself. Your ability to wear lower dentures will depend on your ability to maintain a normal tongue position. If you are unable to do so, you must accept the fact that your lower denture may always be loose.

TONGUE EXERCISES

Exercise 1. Thrust the tongue out and in. This should be done as rapidly as possible. In performing this exercise, the tongue moves out beyond the lower lip from an eighth to a quarter of an inch.

Following are the exercises:

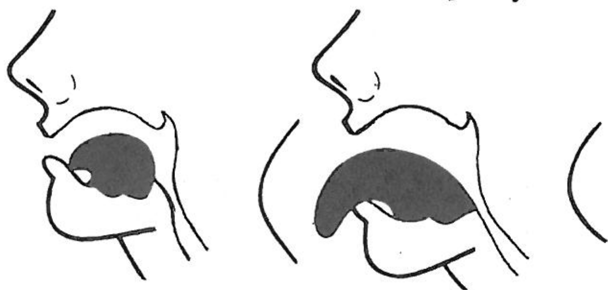


Tongue position in. Tongue position out.

Exercise 2. Swing the tongue sideways rapidly. The tongue is extended out only to the top of the lower lip. The movement from side to side takes place while the tip of the tongue moves through the center of the mouth.

Sketches show extreme swing of tongue.

Exercise 3. Thrust the tongue out as far as possible and then pull it back quickly.



Tongue position in. Tongue position out.

Exercise 4. This exercise brings the tongue up to its highest position in the forward part of the mouth. This is done by saying "eeyah." The full benefit of the exercise can best be obtained by saying "ee" in a high pitch and then the "yuh".

Sketch No. 1 Sketch No. 2

THE TONGUE AND ITS IMPORTANCE TO A DENTURE PATIENT

It has been said that in order for one to possess the so-called "knack" of wearing a lower denture successfully, one must have a normal tongue position. It has also been stated that the seal for a lower denture is made possible by contact of the floor of the mouth with the inside or lingual flange of the lower denture.

The tongue controls the movements of the floor of the mouth, and, therefore, by observing the position of the tongue one can determine the position of the floor of the mouth. The movements of the floor of the mouth in an upward and downward motion are relatively extensive. Observations indicate the average distance is one-half inch. For the sake of illustration, we will use three levels of the floor of the mouth, namely, the low level, the normal level, and the high level.

The low level exists when the tongue is in a retracted position. Under these conditions, no seal exists between the inside flange of the lower denture and the floor of the mouth, which simply means the denture is loose.

The normal level of the floor of the mouth, which exists when the tongue is in a normal position, is the level at which the great majority of mouth functions start and finish. This is the level that normally provides the maxi-

mum seal and retention for a lower denture.

The high level of the floor of the mouth is reached only when the tongue is forced to extend itself.

Examples of the most common functions of the mouth are eating, swallowing, and speech. All of these functions are most effectively performed when the tongue position is normal and the floor of the mouth is at the normal level.

In the first of these functions (eating), it should be kept in mind that all food is received into the mouth with the tongue. In order to do this, the tongue must first assume a normal position. Food that has been placed in the mouth is always on the tip of the tongue. The tongue then places it on the top surface of the lower first molar. Immediately following this movement, the tongue and the middle part of the cheek form a trough with the teeth in an effort to hold the food in place while chewing. Any food that falls into the floor of the mouth is picked up by the tongue. To do this, the tip of the tongue moves slowly downward, taking the floor of the mouth with it to the lower level. As a result of this movement, the seal of the lower denture can be lost. Any function of the tongue that drops the level of the floor of the mouth from a normal level to a low level can cause looseness of the lower denture. Thus, to overcome looseness during

this movement of the tongue, one should close the mouth and keep the teeth in contact.

The function which extends the tongue also creates the high level of the floor of the mouth. For instance, when the tongue reaches into the cheek or under the lips, it is considerably extended, and as a result moves the floor of the mouth to the high level. To clear the mouth of food, the tongue reaches into the cheeks and the numerous folds of tissue. For people with their own teeth, this function is ordinarily used many times during and after eating. However, the presence of dentures will greatly restrict this particular function of the tongue, and to offset this, one should remove dentures as often as practical for cleaning. To prove this to yourself, remove your dentures and note how easy it is to touch almost any part of your mouth by simply extending the tongue and moving it around. Now replace the dentures and note how difficult it is to reach into the cheeks or under the lips. Attempts to carry out this function will usually dislodge the lower denture and cause soreness in the floor of the mouth.

Swallowing is another of the functions requiring the tongue to assume a normal position. Most patients attach little significance to the function of swallowing, and this is probably because they associate it with the swallowing of a liquid from a glass. However, the swallow-

ing of food or saliva is a far more complex function and involves the use of the teeth as well as the tongue. The first stage of swallowing requires that the teeth be brought together. The tongue then assumes a normal position, and the patient is ready to swallow.

Oddly enough, many dentists feel that the function of swallowing food and saliva brings the teeth together more often than does the actual chewing of food. However, without this constant swallowing and reseating, most upper dentures would eventually drop. The reason being tiny glands which produce mucous are in the roof of the mouth. These secretions, unless squeezed out from under the denture, act as a hydraulic pump and will dislodge a well fitting upper denture.

The third function, that of speech, is greatly enhanced by the presence of a normal tongue position. The majority of sounds for speech are made by various movements of the tongue. In making these movements, the tongue touches the palate, the front teeth, and the lips. For instance, to pronounce a very common word such as "the", requires only a single movement of the tongue to the upper front teeth. People who are wearing dentures will find speech less difficult if they possess a normal tongue position, because it permits ordinary conversation with less disturbance to a lower denture. To demonstrate this to your-

self, use a hand mirror and place your tongue in a retracted position. While it is in this position, attempt to say "the". Note the extensive movement necessary for the tongue to reach the upper front teeth. Now place your tongue in a normal position and say "the". Note how little movement is required and also how much better the lower denture stays in place. When one considers the thousands of times each day the tongue moves to carry out the function of ordinary conversation, it becomes increasingly evident how important it is to have a normal tongue position if you wear dentures.

Because of all the problems associated with a retracted tongue position, it is well worth any effort that may be necessary in an attempt to acquire a normal tongue position. This phase of the denture program is entirely your responsibility.

LIFTING THE LOWER DENTURE WITH THE TONGUE

The complaint of being able to lift the lower denture with the tongue is quite unreasonable. Everyone can do so, because dropping the tongue breaks the seal with lingual flanges. With the seal broken, there is nothing to prevent the tongue from lifting the lower denture off the ridge.

ROUTINE EXAMINATION

After obtaining dentures, many patients feel they no longer need to consult a dentist. This attitude is very wrong, and can be the cause of extremely serious problems.

The changes that OCCUR in the tissues supporting the dentures occur very slowly, and are compensated by the patient without awareness of the changes. Such changes cause the dentures to be ill-fitting and produce trauma to the supporting tissues. This trauma over a long period of time can be responsible for serious problems.

All denture wearers should consult the dentist on a regular basis usually once a year at which time the mouth is checked for abnormalities, as well as the dentures evaluated. If nothing needs attention, your dentist will so inform you. If, however, something should be changed, it can be done before serious problems exist.

NEW DENTURES FOR OLD

Most people wear one set of dentures too many years before having them replaced. The concept that dentures are made to last a lifetime is false. Dentures, like any commodity, will in a sense wear out. Their efficient usefulness to a patient has definite limitations in terms of time. The value of dentures to a patient is limited by two factors: the first,

changes that occur in the patient's mouth which are by far the most important, and the second, the actual wear to the denture. In discussing the first factor, it is well to be reminded that the tissues covered by the dentures are constantly changing at a rate far greater than any other part of the body. It is observed that the greatest amount of "shrinkage" of the supporting ridges occurs when the dentures are not stable. Well fitting dentures can preserve the underlying tissues. These changes are always of a destructive nature and result in a loss of tissue available for the support of the denture. In other words, the statement that your ridge has changed indicates to you that your ridge is smaller. Changes that occur in the tissue supporting a denture allows the upper denture to move upward and backward and the lower denture to move downward. The result of this brings the chin closer to the nose. As the chin comes closer to the nose, it also moves forward. This forward movement is in itself destructive to the tissues, because the teeth are no longer coming together as originally intended. The amount of change that will occur in mouths over a given period of time will vary with individuals. It is a generally accepted fact that changes occur more rapidly in younger people and slow down as people grow older. Therefore, younger patients will need replacements more often. Many patients

continue to wear dentures past their usefulness and as a result hasten the destruction of their ridges. Unfortunately, this destruction is not usually accompanied by pain. Therefore, periodic examinations are necessary.

Every dentist will occasionally examine a mouth that exhibits little or no apparent tissue destruction despite the fact that the dentures have been worn far beyond their normal usefulness. These are exceptions and should be ignored, because they do not apply to the majority of people with dentures. The complications that accompany wearing dentures can best be controlled by periodic examinations.

In discussing the need for new dentures, it must be remembered that the average dentist is reluctant to advise a patient, who is not complaining about his present dentures, that he needs replacements. When a dentist advises a change, the first question a patient usually asks is "Why?" If the patient shows little interest, the average dentist is very apt to dismiss any further discussion. Unfortunately, many denture patients, of long standing, are not easily convinced of their need for new dentures. The average dentist gives his patient professional advice, assuming it will be accepted, and if the patient fails to heed or show interest, the subject is usually dropped.

There is another important factor that has to be considered in replacing old dentures for

new; this is the adjustment to new dentures. Because of the changes that normally occur in the mouth, the ridges are now smaller. In an effort to improve the patient's appearance and restore facial proportions to normal, it is necessary to increase the distance from the base of the nose to the chin. In other words, the distance between the ridges had to be increased. This means more bulk in the mouth and added leverage against the ridges. The old dentures are inefficient and may be damaging to the mouth, but nevertheless, comfortable because changes are slow and the patient accomodates. The ridges being smaller allow the old dentures more latitude in carrying out the normal mouth functions. With new dentures, the additional leverage against the ridges creates new problems for the patient and the dentist. It takes time to adjust the new dentures. Soreness may occur requiring several adjustments. Patients in general resent this added inconvenience and are constantly comparing the old with the new. This comparison is completely unjust, and one must remember if the old dentures were good, new ones would not have been advised. A satisfactory result will be accomplished by cooperation of the patient and the dentist. It is unfair to criticize the work if the opportunity to adjust the dentures wasn't given to the dentist. Adjustment appointments are to be ex-

pected and are a part of the treatment. Since one has much to gain through this service, you should be fully aware of the problem it creates and accept the conditions necessary to achieve a successful result.

DENTURE RELINES

Relining a denture means refitting the existing denture to the tissues. It is accomplished by adding new base material to the inside of the existing denture.

Relining is indicated if the only problem with the denture is looseness. This procedure does not change the "bite" or the appearance in any way. If changes in these items are deemed necessary by your dentist, new dentures must be constructed.

Relining can be done in two methods. One necessitates the dentist keeping the dentures for approximately 24 hours or longer. This method produces the best results and necessarily is more expensive than the second method, which can be accomplished in less than an hour. The second method is valuable for a short period of time, but is not generally recommended for a long period of service. Relines done by the patient himself at home are very dangerous and should never be attempted. Your dentist can advise you in this subject.

ADHESIVES

Many patients demand a degree of stability and retention of dentures that is impossible to attain or maintain. The dentist can easily make a denture "tight", and this creates pathologic pressures which the bone and tissues cannot accept. The result would be pain and extremely fast resorption of the bone with the denture very quickly becoming unstable or "loose". The goal is to create dentures that are stable, yet do not produce soreness, thus maintaining the underlying tissues in a healthy state.

Some movement of dentures is normal as they rest on soft tissues. This fact everyone must accept.

There are certain patient conditions which may cause the dentist to advise the use of adhesives. Such factors as abnormalities in size and shape of the ridges, special health problems, and other factors will influence this advice. The use of any material inside dentures, when not necessary, is never advised. The dentist is the person trained to evaluate mouth conditions. To maintain a healthy mouth, please follow his advice.

GENERAL HEALTH

The general health of denture patients is important because of its effect on the health of the mouth tissues. Most denture patients are

unaware of the fact that the tissues of the mouth are directly affected by one's general health. The amount and type of saliva, the texture and resistance of the mouth tissues, the ease with which injury to the mouth can occur, and length of the healing period are all influenced by a patient's general health. Many of the common disorders, such as sugar diabetes, high blood pressure, ulcers in the digestive system, nervous conditions, etc., can create problems for patients wearing dentures. Overindulgence of alcoholic beverages or poor nutritional habits can also create undesirable conditions in the mouth. A loss of weight will alter the size of the ridges, and any extended illness will usually affect the fit of complete dentures.

AGE

Age presents many problems, especially when one is required to exchange old habits for new or adjust to something entirely different. The slowing of reflexes and a general muscular deterioration can affect one's ability to adjust to dentures. Younger people sometimes forget this and become impatient with the progress of older denture patients. However, it should also be noted that in spite of age, many older patients do extremely well adjusting with new dentures.

CLEANING DENTURES

Dentures should be cleaned more often than natural teeth. They should be cleaned upon arising, after each meal, and before retiring. There are several satisfactory methods available, and for the most part, the choice is entirely personal. There are several denture cleaners on the market in the form of powder or cream which can be used with an ordinary toothbrush or brushes made especially for cleaning dentures. These brushes used with soap and water will keep dentures clean for most patients. The other method is soaking the dentures in any one of a number of good denture cleansers. The denture cleansers are used in conjunction with water. The amount and recommended time of soaking will vary with each manufacturer. Many people maintain they do not have time to soak their dentures and, therefore, simply brush them. While this is satisfactory, it must be remembered that excessive or hard brushing can be damaging. For those who brush their dentures and wear them around the clock, it might be well to soak them occasionally in one of the denture cleansers. Because of the fact that denture plastics absorb a minute amount of moisture, it is possible that in some mouths some odors may be present which might become slightly offensive. Soaking occasionally in denture cleansers will eliminate this condition. Ask your dentist to recommend a cleanser.

SINGLE UPPER DENTURES OPPOSING ONE'S NATURAL TEETH

Any discussion of dentures would be incomplete without some comments on single upper dentures. Contrary to general belief, single upper dentures are a source of much trouble to both the patient and the dentist. Because of the fact that most people wearing upper and lower dentures usually are more satisfied with the upper than the lower, people in general believe that this should be true of upper dentures that oppose natural teeth, or a combination of natural teeth and a partial denture. Since it is estimated that for every person who wears an upper denture, there are about ten that wear upper and lower dentures; comparison by patients is therefore more difficult. The conditions under which a single upper denture functions are entirely different from those of an upper and lower denture.

The pressures applied to the upper denture by natural teeth are many times greater than those applied by lower dentures. As a result, the single upper denture can be easily dislodged and tissue changes occur at a faster rate. Any slight deviation from an ideal mouth magnifies itself when an upper denture is subjected to the tremendous forces of natural teeth. It is safe to say that the majority of

people who wear single upper dentures are not happy about the retention, but when they lose the lower teeth and wear upper and lower dentures, no longer complain about this same retention. The reason is the failure to create the forces formerly exerted by lower natural teeth.

Every time a patient with a single upper denture has a meal, it is easy to subject his denture to pressures that are damaging. Patients with single upper dentures are often tempted to eat everything, and being free of a troublesome lower denture, most of them see no need to change their eating habits. Actually, the same limitations that are placed on upper and lower dentures apply to single uppers. Failure to heed this warning will only result in trouble.

IMMEDIATE DENTURE SERVICE

Immediate denture service is exactly what the title implies. It is a service that starts before the last teeth are extracted and extends only to the time when the mouth has completely healed, usually in a relatively short time. The time involved depends on many factors, such as age, health, infection, etc. Following this healing, further service, such as relining is necessary and new dentures are usually advisable in one year.

If you are at all apprehensive about ap-

pearing before your friends or in public without any teeth in your mouth, then you will want immediate denture service. The principle advantage of this service is that you are never without teeth, and the denture serves as a bandage over the extraction area while your mouth is healing. Immediate denture service provides a practical solution to an otherwise difficult problem.

There are routine and definite instructions a patient may be given, and for convenience they can be divided into three groups. However, your own dentist may find it necessary to elaborate on, add to, or delete some of these instructions.

Instructions preceding the extraction and delivery of the dentures follow:

1. On the day of the last extractions, bring a responsible person along in case you need assistance in returning home.
2. If you are employed, arrange, if possible, to stay home the day or two after extractions.

The following are instructions for the period immediately following the delivery of the dentures:

1. Swelling will usually occur and in various degrees. Considerable swelling will affect the appearance of an individual for several days. The intermittent use of cold packs during the first two days

is advised to control swelling.
2. Consult with your dentist about using "pain" tablets to aid in controlling discomfort for the first few days.
3. The immediate dentures should be kept in the mouth day and night for the first three days except to remove them for cleaning. When they are removed for cleaning, gently rinse your mouth with a mild salt water solution or a mouth wash recommended by your own dentist. Do not remove the dentures for long periods of time.
4. The use of adhesives will help hold the dentures in position. Adhesives should be used in moderation. The natural tendency is to use more adhesive than necessary. Ask your dentist to demonstrate the proper use of adhesive.
5. After the first twenty-four hours, one can use a three percent hydrogen peroxide mouthwash in the morning and before retiring. This mouthwash is mixed ½ hydrogen peroxide and ½ water by volume. The usefulness of this mouthwash would ordinarily be limited to about one week. After that, if you wish to use a mouthwash, any of the commercial types are acceptable.
6. Adjustments necessary the first few days will vary with each individual.

However, some alterations should be expected.

7. The diet for the first week or two should consist of soft foods. Common sense dictates that any pressure applied against the sockets of recently extracted teeth can be painful, and if continued, could alter the normal patterns of healing. Therefore, any food consumed during the early stages following the insertion of an immediate denture should be such that it will require a minimum of pressure. Continue the soft diet until the soreness has disappeared.

Additional information until the mouth is completely healed:

1. For the next several weeks, the process of healing will be taking place. Complete healing usually occurs within three to six months following the last extractions. As the mouth heals, the ridges get smaller. This condition permits rapid settling of the immediate denture. Settling can cause soreness that may require considerable adjusting. As the result of settling, the appearance of the individual is altered.
2. By the end of the healing period, most immediate dentures have become very loose. For the majority of people, this presents a problem and the use of some

type of adhesive will help during this period.

3. Since settling and looseness are a natural result of mouth changes that occur under immediate dentures, it brings into focus the need for further service at the end of the healing period.

DIET AND NUTRITION

The subjects of diet and nutrition should be important to every denture patient. One should again be reminded that dentures rest on soft tissues, and maintaining these tissues in good health requires more than just well constructed dentures. Two of the factors necessary are diet and nutrition.

Any patient who is under a physician's care, relative to diet, should discuss this matter with his physician before accepting any of the recommendations of this booklet. The purpose of this discussion is not to recommend a specific diet, but to educate denture patients to the need of maintaining a normal diet. The occurrence of ordinary nutritional deficiencies are common in older patients, and all denture patients should be warned of the fact that mouth tissues will suffer if good diet patterns are ignored. The soft tissues under denture bases were never intended by nature to be covered. Since they are now covered and also subject to constant and relatively severe press-

ures, a very unnatural condition exists.

General advice for all denture patients is to keep their intake of protein and vitamins B and C at a normal level. Since meat is the most common source of protein for the body, it should be consumed in normal amounts. It is the preparation of meat for consumption that presents problems for denture patients. The various methods that will render meat tender and easy to chew should always be used when possible. Tough meats should not be attempted. Other excellent sources of proteins are eggs, milk and milk products, fish and seafoods.

Vegetables afford a good source of vitamins B and C and should be consumed in normal amounts. Here again is the problem of preparation, and for denture patients, most all vegetables should be cooked.

An excellent source of vitamin C is orange juice or other citrus fruits. One four-ounce glass every twenty-four hours is sufficient. Tomato juice is also a good source, but should be consumed in slightly larger quantities.

WEIGHT CONTROL FOR DENTURE PATIENTS

Loss of weight is an unnecessary complication for patients who are without teeth or those who are making the adjustment to new dentures. In the absence of illness, the maintenance of body weight is dependent upon cal-

orie intake and energy output. Weight loss creates more problems than weight gain to the edentulous patient. As weight loss occurs, a looseness is noticed and relining or new dentures may be indicated. Consult your dentist after weight has stabilized.

REPAIRS TO THE DENTURE

Accidents do happen to dentures, and they usually occur at the most inopportune moments. If the denture is dropped on a hard surface, such as the floor or bathroom sink, breakage may occur. That is why, when cleaning the denture, you should fill the bathroom sink with some water, so the denture will hit the water and not be damaged if it is accidentally dropped. If the denture is damaged, please do not try to repair it yourself. Many of the glues found on the market today will actually damage the denture material. A broken denture must be very accurately fitted together before the repair can be made. If the surfaces to be fitted together have been damaged by other materials, it is very difficult, and sometimes impossible to repair. If you are wearing your denture and feel a small crack in it with your tongue, contact your dentist at once. Do not let the crack grow so that the denture completely separates. If a tooth is broken out of the denture, be sure to save the tooth, so that a tooth of the same color and size can be replaced in the denture.

Repairs to dentures take a relatively short period of time, but the best man to do them is your dentist.

SPARE AND DUPLICATE DENTURES

A number of people whose lives demand constant exposure to the public live in fear of their dentures being destroyed or lost. For this reason, when the original denture is constructed, a duplicate denture is made. A duplicate denture made at this period is relatively easy. Such a denture is an exact duplicate of the original and is reliable for use in such emergencies. Many patients have their old dentures relined to be used in cases of emergency. It must be emphasized that these relined dentures should only be worn for short periods of time.

HOME CARE OF THE EDENTULOUS MOUTH

The dentures should be eleaned daily to keep them in a clean, odor-free condition. Dentures should be brushed with a suitable toothbrush or denture brush over a sink with some water in it to prevent accidents in case the denture is dropped. The tissues of the mouth should also be brushed with a soft toothbrush, using tooth paste if desired. All the tissues of the mouth should be brushed, including the tongue. After meals, if brushing cannot be done, the dentures should be rinsed in water. Periodic soreness of the mouth can be alleviated by removing the dentures from the mouth for short periods of time. Finger massage of the sore areas is sometimes helpful. Rinsing the mouth with warm salt water (1 teaspoon to a glass of water) three times daily may also help. Any soreness that persists longer than two weeks or hemorrhaging of the oral tissues deserves the attention of the dentist. It must also be remembered that periodic examination of the mouth and the dentures by the dentist is a must. Consult your dentist as to how often these examinations should be.

SUMMARY

After reading this book, it should be quite obvious that dentures can, and do, present problems for both the patient and the dentist. These problems sometimes creates serious situations to which ready solutions are not available. Most people are completely unaware of many of the troubles they may face with dentures. This book can serve to alert one to the many facts that should prove helpful in their own denture experience. Most patients who have anything, but an ideal mouth structure, plus the necessary "knack" (normal tongue position), have had to work at learning to wear their dentures. A very important fact, and one well known to dentists, is that the most skillfully constructed dentures do not by themselves ensure patients of successful denture service.

Denture service has to be a two-party operation, and the degree of success will depend a great deal upon the understanding and cooperation of the patient.

Some patients become very proficient with their dentures, and as a result can do almost everything they did when they had their own teeth. This obviously irritates or annoys many other people who are wearing dentures. Some people, who at best, have been only mediocre in most everything else in life, now insist that they must achieve the ultimate with their dentures. However, if you are informed by your dentist that the structures of your mouth are definitely short of being ideal, then learn to accept a sensible compromise. To most of us, compromise is nothing new.

A final word of warning is in order for those who are attempting to achieve the ultimate in denture service or have already arrived at this goal. No one can fool mother nature. The human body, of which your mouth is an integral part, will not for long tolerate unreasonable demands or abuse. Sooner or later your mouth will show all the signs of "wearing out" long before its time. For your own good and for the well-being of your mouth, listen to those who know and can advise you in such a manner that you can derive the maximum benefits from your dentures with a minimum of damage to your mouth.