

The Mystery of the Teeth: Roles and functions entwined with the anatomy

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Course Structure

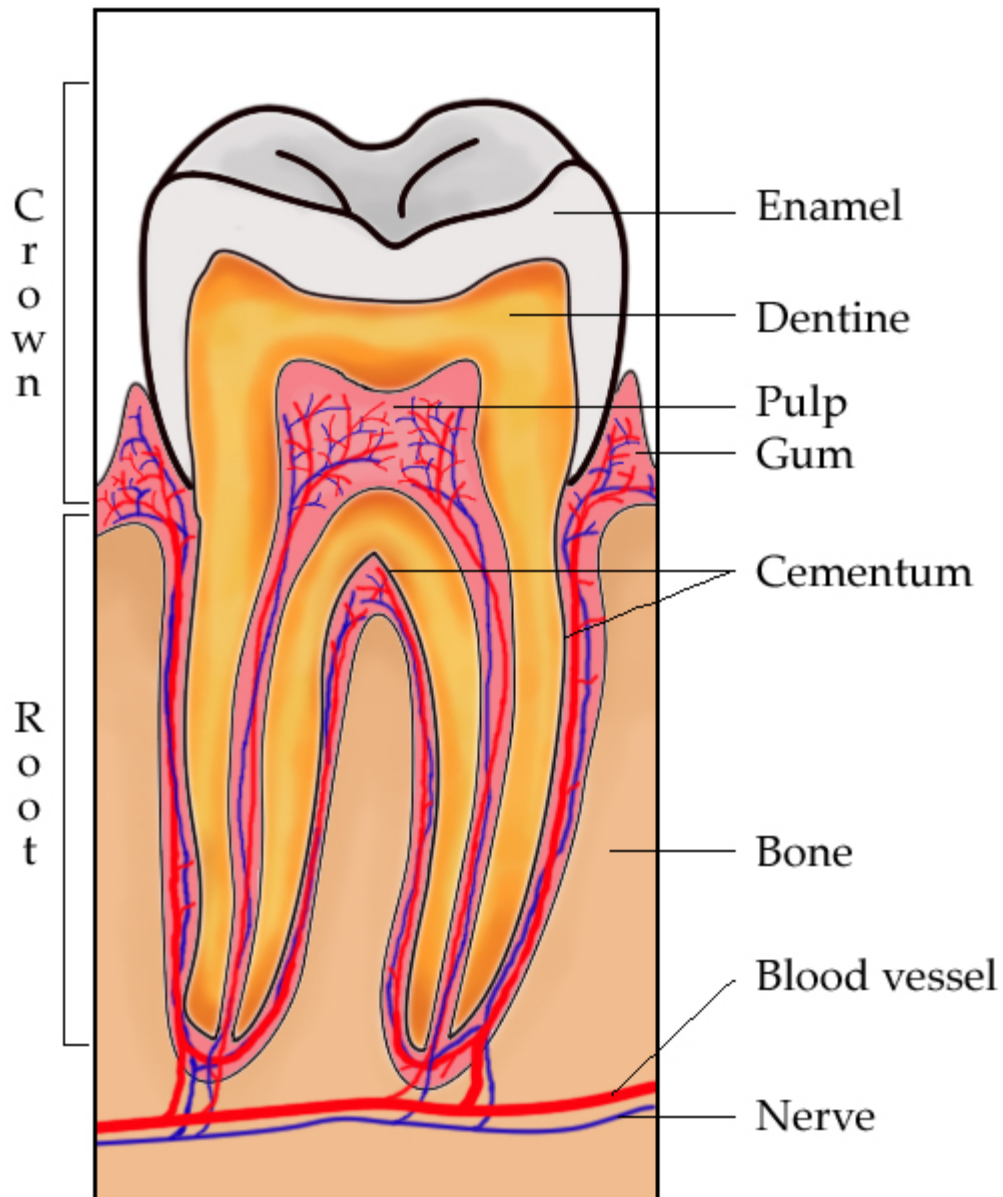
1. Basic Anatomy and Physiology of the mouth and teeth
2. Relationships of the teeth to the other organs and the rest of the body
3. Functional Disruption and causes of distress
4. Toxic Foci Outside Chemical and Metal Contamination in the Study of Dental Degeneration
5. Solutions and the means to Break the Degenerative Cycle
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Part 1

BASIC ANATOMY AND PHYSIOLOGY
OF THE TEETH AND MOUTH

Before we begin to look at cause and effect of dental issues lets look first at the structure of the tooth.

A tooth is any of the normally 32 hard bony appendages that are born on the jaws and serve especially for prehension and mastication of food.



Picture from Wikipedia free encyclopedia

Teeth are made of Dentin, which is the inside of the tooth under the enamel and above the pulp and cementum. It is the soft portion connected to the nerve of the tooth, and needing calcium and other minerals such as fluorine (not chemical), Phosphorus, Vanadium, and Vitamins A, D, & E for strong growth, 70% is inorganic material (dahlite) and 20% is organic with 10% being water. It is secreted by the odontoblasts of the dental pulp this process is called dentinogenesis. It acts as a protective layer and supports the crown of the tooth, but because it is so soft it decays more rapidly than the enamel and when it is exposed it causes sensitive teeth. It is mineralized connective tissue with an organic matrix of collagenous proteins.

The Pulp of the tooth is a soft tissue and cells called odontoblasts, there are other cells also involved fibroblasts, granulocytes, histocytes it is often called the nerve, but it actually houses blood vessels and the nerve endings.

The root of the tooth is housed in the cementum, which is a bony substance excreted by cells called cementoblasts within the root of the tooth and it is thickest at the root apex. Its coloration should be yellowish and is softer than dentin or enamel. This is the location that periodontal ligaments can attach to the tooth for stability. The structure is made up similarly to that of bone, but without vascularization. It is 45% inorganic material (mostly hydroxyapatite), 33% organic (mostly collagen) and 22% water.

The enzyme Rennin also known as Chymosin, and Rennase break down the minerals in milk for potassium, phosphorus, calcium and iron to strengthen teeth.

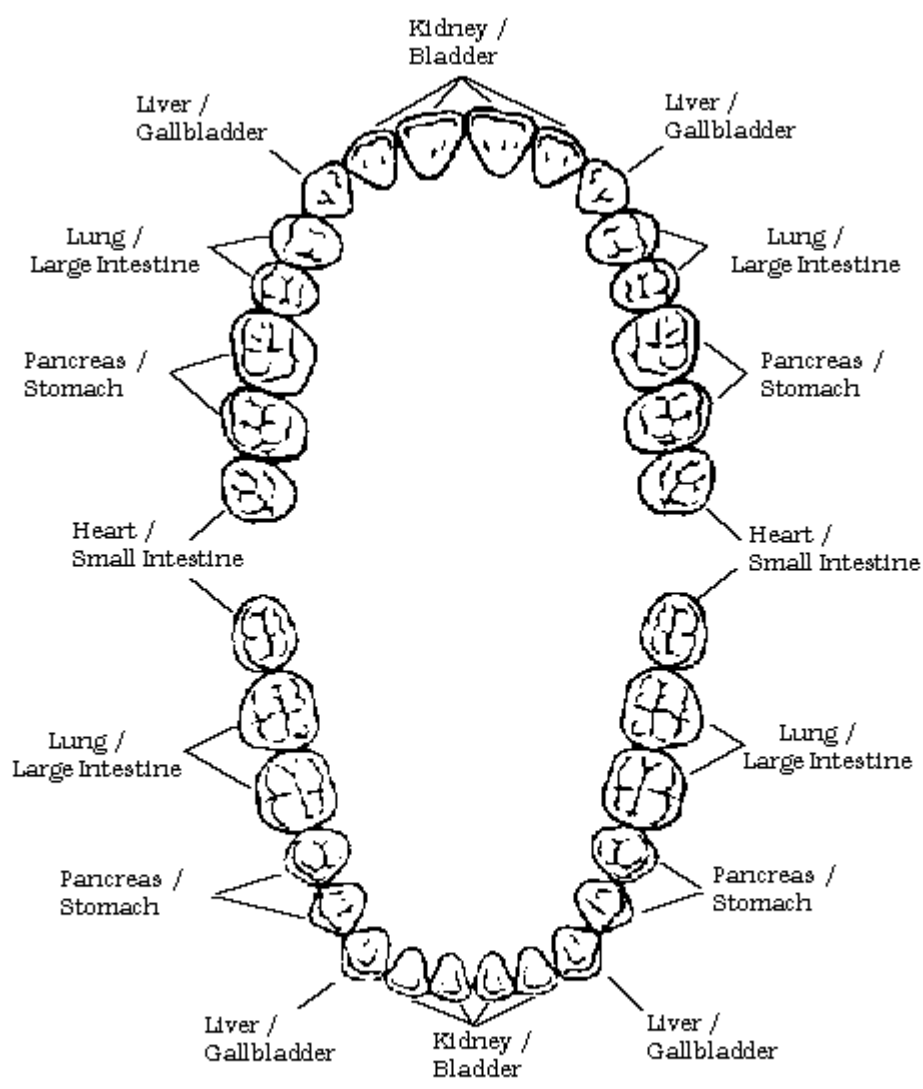
Enamels main components are calcium phosphate and since our body pulls calcium daily for the bones and heart and other locations it explains why we must constantly be replacing it. Some feel that enamel, which covers the teeth, can be easily destroyed by pathogens such as the caries bacteria. Contact with sugar can cause a problem called “clawing or chelation” the sweetest sugar and most damaging is fructose, followed by glucose and then sucrose but the question is now being asked whether it is the sugar that is the major issue or the combination of citrus which speeds up this degeneration issue. Pop (soda) is so damaging because it combines fructose and glucose with ascorbic acid.

Phosphate may be more important than calcium in the teeth because it is in the DNA and RNA and since it migrates slowly from the enamel to the bones, heart, brain, pancreas and other organs it may not be seen as quickly when it is deficient in the diet. Acidic or tart items dissolve the phosphate out of the enamel faster than sugars dissolve the calcium.

Stomach acid is at 2.0 pH so we will look at which others can be damaging that are at a higher pH than that. Lemons are at 2.3, Vitamin C at 2.6, vinegar 2.9, and carbonic acid (soda pop and beer) 3.7. Because of this it is wise not to allow them to sit on the teeth for any length of time. In fact drinking with a straw may be better on the teeth. When this enamel has been a compromised bacterium like Caries and Strep Mutans can do damage. Because of this people with very acidic systems will often have more problems with dental issues than those with a balanced pH. Since this is a known issue rebalancing the body's pH is an obvious need and should be done as quickly as possible. The fastest way to check this imbalance is to obtain pH strips at the local pharmacy or health food store. It is inexpensive and very effective in looking at this larger picture.

Each tooth nerve of a tooth as many corresponding meridian connections to the organs and parts of the body. Because of this it is understandable when we have a tooth ache that many parts of the body feel pain and often we have an underlying body ache which does not seem to have any cause. Fevers can happen due to infections and the immune system may be compromised.

TOOTH REFLEXOLOGY / MERIDIAN CHART



The Wisdom teeth are normally the 2nd molars with the exception of a few people who actually have both their 2nd molars and a set of wisdom teeth or the 3rd molars. These people tend not to be happy when they discover that the removal of the wisdom teeth did not actually take those out but the 3rds and then have to go in a second time for the actual wisdom teeth. But the physical need of the 3rds and the wisdom teeth are becoming obsolete in our society. In the past decades prior to dental reconstruction, fillings and yearly dental care the teeth wore out due to use, breakage, decay and accidents. The 3rds were able to move into the mouth by shifting the existing teeth and filling in the jaw. Allowing mastication of the food that would have been difficult without their growth and replacement of the missing teeth allowed for continuation of health in an already difficult living environment.

Jawbones include the Mandible, which is the lower jaw, and the Maxilla which is the upper jaw made of two bones, which fused at a suture. If it does not fuse you now have the cleft palate syndrome. The baby teeth (deciduous) come in between 2 and 3 years but may take up to 6 years of age and have 20 teeth and are the incisors and then cuspids and then the molars. While these are present in the first 2 years the permanent adult teeth are developing within the upper and lower jaw from buds, which were present at birth. The 6 year molar is the first adult tooth or permanent tooth that comes in. The jawbones grow as the child grows making room for the other teeth, as the adult teeth develop they push the baby teeth out of the way. The 32 adult teeth have specific functions and need to be used for such or the digestive process can be disturbed. The Central and lateral incisors are for cutting, the canines for tearing, the bicuspid and three molars are for grinding and mastication of the food.

If you have TMJ Syndrome also known, as temporomandibular joint work will need to be done to help with the joint of the temporal bone and the mandible. The muscles and joints of the

jaw can radiate to the face, neck and shoulder and may cause problems with chewing and movement of the joint. Noises such as clicking, grinding and popping are not abnormal and side effects are headaches, muscle spasms, toothaches, dizziness, feelings of pain and pressure behind the eyes, pain and ringing in the ears, difficulty opening and closing the jaw and problems of subluxation of the neck which are difficult in rectifying.

The teeth begin to develop prior to birth so the mothers diet and health plays an important factor in the development and health of both the baby and adult “bud” teeth. Teeth can undergo damage during development from other sources. I friend of my parents had very white teeth however she had a very deep indent in the enamel and tooth on all her adult teeth, as though she was wearing braces. It was caused by a very high fever that she had when she was a child and the teeth were being formed. Other things can change the coloration of the teeth. I will never forget the dental hygienist who said to me “you used Tetracycline at some time didn’t you?” I asked her how she knew her reply was that the people who used certain drugs such as Tetracycline can cause the interior pulp of the tooth to turn gray and mine was so she knew I had used it at some time. She was right; it was a drug that was prescribed for me when I was a teen for acne therapy.

The coloration of the tooth can be affected by outside sources not only on the pulp but also on the exterior of the tooth. Dr. Judd goes into this in his book *Good Teeth Birth To Death*. He describes how as calcium and phosphate migrate enzymatically in and out of the teeth, both externally and internally alien ions can get into the tooth structure. If this happens than colorations or spotting of the tooth can happen for example: calcium sulfide, lead phosphate, calcium phosphate, strontium phosphate are white. Lithium phosphate is cream, lithium sulfide is white-yellow, silver phosphate is yellow, nickel phosphate is green, strontium sulfide, magnesium phosphate, manganese phosphate are gray, manganese

sulfide is gray pink. Cobalt phosphate is reddish cream, magnesium sulfide is pale red–brown, mercury sulfide is red, chromium phosphate is violet, copper phosphate is blue, cobalt sulfide, copper sulfide, nickel sulfide, silver sulfide are all black, and chromium sulfide is brown-black although this sounds interesting it causes a weakness and brittle structure to the tooth. These ions come from the heart, muscles, liver, kidneys, bladder, brain, liver, skin, bones and virtually all other parts of the body.

The oral cavity receives it's energy by the trigeminal nerve, which feed the teeth, mucous membranes, and anterior two-thirds of the tongue and motor to the five muscles of mastication: Masseter, temporalis, medial, and lateral pterygoid and the anterior belly of the digastric. The other areas come from the facial nerve. Blood comes from the various branches of the external carotid artery.

The Periodontium is the gums (gingival) that surround and hold the teeth in place. Bundles of connective tissue fibers make up the periodontal ligament, which anchor the teeth to the jaws. The holes that the teeth fit into are the alveolar sockets. One end of each fiber connects to the cementum and the other is embedded in the alveolar socket. Gum disease can be quite serious a study by Dr. Walter Loesche of the University of Michigan School of Dentistry is written of in *The People's Pharmacy* he notes “that older men whose gums bleed regularly have a fourfold increased risk of coronary artery disease than those without periodontal problems. They also seem to be more vulnerable to strokes”

The mouth is also lined with mucous membranes which can be affected by toxicity and allergic responses caused by outside sources, these will be discussed later. There are many minor salivary glands within this lining. The major salivary glands are the parotid (Stensen's duct), the submaxillary (Wharton's duct), and the sublingual glands.

Saliva, which is triggered by the hypothalamus, the location, which controls the hunger, feeding and drinking, centers for the body. Helps clean the teeth and gums as well as makes it easier to swallow the food that has been chewed, and for those who have studied the digestive process is the first step in that long chain necessary for proper absorption.

If the hypothalamus is damaged by surgery, chemotherapy, radiation, or accident the digestive process can be greatly disturbed.

When the saliva is lacking the enzymes amylase that is necessary to break down the food especially starches into maltose and dextrin. Saliva also secrete enzymes to start fat digestion if it is not provided then the pH of the digestion is already off before it even reaches the stomach. If the saliva is not produced sufficiently and the food is not chewed properly the digestive pH is very compromised. The same goes if the saliva is produced and yet proper mastication of the food does not allow the amount or the mixture into the food. Chewing with proper saliva intake is a very important step in our digestive process.

To increase saliva the sense of smell and the taste of bitter foods is very important. A smell can trigger senses, which cause the mouth to water. Bitter foods will also trigger saliva flow and/or increase the production of saliva. Over use of fluids when eating breakdown or dilute the proper use of the enzymes and damage the flow of the digestive process it is believed by many that $\frac{1}{4}$ cup of water is the maximum anyone should drink while eating a meal to allow proper enzyme use and improve digestion and stabilization of the pH process through the digestive track.

When the digestive process is stressed or emotional issues cause a problem in the stomach or digestive track, which cause the regurgitation or vomiting reaction, the fluid that comes up is very

acidic. Because of this the saliva secretion is involuntarily increased by the nervous system to protect the throat and the teeth even before the act is performed since the high acidic secretion would be detrimental in erosion to the teeth and esophageal areas. If someone is fighting Bulimia it is understandable how the forced response of vomiting can cause severe damage not only in these areas but in numerous other ways as well. Both the sympathetic and parasympathetic are involved in the stimulation of saliva but the types differ. The sympathetic nervous system produces a thicker saliva rich in amylase, while the parasympathetic nervous system produces a more watery saliva.

The sympathetic preganglionic neurons that control the salivary glands are located in T1-T3 and fibers which come from neurons in the superior cervical ganglion and go to the external carotid and external maxillary arteries to the glands. The parasympathetic preganglionic neurons that control the submaxillary and sublingual glands are located in the superior salivary nucleus affected by cranial nerve 7. These fibers come from the postganglionic cell bodies in the submaxillary ganglion and work with the facial and trigeminal nerves to reach the glands. (UIUC-COM Neuroscience – Spring, 2001 – last update April, 2001)

Saliva's use in the structure of the tooth still has some debate on whether it is just a deposit called salivary pellicle that covers the entire surface of the tooth and causing a role in plaque formation or whether it actually is a protective barrier between the tooth surface and the acids. The buffering system for the teeth that saliva provides is from the carbonate, phosphate and the protein buffering systems. We do know by many studies that the saliva has natural disinfectant properties and that animals often lick their wounds to help with this process. In humans the antibacterial agents IgA, lactoferrin and lactoperoxidase it may explain that the mouth is the fastest healed location in the body.

Although saliva is 98% water but also contains electrolytes, mucus, antibacterial compounds and various enzymes. And according to Wikipedia contain the following proportions for proper saliva:

2-21 mmol/L sodium (lower than blood plasma)

10-36 mol/L potassium (higher than plasma)

12-2.8 mmol/L calcium

0.08-0.5 mmol/L magnesium

5-40 mmol/L chloride (lower than plasma)

25 mmol/L bicarbonate (higher than plasma)

1.4-39 mmol/L phosphate

Mucus, which mainly consists of mucopolysaccharides and glycoproteins

Antibacterial compounds (thiocyanate, hydrogen peroxide, and secretory immunoglobulin A

Various enzymes the primary three being α -amylase which starts the digestion of starch and lipase fat before the food is even swallowed and has a pH optima of 7.4. lysozyme which acts to lyse bacteria, and lingual lipase which has a pH optimum of 4.0 so it is not activated until entering the acidic environment. Minor enzymes include: salivary acid phosphatases A + B, N-acetylmuramyl-L-alanine amidase, NAD(P) H dehydrogenase-quinone, salivary lactoperoxidase, superoxide dismutase, glutathione transferase, class 3 aldehyde dehydrogenase, glucose-6-phosphate isomerase, and tissue kallikrein.

Cells: as much as 8 million human and 500 million bacterial cells per mL.

The foul odor, which can be attributed to saliva, is due to the presence of these bacteria in the cells such as small organic acids, amines, and thiols.

The electrolytes in saliva are capable of conducting electricity, remember this because it will make much more sense later in this document.

Much of the time we forget the largest item within the oral cavity and it is not the teeth but the tongue, which is covered by hairy filiform and flat fungiform papillae called taste buds. Without the taste buds we cannot tell the different tastes or sensations of bitter, sweet, sour, or salty and without this ability eating loses much of its pleasure, as with those who have lost the sense of smell eating becomes a chore for people who have the taste buds damaged. The tongue helps to move food to the grinding surfaces of the teeth for mastication and then to the oral pharynx and the esophagus.

Even though the pharynx is thought of as part of the throat it is involved with the depression of the tongue. The palatine tonsils may be seen at either side of the oropharynx and the soft fleshy item that hangs is a V-shaped mass called the uvula, which is involved in speech production. The entrance of the trachea is guarded during swallowing by a leaf-shaped cartilage called the epiglottis, which covers the opening of the larynx. In rare instances if the throat is not long enough during the growth process the epiglottis may stick up and be visible with just the mouth open. When this happens the tongue is hitting it during some forms of speech. The sounds, which cause the tongue to be in the back of the throat, may cause a choking or gagging reflex. Because of this the child may not learn how to develop certain speech patterns.

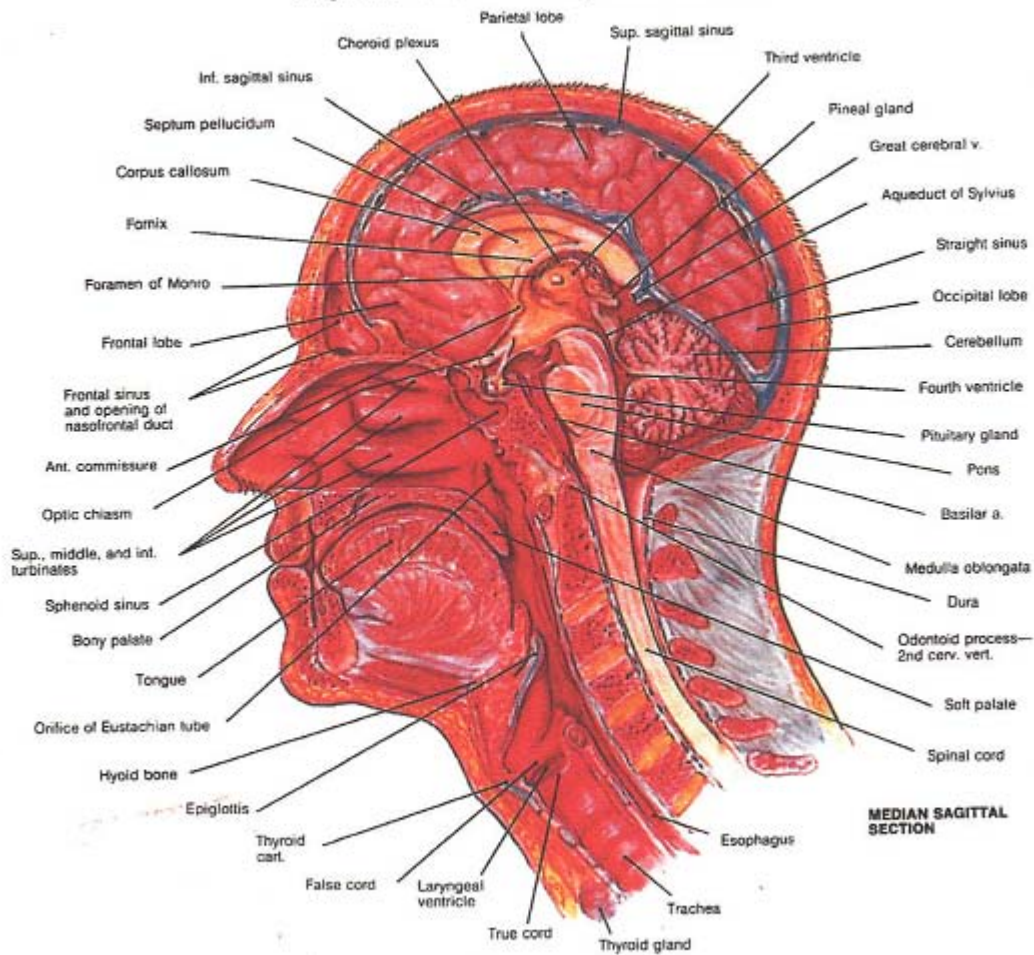
My son went through such an experience; born with a relatively short neck he would only form certain sounds during his first four years of life. We went to several specialists for speech and for testing his IQ. What we found out was his IQ was much higher than normal but nothing could be attributed to his speech problem. It was not until seeing several “specialists” that a nurse told me, don’t worry as soon as he grows I bet his speech will be normal.

Then you'll only have to help him with his speech therapy.

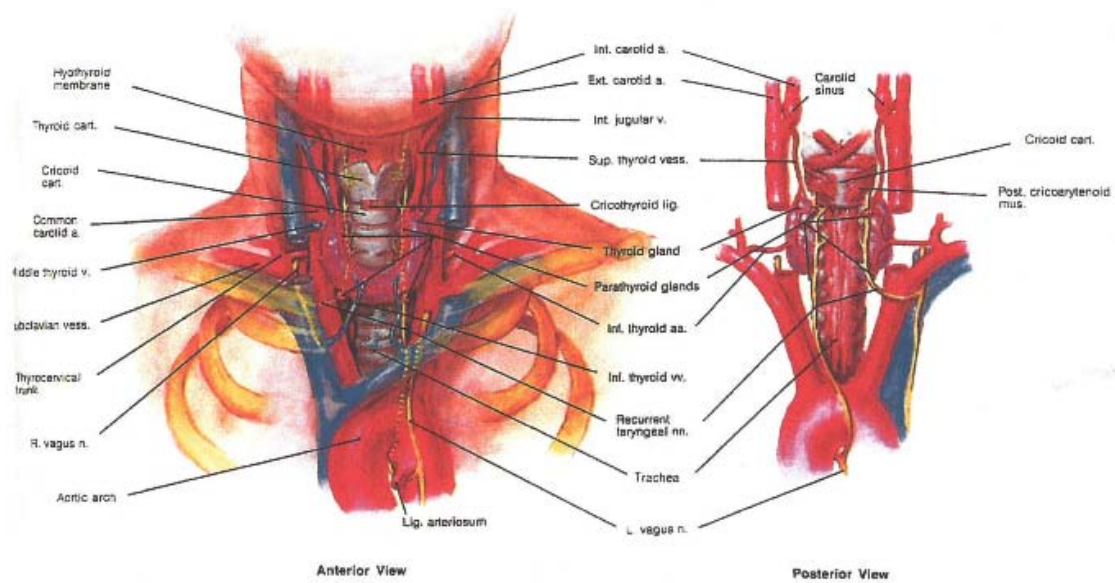
When I asked her what she meant she said that she had seen a similar situation in the past, but the doctors did not believe what she told them. I listened. She asked me if I noticed the uvula sticking up in the back of my sons throat, not the tissue hanging down but the one sticking up. She pointed out that normally you could only see that if you use a tongue depressor and hold the tongue down but on his it was always visible. She said my suspicion is that if his throat grows and that goes below the tongue line that he will start trying to form these other sounds. She also asked me if I had a problem getting him to eat certain types of food that might have a similar texture and that might cause a problem with choking easily. She was right on track.

I'm sure that the medical doctor would have fired her if she heard her talking to me, but thankfully she was not caught. That summer getting ready to start preschool I was worried that my child would be in special education, just before school started he had a growth spurt. His neck increased in height, the uvula was no longer visible and he started talking and trying to make the sounds he could not before. Now all we had to do was work through speech therapy.

Plate 38.
Sagittal Section of the Head and Neck;
Thyroid and Parathyroid Glands

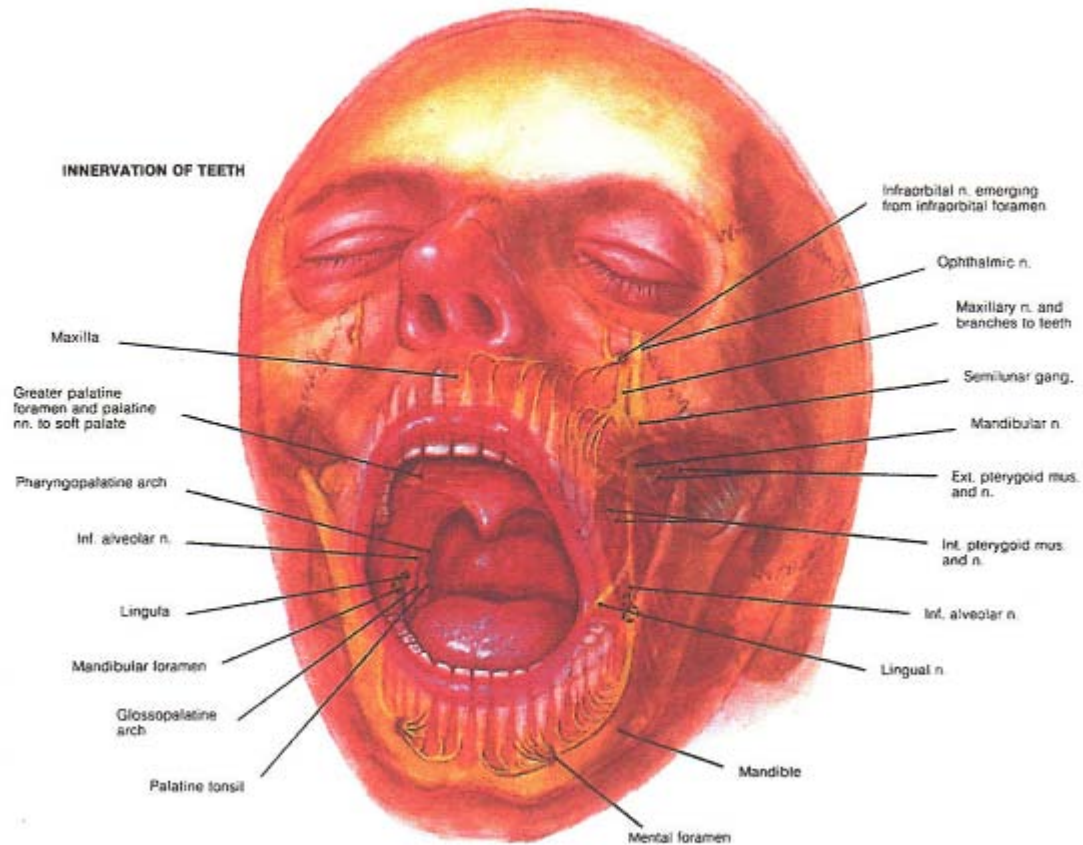


From the John's Hopkins Atlas of Human Functional Anatomy

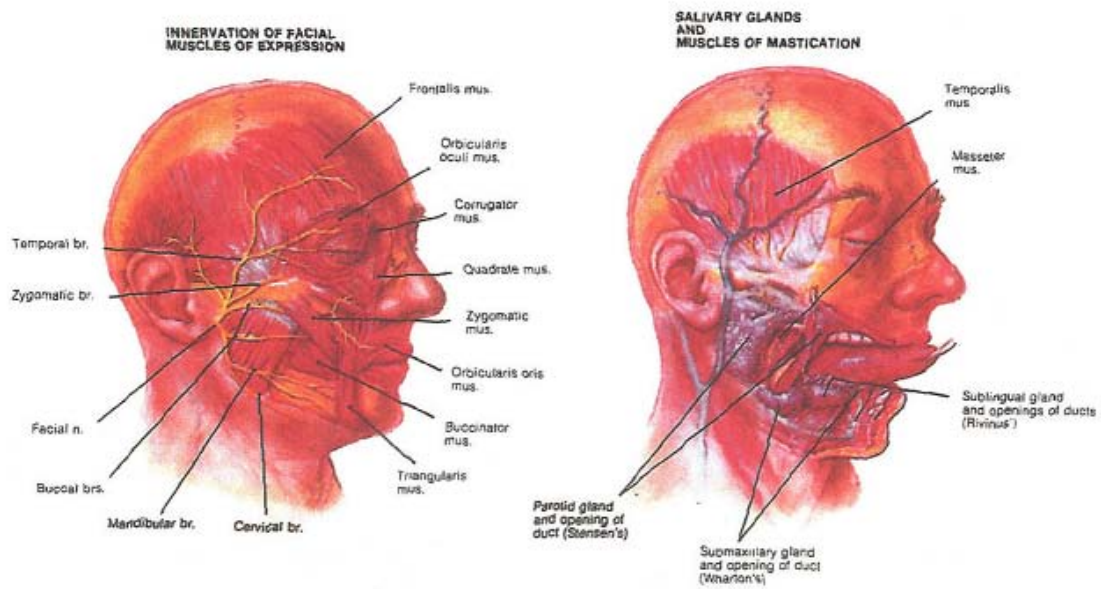


From the John's Hopkins Atlas of Human Functional Anatomy

Plate 37.
 Innervation of the Teeth and Facial Muscles;
 Salivary Glands and Muscles of Mastication



From the John's Hopkins Atlas of Human Functional Anatomy



From the John's Hopkins Atlas of Human Functional Anatomy

Part 2

THE RELATIONSHIP OF THE TEETH
TO THE REST OF THE BODY

Dr Robert Atkins, said “What happens to your teeth can affect your entire body. Those of us in the alternative health field have seen just how true this is.

The attached pages show not only the teeth but also the connection to the body. It is no wonder that when we have a toothache our whole body may hurt.

When you look at this chart it will help you to understand what other kinds of therapies you may need to implement for your clients specific issue.

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Tooth / Organ Relationship Chart

Glands	RIGHT BREAST										LEFT BREAST									
	Anterior pituitary	Parathyroid	Thyroid	Thymus	Proterior pituitary	Midventral lobe of pituitary	Posterior lobe of pituitary	Pituitary	Uterus	Intestine	Proterior pituitary	Thymus	Thyroid	Parathyroid	Anterior pituitary					
Organs	Heart Small Intestine Endocrine gland Pituitary	Breast Thyroid Stomach Pancreas	Lungs Large Intestine	Liver Gall Bladder Eye	Kidneys Bladder, Uterus Rectum, Anus	Prostate	Liver Gall Bladder Eye	Prostate	Stomach Large Intestine	Lungs	Heart Small Intestine Endocrine gland Pituitary	Heart Small Intestine Endocrine gland Pituitary	Stomach Large Intestine	Lungs	Heart Small Intestine Endocrine gland Pituitary					
Teeth	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16				
Upper Jaw	3 rd molar (wisdom)	2 nd molar	1 st Molar	2 nd Incisped (pre molar)	1 st Incisped (pre molar)	Canine (cuspid)	Canine (cuspid)	Canine (cuspid)	Canine (cuspid)	Canine (cuspid)	Canine (cuspid)	1 st Incisped (pre molar)	2 nd Incisped (pre molar)	1 st Molar	2 nd molar	3 rd molar (wisdom)				
Lower Jaw	3 rd molar (wisdom)	2 nd molar	1 st Molar	2 nd Incisped (pre molar)	1 st Incisped (pre molar)	Canine (cuspid)	Canine (cuspid)	Canine (cuspid)	Canine (cuspid)	Canine (cuspid)	Canine (cuspid)	1 st Incisped (pre molar)	2 nd Incisped (pre molar)	1 st Molar	2 nd molar	3 rd molar (wisdom)				
Teeth	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17				
Organs	Heart Small Intestine Endocrine gland Pituitary	Lungs Large Intestine	Stomach Pancreas	Ovaries R.H.I.Breast	Stomach Large Intestine	Liver Eye	Kidneys Bladder, Uterus Rectum, Anus	Prostate	Stomach Large Intestine	Lungs	Heart Small Intestine Endocrine gland Pituitary	Heart Small Intestine Endocrine gland Pituitary	Stomach Large Intestine	Lungs Large Intestine	Heart Small Intestine Endocrine gland Pituitary					
Glands																				
Element	Fire	Earth	Wood	Metal	Wood	Wood	Metal	Wood	Metal	Wood	Wood	Metal	Wood	Wood	Earth	Fire				

Right Side

Part 3

FUNCTIONAL DISRUPTIONS
AND THE CAUSES OF STRESS

The topic of organic or natural dental issues is a limited one there really are not many things that naturally damage the teeth. This does not mean that they cannot be damaged but that the natural list is quite small. Basically, it comes down to the following:

1. Genetics, and the predisposition miasmically or within the DNA for the structure, nerves or inability to fight pathogens has been compromised. By miasmically I mean that something within a previous generation whether viral, or even emotional caused the DNA to become weakened in an area which would affect the DNA.
2. Pathogens:
 - a. Viral: Someone who has had a high fever when younger can cause a deformity in the structure of the tooth as it developed.
 - b. Fungal: Someone who has high levels of candida can cause a toxic overload to the digestive system, which interferes with the proper nutrients getting to the teeth.
 - c. Bacterial: bacterial infections in the jaw or the blood may cause an increase of the caries bacteria or the *Streptococcus mutans* can cause complications to the jaw or gums.
 - d. Parasitic: Parasites are a problem that can happen anywhere in the body, the mouth is no difference, because the blood feeds the tooth and parasites can get into the blood the issues of parasitic contamination is a real concern. If the parasite gets into the tissue or jaw or you have a problem with amebas, prions, rickettsia, etc.
3. Diet and nutrition: The bodies need for specific nutrients for the development and the maintenance of the different parts of the teeth are described in the anatomy portion. The deficiency of these nutrients while the fetus is in the womb will start the building process at a loss. If the mother has enough of the nutrients in stored the child may be able to draw from these reserves, if not the tooth structure is already

impacted. After birth the nutrients must be available to keep strong healthy teeth, both in development and in the necessary nutrients to replenish the daily draw of the nutrients. Since the teeth are used as a storage area for some things like calcium when the body is lacking in other areas it may pull the calcium from the tooth. If the tooth is already depleted or fragile decay becomes much easier and structural integrity may be compromised. Absorption of nutrients is the other factor to consider, if the body cannot use the nutrients that it is given then a degenerative cycle will occur.

4. Muscle and Nerve damage: Since the mouth draws it's energy from other locations namely the cranial and facial nerves and T1-T3 when these nerves have been compromised due to spinal injuries or defects the tooth and jaw may have difficulty also.
5. Blood flow: The veins and arteries which feed the face, and jaw cannot be obstructed or the tooth will die.
6. Trauma: Although heavy metal and outside toxins will also be discussed in this part we are talking of emotional or physical trauma to the mouth and teeth.
 - a. Emotional: We are learning, and this has been quite a revelation to me, just how involved our emotions are to the rest of the body. The emotional traumas or negative thinking can even cause damage to the teeth and jaw. The brain controls so much and when the emotions interfere in the endocrine function, the muscles or the bodies ability to work it can put stress on the organs which store those memories and the teeth that work in conjunction to that organ.

The endocrine function which controls the chemicals we need in our body can again play a factor since they will also interfere with the bodies ability to deal with stress, absorb nutrients and provide the hormones necessary for the other endocrine glands such as the

thyroid, parotid and pituitary. These control how the body works with sugar and how well the immune system can work. How the Autonomic nerves system functions including the Sympathetic and Parasympathetic will affect the bodies' ability to work and to regenerate.

- b. Physical trauma: Although most think of just the sudden shock of the mouth being hit and causing a tooth to break, it may be much less traumatic than that. If the tooth is all ready compromised even chewing on a piece of ice, or something crunchy can cause the tooth to break.

We now know that if a tooth is knocked out and put into a glass of milk that the tooth has the chance to fix itself. Sometimes the blood vessels and nerves will reattach when this is done quickly and then they go directly to the dentist or hospital. The theory is that the enzymes in the milk keep the tooth from dieing all the way until it can be replaced.

But physical trauma to a tooth can be a small chip or breaking the tooth in half horizontally, it can even be a lateral split of the tooth. Any of these may require the removal of the tooth if the nerve dies. But at best, removing the enamel may cause the tooth to become sensitive and open to bacteria and outside sources easily.

The other trauma may be caused by the dental work we have had. I for one have gone through a few of these. The first was when I was a child. When I needed my first filling the dentist told my mother and me that I did not need Novocain, that there is no nerve to the "baby teeth" I wish someone had told my tooth that! Then

later (I still think he needed a new car...) I went in for my normal cleaning and fluoride treatment and was told I had numerous fillings needed, that the cavities were needing to be done. Because of this he filled all 14 of them in two sittings. Thus, the stress to my jaw began and the TMJ issues that I fought with ever since. Let's think about the emotional connection that Louise Hay says for that.... Anger. Resentment. Desire for REVENGE. Ya think? Remember this was the dentist that said there was no pain in the baby teeth.

The first adult issue I recall was a dental student who hit the nerve when giving me Novocain. Although he bragged about being "right on target" to the nerve, I would have preferred reaching over with my hand and giving him a bit of a squeeze to show him how "on target" felt. True, I felt like I should have hit the ceiling, but he would have felt like hitting the floor. These little traumas leave an emotional scar, and may damage the nerve to the tooth. After that the chain of events became longer. I have nerves that don't go where they should, or so I thought, a shot in the lower right jaw would numb my upper left side but not the interior lower right. I know understand that our nerves can go where they want.

This same dental group did my first root canal after the birth of my first child. This is yet another type of trauma to the teeth, the pull of the nutrients from our baby. After her birth I had pain in my left bottom bicuspid and they determined a root canal was necessary. The tooth abscessed every time they tried to fill it. If they drilled into the jaw, it would close back up and not drain, so they would remove the temporary filling and the abscess would go away, they'd refill it

and it would come back. Eventually, after 4 times of this, I was sent to a specialist who determined that the tooth had a “fish-hook” nerve at the bottom and when doing the root canal they were leaving part behind. He then went in, via slicing open the lower jaw horizontally and cut off the bottom of the tooth root and removing the offending “fish-hook” the tooth was then filled and I was on my merry way. This spot in my jaw never abscessed again, but remained warm. Over the years it would sometimes be nagging warmth and sometimes hot. After 20 years the bacteria, which had been trapped into the jaw, had eaten away part of the bone and had degenerated the implanted post so that the whole post, tooth and crown pulled out of the remaining socket of the tooth root. The heat went away, the bad taste that was there when I ate disappeared and the infection has now been able to be worked on. The bone must be repaired and the destruction stopped and regenerated.

8. The other trauma comes from association. A tooth which is next to one in trouble may also become toxic and develop a problem if the original one is not repaired.

As I said earlier some feel that enamel, which covers the teeth, can be easily destroyed by pathogens such as the caries bacteria. Contact with sugar can causing a problem called “clawing or chelation” the sweetest sugar and most damaging is fructose, followed by glucose and then sucrose but the question is now being asked whether it is the sugar that is the major issue or the combination of citrus which speeds up this degeneration issue. Pop (soda) is so damaging because it combines fructose and glucose with ascorbic acid. But sugar as you see is only one of the disruptions that the teeth may undergo.

Periodontal gum disease or cavitations (left when a tooth has been removed and not healed properly) also may have the same toxic response due to the bacterial issue. Failure to completely remove the periodontal ligament lining the tooth socket, large holes, failure to clean the infected adjacent bone, smoking and many other things can complicate gum and cavitation issues.

X-rays and other forms of outside radiation may also play a factor in the health of the jaw, and as we start to understand these Geopathic stresses we see more problems developing. There is much controversy now regarding cell phones and microwave ovens. Heaven help us we're going to need it.

Part 4

TOXIC FOCI
OUTSIDE CHEMICAL AND METAL CONTAMINATION
IN THE STUDY OF DENTAL DEGENERATION

Toxins such as mercury and fluoride have been studied over the centuries, although the dental field which is controlled primarily by the ADA denies this, have been linked to many dental issues. Mercury which has been rated as hazardous by the World Health Organization (WHO), Occupational Safety and Health Administration (OSHA), National Institute for Occupational Safety and Health (NIOSH), Agency for Toxic Substances and Disease Registry (ATSDR) and the American Conference of Government Industry Hygienists (ACGIH) is still classified as safe through the American Dental Association (ADA). All of these other organizations have a threshold limit which has been placed for contamination and allowance of human contact.

It has been known since the 18th century when the term “Mad as a Hatter” was coined for those working with the chronic mercury involved in the felt hat industry that mercury caused adverse reactions. Toxic reactions have been recorded in 1889 in *Charcot’s Clinical Lectures on Disease of the Nervous System*, with rapid oscillatory tremors after contact of mercury; in 1940’s and 50’s when mercury became linked with Pink Disease from baby products and teething powder and about 25 % of the infants who contacted the disease died. Again in 1961 in Japan with the Minamata disease caused from environmental toxicity when petrochemical manufacturers dumped 27 tons of mercury compounds into the Minamata Bay.

In 1803 when Joseph Fox a English dentist invented a fusible metal filling which replaced the old form of filling a cavity with items such as woodchips, cork, molten lead, pine resin, tin or gold foil. This was much easier for the dentist and the patient alike. But this process progressed (or I prefer to term it regressed) when August Taveau of Paris and Thomas Bell of England decided to put shavings from silver coins with mercury to make it soft during insertion and then allowing it to cool quickly. In 1833 the Crawcour brothers introduced this find to the United States.

Shortly after this an organization was developed to help with the conflict of the two types of dentists which were now working in the United States because there were medical dentists with some training and barber dentists who were non-medical and worked on teeth although they were barbers, blacksmiths, carpenters and others. When the medical dentists realized that the mercury was causing a problem the organization known as the American Society of Dental Surgeons (ASDS) was formed in 1848 their goal was to ban the use of dental amalgams and stop the mercury use. When they passed a resolution banning this amalgam by licensed dentists many of the medical dentists and barber dentists revolted because of the financial gain. It was cheaper to use the amalgam and less time consuming.

These people eventually organized the ADA after causing a lack of quorum in the August 1st, 1856 Annual General Meeting of the Society and causing this group to lose its strength. In 1859 the ADA was created. So, we now know that the issues of mercury have been battled since the early 1800's and that the ADA's original founders knew the risks but have since then declared that Mercury simply is not released from the amalgam and consequently the toxic effect is eliminated.

The fights, debates and studies have been done ever since by sources outside the ADA and although there has been numerous such studies the ADA still holds this belief. In fact the ADA has done several information circulars to the dentists and media to remind people of this fact. According to Dr. Wentz "The ADA now argues before the United States' courts that it bears no culpability for its position with regard to amalgam fillings. Indeed, the same organization that has invested so much in becoming the perceived authority over the practice of dentistry, both to the profession and to the public, now suggest that it, incredibly, bears no legal responsibility for the advice it gives. It appears that dental

practitioners, and the public who have faithfully followed the ADA mantra may well have been hung out to dry by the association they have come to trust.”

It is hard to hold fault to the dentists who have been trained and promised by the ADA that mercury is the safest and longest-lasting common filling that the dentist and the patient has to offer today. We all learn from our superiors, and our elders, our professors and the boards that are established to help and protect us. So unless they have had the good fortune of investigating the side effects of mercury they will blindly go along believing this yet to be true. The other very possible explanation to them continuing may be that of legal liability. If you admit that mercury amalgams are dangerous, does that in fact make you liable for the work you have done prior to that time? This could be a very expensive issue, both in court as well as in their practice.

Dr. Wentz also lists over 48 different types of industrial toxins we can add to our problems of our mercury amalgams. Because these toxins will add to that issue in the food we eat, the air we breathe and the water we drink.

I personally have yet to understand why the Nuremburg Rules and the Requirements for Human Experimentation, which were in effect for the sentencing of Hitler's collaborators, do not apply to this organization. But, time will tell.

They have also been linked with brain ailments such as Alzheimer's, hallucinations, epileptic seizures, Parkinson's, and MS are all believed to be linked to toxins of fluoridation, mercury and others. Even our over the counter toothpaste contains, acid, sugar, fluoride, chalk, silica (sand), methyl benzoate, red dye, blue dye, soap, mixing agents and glycerol.

Toxins such as Aluminum are found in items like toothpaste, cosmetics, foil, cooking utensils, pots and pans and as stabilizers for vaccinations and immunization shots, as well as baking powder, salt, and antacid preparations. Mercury, which is in dental fillings, vaccinations, fish and water, is also a toxin. Selenium may help neutralize mercury.

In a 1984 article in *Science Digest*, the American Dental Association estimated that only about five percent of the US population is sensitive to mercury after that time the ADA decreased the number to less than one percent saying that there have only been 100 documented cases of mercury allergies. But according to Dr. Myron Wentz in *A Mouth Full of Poison*, other studies have estimated it to be up to 35% and over 103 million Americans. The common list of these allergies consist of absentmindedness, breathing difficulties, burning eyes, difficulties in concentration, cough, depression, diarrhea, dizziness, ear ringing, eyes watering, itching, crusting or red, flushing, headaches, heart palpitations, hives, irritability, joint aches and pains, muscle pain, nasal congestion, nausea, itchy or tingling nose, runny nose or postnasal drip, rapid pulse, smell impairment, skin rashes or itch, sleeping difficulties, sneezing, swallowing difficulty, swelling, throat irritations and itchy throat, tiredness and fatigue, vomiting, and wheezing. This list was increased in Dr. Hal Huggins book with a percentage of people who suffered some of these issues and many more, I would highly recommend reading *It's All in Your Head*".

Dr. Wentz also lists several diseases aggravated by allergies to metals these include but are not exclusive to Amyotrophic lateral sclerosis (ALS) or Lou Gehrig's disease which is a progressive fatal neurodegenerative disease caused by the degeneration of the motor neurons. Chronic fatigue syndrome, Crohn's disease or Regional enteritis which is an autoimmune disorder with chronic, inflammatory condition of the gastrointestinal tract; Diabetes

Mellitus (hyperglycemia) with type 1, 2 and gestational, Excema and Psoriasis, Food Allergies which are unexplained, Fibromyalgia, Immune mediated pathologies.

Another disease is Lupus erythematosus a chronic autoimmune disease where the immune system attacks the body's cells and tissue, resulting in inflammation and tissue damage. Multiple chemical sensitivity, Multiple Sclerosis also called disseminated sclerosis or encephalomyelitis disseminata, is thought to be both a immune and nervous system disorder and so classified as an autoimmune disease it is a chronic, inflammatory demyelinating disease that affects the central nervous system and the neurons. The cells of the brain and spinal cord that carry information and which create thought and perception and which allow the brain to control the body. The fatty layer around the neurons is the myelin sheath, which helps the neurons carry electrical signals, and the MS gradually destructs this myelin.

Also affected are Myalgic Encephalitis another disease which affects the central nervous system and possibly the immune system as well as organs. Oral Burning and Itching, Rheumatoid Arthritis another inflammatory autoimmune disorder which causes the immune system to attack the joints and often leads to loss of mobility due to pain and joint destruction. Scleroderma is where large amounts of collagen deposit in the skin or around the organs and even the blood vessels this can cause hardening of the skin and associated scarring. Sjogren's syndrome, which is an autoimmune disorder in which immune cells attack and destroy the glands that produce tears and saliva.

Debates are now occurring as to whether it is best to leave the toxins in the teeth or remove them. The first thing I can say is to remember the story about saliva. Saliva "is capable of conducting electricity" due to the good electrolyte presence. So as we look at

the electrical imbalances caused by metal fillings we now understand how the battery effect is being transferred.

As to the removal of mercury the best answer I can give you is see what your body is telling you. If you have developed a severe condition it may be worth your time and money to remove them. But, from personal experience I would recommend the process in a series or quadrant therapy rather than all at one time when you have many. Mercury that is released can trigger a healing crisis where pathogens such as virus' or emotions are stuck, and small bouts of this release may be preferable to larger doses. If you are not working with a dentist, which knows the safe means to remove mercury either change dentists or leave the fillings alone. Removal of mercury fillings can cause the vapors and particles to be inhaled and swallowed when not done properly.

Dr. Hal Huggins is one of the top experts in the field of Mercury removal and has done much of his work while studying the blood chemistry. When he monitored this he found that after removal patients, which incurable diseases were improving. He also ran head long into the brick wall of the ADA and other dentists who did not want to hear his results. He did however have a remarkable breakthrough thanks to Tom Bearden of Cannel 7 in Denver did two five-part series on the subject of mercury toxicity in 1983 & 84 and won an Emmy award for the program. At the 1984 Chicago conference called the "Workshop on Biocompatibility of Dental Materials" he was not allowed into the conference but snuck in using an unclaimed ticket and bought satellite time to beam the information back to Denver. He did a report and as it is said in Dr. Huggins book *It's all in your head* "Today I read the ADA's reaction to Dr. Huggins' presentation. This is truly interesting, for his presentation is scheduled for tomorrow afternoon at two-thirty." It was a case of synchronicity for this, since the ticket that he used which was unclaimed belonged to Dr.

Pinto who began describing the events of mercury toxicity in the 1920's.

Dr. Huggins book *It's All in Your Head* will be required reading for this course and Chapter 7 should be read for understanding the recovery of Mercury Toxicity what the blood shows and what type of tests that can be run to see these results.

Normally there are immune markers on your tissue that help the immune system to differentiate the friendly tissue from foreign invaders but mercury and other heavy metals can miss tag the markers. Some of these metals cause cellular change and mercury is one of them, it is so efficient in creating an autoimmune response that it is routinely used in university research to create an autoimmune response.

According to Hal Higgins "Where mercury attacks is somewhat dependent on a person's genetically "weak link." Autoimmune disease area a result of a genetic predisposition plus an environmental exposure." When mercury combines with hormones the endocrine organs may not perform normally. According to Higgins Hashimoto's thyroiditis is one good example of a hormonal derangement commonly attributed to an "unknown" autoimmune etiology.

California was the first state, many years ago, to admit that it knows one of the causes of birth defects in mercury it passed the California Proposition 65 to help prevent birth defects and coined the phrase “disclosure before exposure” so now every dentist in California has to display the following sign:

Warning

This office uses amalgam filling materials which contain and expose you to a chemical known to the State of California to cause birth defects and other reproductive harm. Please consult your dentist for more information.

According to Lars Friberg, M.D. Ph.D. former head of toxicology of the World Health Organization silver mercury amalgam fillings are the single source of mercury exposure and the silver fillings are made of powders of copper, tin, silver, and zinc mixed with approximately 50% liquid elemental mercury.

Even one microgram of mercury is adequate to destroy any type of cell in the body, especially nerve tissue. One toxicologist was asked the best way to analyze the amount of mercury in a filling. Joe Levisky's reply was “Weight the filling, heat it, and weigh it again. The difference is the amount of mercury. This is probably the simplest and most accurate method.” Even chewing gum for 10 minutes release 15.6 times more mercury than when the mouth is at rest. The newer fillings dated post 1976 emits up to 50 times more mercury than the earlier, conventional amalgam fillings. So now any filling can have the toxic effect that would have taken 50 of the older amalgam fillings. Heat and chemical reactions of food will also break down the fillings quickly.

Mercury is being linked to fertility issues and both ovaries and testes have been found to be sites of mercury accumulation. The egg, which is exposed to mercury, may lose its ability to become

implanted in the wall of the uterus. It can also directly interfere with the male's ability to manufacture sperm. Because the mercury can directly inhibit the cellular ability to reproduce the genetic code of the DNA in the sperm itself birth defects may be more common. If mercury is involved in the process of mitosis and the cellular split is affected then issues can happen in the special areas of the heart, liver, kidney, muscle, bone and other tissue. These may be then passed on as miasmatic issues or part of the genetic family inherited trait. Mercury can alter the activities of five different human enzymes that control activities in the placenta, one of these is cytochrome C oxidase and is necessary for the production of ATP, the primary energy source for all biological activity in our cells.

Fetal brain issues often happen because the mercury created new pathways of development instead of crating the correct hookup. This deranged alignment of neurons happens in both the cerebrum and the cerebellum portions of the brain. The cerebrum is the intellectual portion of the brain that processes memory and thought. The cerebellum is the part of the brain that coordinates rapid muscle activities and needs to interact with the cerebrum to produce coordinated muscle activity. The cerebral cortex directs messages such as shifting weight and counter balance.

Many other child defects are mentioned in Dr. Huggins book *Uninformed Consent*. One of the most startling things I read was that after fertilization occurs the mother becomes twice as sensitive as before and the new fetus becomes four times more sensitive to mercury exposure than it's mother. And that contraceptive creams, gels and lubricated condoms often contain mercury because of the spermicidal effect. The mother also is placed in higher risk because of the mucosal membrane environment of the vagina and causes another highly effective deliver system.

Even metal braces typically contain nickel, chromium, and cobalt and behavior changes acting-out, withdrawal, distractibility, disturbance in peer relations, and immaturity. Dr. Huggins book discusses study he did on education and side effects of teens due to the influence of metal braces. He found that a Childs grades in school dropped one and one half full grades after the application of the metal braces. Nickel is one of the most durable and most carcinogenic metals on the planet according to Dr. Huggins and yet it is in children's crown, braces, adult crowns and bridges and even partial dentures.

The report from the Journal of Dental Research in 1991 demonstrated how nickel dissolves from dental appliances into the saliva and the corrosion is faster if beryllium is present. Although it is carcinogenic it does not do the same type of cellular destruction for everyone it can caue problems with oxygen, nitrogen and sulfur containing biochemicals. It can go into Genotoxicity in the actual genetic code of the DNA, in DNA replication and in Immunoreactivity conflict in the immune system. Sometimes it affects the heterochromatic long arm of the chromosome that is part of a tumor-suppressor gene. The specific chromosomes that it may affect are numbers 1, 7, 11, 13, 14, 20 and 21 and sometimes 20 and 21 are lost all together. Where mercury would probably kill the cell nickel just makes the cell turn malignant. And yet, we use nickel crowns on children since they are inexpensive! One of the side effects is visual and happens to some preschoolers who now require thick glasses. It attacks the visual area of the brain similar to mercury. Mercury usually causes nearsightedness, but nickel alters the vision even more.

Unfortunately, mercury can cross ANY barrier or cell membrane in the body and so the term barrier does not apply. Teeth are not the only location for mercury in the body. Many item also carry mercury, even eye drops, contact lens wetting solution (thirmerosal a mercury containing solution), Mercurochome, merthiolate,

immunization shots used a mercury stabilizer, and until the reserve is used up these are still being used.

Even hemoglobin is affected by mercury. Once mercury is bound to the hemoglobin in a red blood cell, it will typically stay there for the entire lifetime of that red blood cell. This is approximately 120 days. These people are highly fatigued and are often sent to psychiatrists because no physical reason is there for the fatigue so it must be all in their head.

Mercury in the digestive track may kill the good bacteria necessary for proper digestion because of this we often experience leaky gut syndrome when the almost properly digested food ends up back in our bloodstream where the immune system attacks the improperly digested protein. This reaction often causes allergic reactions so when the metals are removed these allergy reactions often improve. When the good bacteria are killed it often leaves candida free to multiply undisturbed. This is why candida is often helped while taking drugs only help while they are on them but as soon as the drugs are stopped the candida numbers increase again.

Toxic roots from root canals often cause another type of toxin in the mouth, if bacteria is trapped or there is heavy metal toxicity is locked into the root structure the toxins may migrate to the outside of the root to the interphase between the bone and tooth. During chewing a few molecules of the toxins are forced to the surface of the mouth and mix with saliva and then proceed to the digestive track. But root canals have many potential problems many of which are due to the root. Sometimes a single root has more than one canal and can even split off the main canal about one-third of the way up the apex. Curved canals present a problem since the files cannot curve, or the straight file punctures the root. Accessory canals may exit the tooth and there can be a few to several dozen. All of these issues are not shown on the dental X-ray.

Periodontal gum disease or cavitations (left when a tooth has been removed and not healed properly) also may have the same toxic response due to the bacterial issue. Failure to completely remove the periodontal ligament lining the tooth socket, large holes, failure to clean the infected adjacent bone, smoking and many other things can complicate gum and cavitation issues.

The list of symptoms, which were named for fluoride toxicity are short compared to the list of diseases, linked with mercury. The most prominent is irritability, depression, and emotional instability. High cholesterol and weight appear to be indicators of toxic exposure. As the body becomes ill the toxic load should be trapped into the fat to protect the organs and brain.

Hormones that are most often affected by mercury tend to be the thyroid, insulin, estrogen, testosterone, both anterior and posterior pituitary and adrenalin. Since mercury can bind with the sights capable for connecting metabolic cofactors it again causes interference.

According to Dr. Huggins, the thyroid is one of the important glands influencing dental decay. "There is a fluid flow from the pulp chamber, through the dentin, through the enamel and into the mouth of people who have no dental decay. Thyroid offers part of the endocrine function that controls the direction of this fluid flow. Low thyroid hormone production allows this fluid flow to run in the opposite direction- from the mouth, into the enamel, dentin, and pulp chamber. This fluid brings bacteria and debris from the mouth with it leading to dental decay." Because of the emotional link of the thyroid hormones and the disruption of the posterior pituitary hormone (oxytocin) it is difficult to tell which is more important in the interpretation of emotions.

One of Dr. Huggins comments about the pituitary hormone and it's reaction to the mercury and it's function was involving a man who

had a family reunion coming up and wanted to be on his best and not fighting depression. He needed more of the posterior pituitary extract for this event. He asked him if it really made that much of a difference. The reply was “I take the pill, and it changes the personality of the next 200 people I meet”. I found this to be a very profound statement and really emphasized how important it is not to have toxicity in the Pituitary gland. Because the gland is just above the nasal sinus and above the hard palate in the mouth it is easy to see hot toxic mercury vapor can affect it.

Because of the two toxic responses to the thyroid and pituitary he has found that there is a major connection to those with high blood pressure, especially the type of high blood pressure that only minimally improves with drugs. A study was done in Sweden showed the pituitary glands of dentists held 800 times more mercury than those who were not dentists. The posterior pituitary gland is the control for night-time (nocturnal) urination and the concentration of the urine during the evening. Toxicity will disrupt this also.

Hormonal imbalances of testosterone and estrogen can be out of proper production due again to mercury and insulin, which of course is involved with diabetes, has three binding sites. Should one of these have mercury or toxic interference diabetes can be a side effect.

The first target of mercury vapor is the brain and central nervous system. So we can understand why conditions such as MS are easily influenced by this toxicity.

To recap Mercury reaches its destination tissue and can evolve to damage in any of the follow ways:

1. Alteration of the Cell Membrane Permeability
2. Alteration of the 3-D form of the molecule
3. Alteration of Enzyme Function

4. Interference in Nerve Impulses
5. Alteration of the genetic code
6. Inhibiting the DNA repair
7. Interference with the endocrine function
8. Contributing to the autoimmune disease
9. Digestion and absorption alteration
10. Contribution to the development of antibiotic resistance

Part 5

SOLUTIONS AND A MEANS TO BREAK THE
DEGENERATIVE CYCLE

What can we do to help ourselves now that the teeth are in trouble and side effects have been complicated from dental work and toxins?

As I said before there are debates are now occurring as to whether it is best to leave the toxins in the teeth or remove them. The first thing I can say is to remember the story about saliva. Saliva “is capable of conducting electricity” due to the good electrolyte presence. So as we look at the electrical imbalances caused by metal fillings we now understand how the battery effect is being transferred. So we must look at several factors. The amount of mercury in the body, how old the filings; are they the newer more toxic fillings or the ones prior to 1976 were less toxic but may be breaking down from age, use, heat exposure, gum chewing, etc? Whether you plan to have children and the risks to the fetes, current medical problems, genetic tendencies, etc. And mostly, probably more important than any other issue...is there a qualified dentist to remove them!

Removal of toxic mercury may take the immune system at least three to six months of relatively mercury-free existence. Many diseases and conditions were found to improve (at different amounts) after removal. Dreaming often changed from black and white to dreaming in color due to the non-interference with the function of acidic fibroblast growth factor and its function on the sleeping and eating cycles.

For people who wish to remove the mercury there are products that can help. Items like Zeolight by Or-ion, NCD by Waiora, PCA by Maxam Nutraceuticals these are just a few which are designed to help trap the heavy metals and pull them through the body in the urine.

For people who work in energy medicine and work with the Chakra's the 1st Chakra or the base root center will involve the teeth and nail structure.

In the *The People's Pharmacy Healing Herbs and Home Remedies* it refers to using mouthwash for gum disease, this is not a new thing, much as we like to think it is. As far back as 5,000 years ago the Chinese healers had a mouthwash for gum disease, but as the book says "it wouldn't excite much interest nowadays: they used urine.

They did however say that studies have been done using CoQ10 and have had significant improvement in periodontal disease. Aloe and Myrrh has been used since the twelfth century when a Benedictine herbalist nun, Hildegard of Bingen recommended it for brushing. But, remember that aloe has a laxative action so swallowing may not be preferred.

Grape Seed (*Vitis vinifera* and *Vitis coignetiae*) may also have a role in maintaining dental health as it is an anti-inflammatory and helps with reduction of the *Streptococcus mutans*, which is a bacterium that can cause problems with tooth decay. Since Grape Seed is a polyphenol, which both stops the growth of the bacteria and slows the conversion of sucrose into glucan it may be a good alternative in helping with dental issues.

They also found that the natural fluoride found in tea leafs from Green Tea (*Camellia sinensis*) may help with dental caries although it can stain the enamel of the teeth.

For toxicity due to any form, including mercury here are some suggestions:

Drink plenty of water, so that the hydration of the body can detox, the last thing you need is to detox one area just to have the toxins float around to another location and settle somewhere else.

Eat fish in moderation since it may contain mercury, but always broil it; do not baste it in its own juices. Although fish may contain mercury they also contain alkylglycerols, which help to remove mercury from the body. And since the mercury would be stored primarily in the fat broiling the fish and draining the juices will get rid of much of the fat and toxins while keeping the alkylglycerols.

Use plenty of fiber in your diet such as oat bran and pectin, which is found in apples.

Eat foods for added sulfur such as organically grown beans, onions and garlic since they help protect against toxins.

Alfalfa is a detoxer for toxins, and it provides many valuable nutrients, use it!

The following recommendation comes from *The Prescription for Nutritional Healing* For nutrients to detox heavy metals use the following combinations:

Listed as Essential is: Glutathione plus L-methione and L-cysteine as directed on the label on an empty stomach and take with water or juice. Do not take with milk. Use 50 mg vitamin B6 and 100 mg vitamin C for better absorption. This is needed for sulfur and helps to detoxify harmful metals and toxins. With this take Selenium 200 mcg daily, in divided doses. If you are pregnant, do not exceed 40 mcg daily. This neutralizes the effects of mercury and Vitamin E 400-800 IU daily. Works with the selenium to neutralize mercury. Use d-alpha-tocopherol form.

Listed as Very Important is: Apple pectin as directed on the label, which aids in the removing of toxic metals from the body. Garlic (Kyolic from Wakunaga) 2 capsules 3 times daily. This acts as a detoxifier. Kelp or alfalfa 1,000-1,500 mg daily. Which aids the body in removing toxins. Vitamin A in 25,000 IU daily. If you are pregnant, do not exceed 10,000 IU daily this is a powerful antioxidant and destroys free radicals and should be used with carotenoid complex with beta-carotene in 15,000 IU daily which also helps as a free radical scavengers and Vitamin C with bioflavonoids in 4,000-10,000 mg daily. Helps remove metals and strengthens the immune system.

Listed as Important is: Vitamin B complex in 100 mg of each major B vitamin twice daily and is important for the functioning and protection of the brain.

Listed as helpful is: Brewer's yeast as directed on the label for a good source of B vitamins. Hydrochloric acid (HCl) as directed on the label to aid in digestion and you should take this if you are over 40 and deficient in HCl. And Lecithin granules or capsules 1 tbs 3 times daily, before meals or 1,200 mg 3 times daily before meals if a capsule this helps protect the brain cells from mercury poisoning.

If you suffer from candidiasis and have reactions showing in the mouth or other parts such as thrush realize that mercury levels have been linked to it.

The enzyme Hyaluronidase is used in the prevention of hematomas and in specialized orthopedic and dental problems. It is the catalyst that breaks down hyaluronic acid and increases tissue permeability to fluids.

For strengthening the teeth we need to be sure we are getting the proper types of nutrients the following list tells you what some of

them are and what you can eat to get these vitamins, minerals and nutrients.

Calcium which comes naturally in Breast milk, apples, beer, cabbage, boc choy, Chinese cabbage, carrots, cider, drinking water (in some areas), grains, grapes, leafy green vegetables (like kale), legumes, nuts, pears, meat bones, cheese, yogurt, sardines (with their bones), broccoli, peas, almonds, brazil nuts, sesame seeds, tofu, soymilk, blackstrap molasses, dried figs and apricots, and corn tortillas with lime added. To utilize it best take with vitamin D and magnesium.

Calcium when added with phosphorus, boron, silicon and magnesium may help re-strengthen degenerated bone including teeth.

Fluoride in natural sources of apples, calf liver, cod, eggs, kidney, salmon or sardines (canned), tea, and seawater may help prevent dental cavities in children by decreasing caries. However, it should be understood that it may pull iodine needed in the use of the thyroid and in larger doses may cause crumbling teeth (mottling) of the teeth. A report from Good Teeth, Birth to Death, by Dr. Gerard F. Judd, PhD. shows more fluoride increases decay by double in a study done with 480,000 children in the last 3 decades. It was verified in the Journal of Public Health Dentistry 11/1993 42% of the average 65 year olds have no natural teeth, 40 year olds have an average of 30 decays, and 17 year olds average 11 decays. The American Indian population, which has been, fluoridated the most and given free dental care has 4 times this decay. The black population and those at poverty level have twice this amount. Fluoride changes the decay rate from .35 tooth per year to .70 tooth per year per the U.S. studies carried out by the National Institute of Dental Health since 1972.

Fluoride causes decay by destroying adenosine diphosphalase and other enzymes, which assist in forming the enamel. Fluorosis and mottling are caused when some of the 17 pounds of other elements in the body enter the enamel when calcium and phosphate are absent and this gives the different colors in the enamel as well as the brittle teeth syndrome, which is caused, from the newly formed alien crystals. Fluoride also causes gum pockets since it destroys the specialized hydrogen-bonded structure in the protoplasm, proteins and enzymes. By removal of fluoride products and increasing vitamin C, calcium and protein we may be able to improve this problem.

One theory that Dr. Gerard Judd has found is that using simple pure bar soap without the dozen contaminants in toothpaste, can help the teeth for reenameling, because you cannot get good crystalline enamel when the teeth are contaminated with the toothpaste.

Dr. Judd's Recipe for perfect teeth:

1000 mg Ca with D

1 Tablespoon lecithin to replace phosphate

Rinse sugar, soda pop and tart/acid substances off teeth as soon as possible

Avoid all fluoride products

4,000 mg vitamin C

RDA of all vitamins and minerals

Brush teeth with bar soap, be sure to dig out all food trapped in the gum line.

Use caution chewing hard items, because of current brittle teeth.

If infection and using antibiotics use extra vitamin C

Study the causes of bad teeth and avoid

Magnesium strengthens tooth enamel and is found naturally in almonds, avocados, bananas, bluefish, carp, cod, beet green

collards, dairy products, flounder, halibut, herring, leafy-green vegetables, mackerel, molasses, nuts, ocean perch, shrimp, swordfish, wheat germ, and whole-wheat bread.

Molybdenum is in the soil and goes into foods naturally when there. It is found in cereal grains/whole grains, fruits, sunflower seeds, dark green-leafy vegetables, lean meats, organ meats (liver, kidney, sweetbreads), shellfish, lima beans, lentils, green beans, potatoes, spinach, peas and other legumes. May help dental caries.

Phosphorus is used with calcium to build strong teeth and bones it is found naturally in almonds, beans (dried), calf liver, cheese (cheddar), cheese (pasteurized), eggs, fish, milk, milk products, peanuts, peas, poultry, pumpkin seeds, red meat, sardine (canned), scallops, soda, soybeans, sunflower seeds, tuna, and whole-grain products.

Vanadium, which also plays a role in the metabolism of bones and teeth it, is natural in cereals, dill, fish/seafood, liver, mushrooms, parsley, carrots, cabbage, mushrooms, and soy.

Vitamin A also helps with teeth and bone development and growth and is involved in maintaining the healthy condition of the outer layers of many tissues and organs. It is found naturally in colored fruits and vegetables, fresh apricots, asparagus, broccoli, cantaloupe, carrots, mustard greens, pumpkin, spinach, winter squash, sweet potatoes, watermelon, raw endive, kale, leaf lettuce, dairy products like milk and eggs, fish liver oil and liver. A decrease in Vitamin A will cause a defect in teeth and gums.

Vitamin C, ascorbic acid and cevitamic acid helps to promote healthy gums, teeth and bones. Vitamin C is found naturally citrus fruits (grapefruit, lemons, orange juice, oranges and tangerines), greens, cabbages, peppers, broccoli, brussel sprouts, collards, green peppers, kale, peppers (sweet and hot), potatoes, spinach,

watercress, tomatoes, rose hips, strawberries, black currants, guava, mangos, and papayas.

Vitamin D found in Sunshine is brought in through the eye and the skin and is found naturally in cod-liver oil, egg substitutes, halibut-liver oil, herring, mackerel, salmon, sardines, sunlight, tuna, vitamin-D-fortified margarine, vitamin-D-fortified milk. The vitamin D regulates the growth and hardening and repair of bone and teeth by controlling the absorption of calcium and phosphorus from the small intestine.

If you have TMJ Syndrome also known, as temporomandibular joint, which we discussed earlier, the following may help:

Eat a diet including lightly steamed vegetables, fresh fruits, whole-grain products, white fish, skinless chicken (although there is some debate about the arsenic acid within the chicken feed now causing toxic reaction to the human system), and turkey, brown rice, and homemade soups and breads. Also eat more sulfur-containing foods, such as asparagus, eggs, garlic, and onions. Sulfur is needed for the repair and rebuilding of connective tissue, cartilage and bone and aids in the absorption of calcium. Eating fresh pineapple frequently adds the enzyme Bromelain into the diet, which helps with inflammation.

Sleep with a bite splint those with TMJ tend to be night time grinders or clenchers and a bite splint will help reduce this stress. But it does not need to be expensive. Sure you can go to the local dentist and have one made to fit, or to the local chiropractor for a cheaper type, but you can simply go to the local mega-type department store or sporting good store and ask for a sports bite plate. Be sure to get the type that is not attached to headgear. You will follow the directions and put it into hot water then mold it to the individual's upper jaw. If you choke easily then purchase the

child size used for karate or football it will still reduce the stress of the jaw. The whole thing will probably cost you under \$5.00.

But it is the items you avoid that may help TMJ the most: Avoid chewing gum and overstressing the muscles and joint. It is also not good for the teeth. Avoid high-stress foods such as sugar, white flour products, junk foods, and fast foods; avoid caffeine since caffeine increases tension, which aggravates the problem. Avoid over the counter medications containing decongestants, which also have the same type of effect. Alcoholic beverages are a common contributing issue to teeth-grinding (bruxism) so it also is wise to avoid. Do not sleep on your side or lie on your stomach with your head turned to the side or propping your head at a sharp angle while watching TV or reading. Yes that leaves only one option. Sleeping on your back to relax the back, shoulder and neck muscles.

Chiropractic therapy may help some but if the technique does not work try a different type such as the activator technique, which may be less strenuous on the bones and muscles. Experiment with heat and cold therapy, and use hot or cold packs for relief of the pain. If you work at a desk be careful of your posture; your cheekbones should be aligned over your collarbone, the back comfortably straight and the ears not too far in front of the shoulders.

Therapies which may help include stress management, heat and muscle relaxants (preferably natural), physical therapy, muscle stimulation with a TENS unit (transcutaneous nerve stimulation), ultrasound, which may promote tissue healing, electrogalvanic stimulation for muscle relaxation, plasma therapy may help in promoting tissue health, biofeedback for stress reduction and infrared therapy to detox the muscles of the jaw. It is uncommon to have to resort to orthodontists, or surgery in this event if it is taken care of in most cases.

The biggest problem with TMJ syndrome is the misdiagnosis of it. Many refer to it as the great impersonator because the muscles of the jaw are so many and so intertwined with other parts of the body that people may be misdiagnosed for other things such as MS, Fibromyalgia, headaches, migraines, seizures and even menstrual cramping when in fact it is a side effect of TMJ.

The Prescription for Nutritional Healing lists Nutrients that can help as:

Essential: 2,000 mg of Calcium and 1,500 of Magnesium in divided doses after meals and at bedtime. These can help for proper muscular function and calming effect and can prevent bone softening as well as relieving stress. 500-1,000 mg daily of Chondroitin sulfate plus glucosamine sulfate as directed on the label for nutritional support and for strengthening the joints, ligaments and tendons. Kyolic-EPA from Wakunaga with increases activity of the anti-inflammatory prostaglandins. 500-1,000 mg three times a day of Methylsulfonyl-methane (MSM) for a sulfur compound that can reduce inflammation and aid in joint and tissue repair. 400 mg twice daily of S-Adenoslmethionine (SAME) to prevent deficiency, which results in the inability to maintain cartilage properly and aids in reducing pain and inflammation. But this product should not be used if you have manic-depressive disorder or take prescription antidepressants. 100 mg of each major B vitamin three times daily plus 100 mg extra daily of pantothenic acid (vitamin B5) these are anti-stress vitamins, sublingual forms are recommended for best absorption.

Helpful also includes: 60 mg daily of Coenzyme Q10 plus Coenzyme A from Coenzyme-A Technologies as directed on the label this improves oxygenation of affected tissues. Works effectively with coenzyme Q10 to support the immune system's detoxification of many dangerous substances. 500 mg daily L-Tyrosine when taken at bedtime on an empty stomach with water

or juice improves the quality of sleep and relieves anxiety and depression. Do not take this with milk. Take with 50 mg vitamin B6 and 500 mg vitamin C for better absorption. But if you are taking a MAO inhibitor drug do not take L-Tyrosine.

Multivitamin and mineral complex is taken as directed on the label. This is to help balance nutrients. Shark cartilage helps with pain and inflammation and aids in the repairing joints and bones. Start with 1 gram per 15 lbs of body weight daily, divided into 3 doses. When the desired effect is achieved reduce the dosage to 1 gm per 40 lbs of body weight daily. 4,000-8,000 mg daily of Vitamin C with bioflavonoids this is used to help with stress and is necessary in adrenal gland function and may help with the healing and repair of connective tissue.

Boswellia helps to restore blood vessels around inflamed connective tissue and reduce inflammation. Feverfew (not during pregnancy) and ginger are good for pain and soreness and ginger helps as an antioxidant and has anti-inflammatory effects. Nettle leaf has anti-inflammatory properties. Turmeric and willow bark are good for pain and inflammation.

They also list many herbs which may help these include; blue violet, catnip, chamomile (in the ragweed family so watch for allergies), hops, kava kava, lobelia, St. John's wort, skullcap, thyme, passionflower, red raspberry, valerian root, and wild lettuce all of which have calming and anti-stress properties.

We also need to remember that the lymphatic system is involved in the mouth due to the tonsils. Because these work on the immune system and help with viral or bacterial infection these cannot be forgotten in therapy if someone is having problems, since the infection could spread. Unfortunately, we often remove the infected tonsil rather than improve the immune system and help the body to heal. When we do this we now remove an important

combater of infections in the mouth and the body. Earlier we discussed grape seed because of its aggressive therapy on the streptococcus bacteria, which is often involved in Tonsillitis.

Even emotions can be involved in issues of the mouth. New affirmations can be helpful such as I am a decisive person. I follow through. Different choices are given in Louise Hays book *You Can Heal Your Life* that help with the emotional blockages which contribute to distressed tissue and organs. I welcome new ideas and new concepts. The tongue represents the ability to taste the pleasures of life with joy and the new affirmation is I rejoice in all of my life's bountiful givingness. Tonsillitis is Fear. Repressed emotions. Stifled creativity and the new affirmation is my good now flows freely. Divine ideas express through me. I am at peace. Teeth issues represent decision and issues like root canal are a long-standing indecisiveness. The inability to break down ideas for analysis and decisions. The new affirmation to replace these issues is I make my decisions based on the principles of truth, and I rest securely knowing that only right action is taking place in my life. Jaw problems such as TMJ are Anger, resentment, and the desire for revenge. The new affirmation is I am willing to change the patterns in me that created this condition. I love and approve of myself. I am safe. Using these new affirmations and repeating them over and over can help shift the consciousness and change the ingrained emotion, which is causing the problems.

In summation, I would like to point out that teeth are only one part of an interconnected area. We must look at the whole oral cavity, all the muscles, bones, nerves and even veins. Even the spine is involved in the dental process. All the body works together, and the teeth and their health truly do affect the whole body. Mental issues, outside toxins, pathogens and nutrition all can make or break the healing process or make it extremely difficult to help.

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Part 6

In class Study Case
Worksheet

Technician: _____

Client Case Study <i>(list rectifications and mark how many times you did each therapy)</i>	
Client Name:	
Date:	
Dental Complaints:	
List Therapies for Complaints:	1.
	2.
	3.
List probable causes:	1. 2. 3.
List probable body links:	1. 2. 3.
List Therapies for Organ/Sarcode connections:	1.
	2.
	3.
List Emotional Connections:	1.

	<ol style="list-style-type: none">2.3.
List Therapies for Emotional Connections: (one required)	<ol style="list-style-type: none">1.2.3.