

RESEARCH ADVOCATES

ORAMEDICS

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RESEARCH: (n.) – Scholarly or scientific investigation or inquiry.*

ADVOCATES: (v.) – Speaks in favor of, recommends.*

ORAMEDICS: (n.) – Freedom from Dental Disease. **

“...It must be remembered that there is nothing more difficult to plan, more doubtful of success, nor more dangerous to manage than the creation of a new system. The initiator has the enmity of all who would profit by the preservations of old institutions and merely lukewarm defenders in those who would gain by the new...”

-Machiavelli, 1513

* From the American Heritage Dictionary.

** Motto of Oramedics International.

Foreword

Oramedics is a dental health care delivery system developed by Robert O. Nara, D.D.S., founder of Oramedics International. Many Oramedics approaches to oral health are unconventional; interesting, unusual. The most significant difference between Oramedics and conventional dentistry is startling: Oramedics patients achieve and maintain lifetime freedom from dental disease.

Most conventional dentists know dental disease is preventable. Many understand why – if they habitually study research. Some even understand how, at least in theory. So few successfully practice preventive oral medicine that the result is not statistically visible.

Oramedics Fellows – practicing dentists – also know that dental disease is preventable. They know why, they know how and they are successful.

Statistics from Oramedics case histories are now conclusive. The implication for oral health of the future is contained in one simple, but near-awesome statement: Zero Failures.

PART ONE

How Long Has This Been Going On?

Pioneers in medical research and practice have eliminated diseases one by one. While many diseases still stalk people and baffle science, there is a long list of vanquished diseases: Polio, Diphtheria, Smallpox – and many more. We can conquer disease. It is the human heritage.

One disease has mystified science and tormented people since the dawn of time: Odontosis is the insidious destroyer whose vicious invasions begin in childhood and plague us throughout life. This disease brings pain, disfigurement, financial loss and impaired health – often stealing years from human lifetimes.

At one time or another all diseases were considered unavoidable. If you ‘caught’ pneumonia, hepatitis or diphtheria, you were doomed to sickness and probable death. Everybody knew there was no hope. Today, however, people no longer fear those diseases.

What has happened? Attitude – the frame of reference – has been changed! The old frame of reference (no hope) has been exchanged for our current frame of reference: no problem.

The current popular frame of reference to Odontosis is also archaic and incorrect. Because public and profession alike are trapped in an outmoded frame of reference, our thought patterns and habits actually perpetuate this country’s number one health problem.

We must somehow break this cycle of ignorance. We must shatter that frame of reference and replace it with the only rational frame of reference: Odontosis is totally preventable. And that is no ivory tower theory, either. We know how, right now – today – to eliminate this disease *in practice*. Incredible as it may seem, they have won the war and yet most people don’t know it! The

‘enemy’ still invades and pillages the dental health of 98 out of each 100 men, women and children.

Why ‘dental health?’ Because odontosis has been called dental disease throughout history. So little has been understood about this crippler, this destroyer, that only its symptoms have received attention. Only its symptoms have been given names. That’s right – don’t bother looking for ‘odontosis’ in your big dictionary. The word is not there. There is no name for dental disease.

Oramedics International found it necessary to name dental diseases – to give the enemy an identity, because the sole objective of Oramedics International is to translate research and development into practical methods of eliminating disease *before* treating the *symptoms*.

Today the public is unaware of many developments in our progress against these diseases. Frame of reference? – ‘We all get bad teeth and will probably lose them all sooner or later.’ People don’t believe that there is any real way to prevent this.¹

In the profession some dentists consider prevention theoretically impossible, and yet there is near-universal apathy toward it. How else could generations of dentists repair, restore and replace disease-damaged teeth without bothering to name the disease? Even most dentists, then, view dental disease – odontosis – from a defeated frame of reference.²

Prevention, as apparently viewed by conventional dentistry, is a *concept* – perhaps an *ideal*, but not a *genuine goal*. The profession often preaches prevention, rarely teaches prevention and almost never achieves prevention.³

How long has this been going on? In 1819 a dentist named Levi S. Parmly published a book.⁴ In it, he discussed causes and prevention of dental disease. He didn’t know *why* – he was generations ahead of necessary research – but he told people *how*. With astonishing insight, this pioneer even specified the *cause* of most dental disease.

In 1896 Dr. G.V. Black, recognized as ‘the father of modern dentistry,’ addressed a graduating dental class. He spoke of his hopes that the profession

would someday practice preventive, rather than reparative dentistry and, “Perhaps within the lifetime of you young men before me.”

More than the lifetimes of those students – 82 years – have gone since Dr. Black dared to hope he could change a ‘frame of reference.’ What has become of Dr. Parmly’s knowledge, of Dr. Black’s magnificent obsession with preventive dentistry?

“The answer is evident,” asserts a ‘Dental Currents’ editorial. “The profession does not teach its students facts which have been known for 80 years.” Two years later (1974) the editors were blunter: “The official posture of the ADA (American Dental Association) is at best, silly, and at worst, evil.”

Harsh words, yes. They serve to illustrate the extreme polarization within the profession. Bitterness between proponents of conventional dentistry and advocates of preventive dentistry has all but blocked effective, beneficial communication. In an all-or-nothing conflict, there has to be a loser. Today, the loser is the American public.

Conventional dentists refuse to believe that the public can adequately understand prevention or that they will expend useful, continued effort toward achieving freedom from dental disease.

The profession’s public posture is to preach oral hygiene and endorse school programs and water fluoridation. In private practices, however, dentists continue to repair disease-damaged teeth until the cumulative result becomes total failure. The victim’s teeth are replaced with dentures, mocking all of the previous anguish and expense.

Millions of dollars are spent every year in this country to repair or replace damaged, diseased teeth. Very little is expended to eradicate the cause.⁵ Manufacturers, distributors, advertisers and others associated with dentistry derive the bulk of their incomes from merchandise or services aimed at repair and replacement of *symptoms*.

Dental Currents again: “It is, after all, threatening to be told that you earn your living correcting what you could have prevented in the first place.”

Disregarding motives, morals and public statements, the empirical result of conventional dentistry's cumulative bequest to this nation is that 98 out of 100 have dental disease now.

This, in spite of the fact that preventive knowledge was firmly seeded in the early 19th century and, nurtured by research, has continued to grow. Odontosis (dental disease) is preventable today.

How long has this been going on? -Too long!

PART TWO

Advance And Be Recognized!

“Advance and be recognized!” – The sentry’s challenge to a suspected enemy. Wouldn’t it be a ridiculous command if the soldier had never been taught to recognize his foe? *What if he didn’t even know his enemy’s name?*

There is an insidious, implacable enemy in your mouth. You may recognize names of battles you’ve already lost: Cavities, decay, tender gums and missing teeth. These are not the enemy (disease). These are the enemy’s invasions (symptoms). Most people are casually ignorant about these diseases. With all our medical and scientific progress, why does dental disease remain such a public mystery?⁶

Using a curious double standard, people are willing to learn about their bodies and minds – but not their mouths. Operations and diseases, germs and hygiene – anything related to health is interesting until someone says, “Dental.” Slam! The gates to the frame of reference are closed and shuttered.

In our modern and enlightened society people frequently seek medical health care. Here again, statistics show the enormity of our double standard: An astonishing 84 percent of our people seek little or no dental care. The otherwise rational people simply ignore dental health until too late, and then the pain drives them to the dentist – very likely to lose yet another tooth.⁷

It’s still true: An ounce of prevention is worth a pound of cure. Anyone would profit from prevention, but it obviously should be an economic necessity for the less well-to-do. If you are in that 84 percent, prevention is the one thing you most need and are least likely to obtain from conventional dentistry.

Unfortunately, nobody can just ‘go get’ dental prevention, as if it were an immunization vaccine. People must climb out of their frames of reference and

meet prevention part way. With new ‘ammunition’ and ‘tactics’ we can win the battle against odontosis, but the ‘civilians’ have to help. You’ll have to enlist for the duration of this particular war.

Basic training begins with recognition of the enemy. First, take a look at three oral health problems that are not necessarily disease. After a brief examination of these, we can set them aside and tackle the real thing.

Congenital or *physical* problems exist from birth or develop later: Crooked and misaligned teeth are such defects. *Trauma* is the result of external force such as a cut or blow that can break teeth or cut gums.

Physiological: Other health conditions such as diabetes, epilepsy and hemophilia affect oral health. Assuming these disorders are under supervision, the medical doctor should be asked to confer with the patient’s dental doctor.

The above have three common factors; not everyone is affected by them, they are not specifically caused by disease and probably could have been prevented by dental medicine or method other than clinical treatment.

Odontosis – dental disease – is *pathogenic*. It is caused by germs. The most apparent symptoms are *infections*. We are all familiar with this relationship elsewhere in the body. What seems obvious at first glance is a critical adjustment to the frame of reference, so remember: We are now discussing *dental* disease. Bring your old familiarities with you to this ‘new’ part of your body. We’re looking at disease mechanisms and medical defenses – in the mouth.⁸

Cavities are holes through tooth enamel into the soft interior, usually with decay (infection) involved. These are *symptoms* – they are effects, not causes. Dentists often refer to any stage of this process as ‘caries,’ although properly speaking; there is no actual infection at first. The process is initiated by a carious lesion, the early assault on the tooth enamel itself.^{9, 10} Oramedics has named this particular member of the odontosis family: All of the symptoms above are created by a disease we now call ‘cariosis.’

If cariosis is brought under control, the disease process is halted. Even if there has been massive damage, cavities can usually be repaired. In fact, recent

research indicates that early carious lesions can be medically reversed. As with other parts of the body, teeth with early cavity damage can heal those cavities.^{11, 12}

Puffy, tender ‘off-color’ gums are symptoms of disease, often called gingivitis. Oramedics calls this member of the odontosis family ‘gingivosis.’ Infection and damage are present, but probably no irreversible harm has been done. Oral bone and tissue has an amazing self-restorative ability once disease has been eliminated. The relatively mild symptoms of gingivitis (gingivosis) are deceptively dangerous, however. This encourages neglect, which almost invariably results in yet another disease, ‘while our backs are turned.’

Periodontosis sneaks in, insidiously: the gravest disease in the dental world – America’s number one health problem. Conventional dentists know this as ‘periodontal disease’ or ‘periodontitis’ or ‘pyorrhea.’ It is:

“A disease occurring in various forms and degrees of severity characterized by the formation of pus in the pockets between the root of the tooth and surrounding tissues; frequently accompanied by the loss of teeth.”¹³

Although *cariosis* (cavities) is considered the gravest childhood problem, *gingivosis* and *periodontosis* also have their onset early in life and become the arch destroyer of adult oral health. The American Medical Association blames a huge share of physical disorder on these oral health problems.

Periodontosis will steal years from a lifespan, both directly and because it will cause massive tooth failure. Because of this one disease, three out of ten Americans will have no teeth past age thirty-five. Periodontosis can be prevented – it can be stopped at any stage of its development – but its damages can never be repaired to an original condition.¹⁴

Odontosis: Cariosis, gingivosis and periodontosis – the enemy! Damages already done by these should be corrected, obviously. But why concentrate on the effect while ignoring the cause? As you become more familiar with these diseases, you will eventually be faced with a decision: Whether to spend a lifetime of pain, anguish and money on the effects of the diseases... or to eliminate those diseases from your life, *by the prevention of their causes.*

PART THREE

“...do you mean I’ve spent all of this effort and money for nothing...?”

Well, first: Let’s get honest with each other. If you have spent a lot of effort and money on your teeth, you’re a most unusual person. With the normal frame of reference, people often ignore their teeth because they view dental problems as unavoidable. It’s also likely that many avoid dentists because of guilt feelings: they are ashamed of the condition their neglect has created.

But to answer the question: No, the money and effort was not wasted. Any prevention is better than nothing. It’s just that it didn’t work, did it? Think of the youngster on TV who comes home from his dental checkup, bragging, “I only had one cavity!” Let’s look at the familiar methods of ‘prevention’ that, at best, can sometimes hold disease down to ‘one cavity’ every six months:

Many people have never had a dental prophylaxis: a professional cleaning of the teeth and gums.¹⁵ Most ignore all or part of the well-published formula: ‘Brush after meals, use floss, avoid sweets and see your dentist twice a year.’¹⁶ About the only preventive method people in some areas can’t easily avoid is fluoride in the public water supply.¹⁷

Millions use a combination of these things, or all of them, in a sincere effort to reduce disease symptoms. At best, they will reduce symptoms – they will probably not prevent the diseases.

Why not? We’ll go over the preventive power of that formula piece by piece. Brushing after meals has never been proven an *effective* prevention for odontosis. It can’t hurt, but the way virtually everyone does it will not do the job.

Research in Europe (1973) demonstrated that while ‘normal’ hygiene has little or no effect on odontosis, a professional cleaning *every two weeks* all but eliminates disease.¹⁹

Using floss is also a good idea. Again, there’s no way to get your teeth ‘too clean.’ Properly used, floss – or better yet, dental tape – will help limit the extent of disease. The emphasis is, of course, on ‘proper use.’ Anyone who thinks he knows how, but still has evidence of active disease, is fooling himself.

Avoid sweets. Why? The next time someone recommends this as a dental preventive, ask him why. In the absence of odontosis, *sugar in the diet has no effect on teeth*. If there’s a disease problem, sugar can be a part of the harmful effects, but it has nothing to do with the cause.²⁰

If you want to see your dentist every six months, that’s another ‘good idea.’ It won’t practically help you avoid disease, but at least you can find out twice a year how ‘bad off’ you are. In a two year study reported in 1976 by a department chairman from New York School of Dentistry:

“Analysis of the data revealed that the four prophylaxis treatments, administered over two years, did not alter the oral hygiene, gingival health or caries activity... nor did... the program motivate (them) to increase their frequency of tooth brushing.

“The authors feel that those private and public dental preventive programs which rely solely upon a professionally administered prophylaxis to achieve an effect on dental health, would be critically evaluated to determine their actual benefits.”²¹

Translation? Seeing a dentist for six months every two years didn’t help in any scientifically significant way.

Two research scientists at University of Michigan’s Dental Research Institute reported in the Institute’s Fall, 1977 ‘Bulletin:’²²

“The emphasis has formerly been on repairing damaged tissue, without considering the basic cause... People in contact with dental research are beginning to understand this new approach. Some questions are now beginning to be answered.” (Dr. Salam A. Syed)

Dr. Walter J. Loesche noted that the responsibility has traditionally been on the patient to brush, to floss and to avoid sugars. “Now,” Dr. Loesche said, “it will be equally on the dentist to learn what is going on in the patient’s mouth, and to treat it accordingly.”

Just what is it that ‘goes on in a patient’s mouth?’ There are two* main ‘bad actors’ in odontosis, the germs that are the source of the problem. They are *Streptococcus mutans* and *Lactobacillus acidophilus*.^{22, 23} Unless these germs are controlled, odontosis will be present to some degree, and these germs are frequently found in the mouth. They are always found when disease is active.

Most research agrees that when they are ‘free floating,’ in a disorganized condition, these germs are probably not harmful. *Lactobacillus* may indeed have beneficial function elsewhere in the digestive system. Very recent research concludes that virulence of the strep mutans germ has little or no bearing. If present in an organized state, these germs are actively producing disease: There is very likely no such thing as ‘mild’ germs.²⁴

The germs feed on food wastes, especially sugar, and secrete their own wastes. One such waste is called dextran. Combined with other debris in the mouth, this sticky substance forms a film called plaque, which is deposited on the teeth. Germs settle in this plaque and form organized, swiftly growing colonies, making even more plaque in a vicious cycle.²⁵

When enough plaque has built up, germs get between it and tooth enamel, where they are shielded from air. In this *anaerobic* environment they not only thrive, but extremely important changes occur.

Now the germs begin converting sugar into acid. In fact, within seconds after you eat sugar the acid production increases enormously and doesn’t taper off

for hours.²⁵ The acid produced is trapped by the plaque – ‘dammed up’ against the tooth enamel. This, of course, is the reason that conventional dentists advise us to ‘avoid sweets.’

However, it is not the sugar which causes the acid, it is a *disease mechanism*. Were the germs not organized and shielded by the plaque, sugar would have relative insignificance in disease. (Too much sugar, too often is bad for you physically. “Avoid too many sweets, too frequently,” might be a much more appropriate suggestion.)

When odontosis is present, however, the acids attack tooth enamel, causing carious lesions until the enamel is perforated. The enamel performs an important function: It prevents germs from reaching the softer, ‘living’ insides of the teeth. Enamel, itself, is also ‘living,’ but it is not susceptible to infection.

The inside of the tooth (dentin) has little protection from decay-producing germs. It isn’t nearly as hard as enamel and decays much faster. When cariosis produces holes through enamel, it gives strep mutans, lacto and any other germs in the mouth a doorway into unprotected tissue. Result: Decay and eventual nerve-chamber infection – the agony and extreme danger we call an abscess.

While its acids are eating at enamel, plaque continues its dirty work. A buildup of plaque at and slightly below the gumline begins to harden into mineral-like deposits called tarter and calculus.²⁵ In effect, small dams are built at the base of the teeth, backing up still more debris and plaque, which in turn hardens in place. Germs – and not just strep mutans and lacto – colonize in these ‘swamps’ where the trapping and decaying oral debris provides food for explosive growth.

Tarter and calculus are rough. The sandpaper effect can soon wear through the outer ‘skin’ of gum tissues. That external layer is *only one cell thick*. Like enamel, it is a germ barrier. When that barrier is disabled, the waiting germs have access to inner tissues. Once again, infection is the result: Gingivosis. Also, any germ which reaches unprotected inner tissues of the body can be transported by the blood stream. Many diseases in other parts of the body have their first ‘breakthrough’ inside a mouth suffering from odontosis.

Teeth are held in place by numerous tiny, filament-like *connective tissues* which anchor teeth and gum together, in a manner suggestive of guy wires on telephone poles. They allow teeth to flex enough to absorb the shock and torque of chewing, yet hold them firmly in their proper place, snug into their sockets in the jawbone.

When these miniature marvels of nature's construction are attacked by infection, abraded by rough deposits, insulted by acids... they begin to *let go* as they are destroyed.

This is the work of periodontosis, the destroyer. Once these tissues are gone, they can't be replaced - the widening gap between teeth and gums forms 'pockets' below the gumline. If the stagnant pools of gingivitis are 'swamps,' then the pockets of periodontosis are cesspools. Ever widening, ever deepening, these pockets can accelerate the destruction of connective tissue - they give germs access to the bone support of the teeth. Infection - bone infection - often results.

The teeth, of course, have lost both connective tissue and bone support. They get loose and, unchecked; periodontosis will ultimately claim all of the teeth. So what? Dr. Charles Mayo, founder of the Mayo Clinic, often said that loss of all teeth probably cost the victim ten years of his life...

In *Part Two* you learned what the diseases are and what they do. Now you know what causes them and how the disease mechanism works. It is evident that strep mutans and lacto are the foundation of all these problems. If we could get rid of them and keep them gone, or if we could get rid of most of them and find some way to keep the remainder disorganized, there'd be no odontosis. It is that simple.

In spite of this, the 'normal' methods of 'prevention' are not adequate to do the job. National statistics are in agreement on the numbers of people with odontosis... dental disease... so the conventional program simply is not working.

Oramedics Fellows, on the other hand, routinely help their patients simply and economically achieve freedom from odontosis. Are you interested?

- Then let's get on with it...

PART FOUR

Freedom from Dental Disease

- a personal decision.

Almost all disease prevention is through either immunization or avoidance. Diphtheria is prevented by a vaccination which makes us immune. Malaria is prevented by avoiding or destroying the specific mosquito which carries and infects people with the malaria protozoa.²⁶

There is, today, no immunization against odontosis. Prevention must take the other form, avoidance – remembering that is the generally accepted preventive method for controlling a host of ‘medical’ diseases.

If you became aware of symptoms of disease elsewhere in your body, you’d visit a medical doctor. He would almost certainly order tests to determine the extent of the disorder before beginning treatment. He’d need a full medical history. If prevention of the disease, or some of the treatment for it, was partly your responsibility, the M.D. would be careful to explain it so you fully understood.

Not surprisingly (with your new frame of reference) medical dentistry is no different. Remember in Part Three when Dr. Loesche said it should be the dentist’s responsibility “to learn what is going on in the patient’s mouth, and treat accordingly?” Oramedics Fellows would never attempt to treat odontosis without specific laboratory tests and evaluations on a case-by-case basis. There is nothing exotic about the tests involved: they are simple and inexpensive. They are virtually foolproof. One test determines the extent of bacteria infestation in the mouth, the other the extent of plaque buildup.

Neither test is of value if the objective is to repair symptoms without treating disease. Conventional dentists, therefore, seldom order them.

The patient does, indeed, have a responsibility in prevention of disease. Nobody can clean your mouth for you well enough and often enough to prevent

odontosis... unless you can afford the time and expense of professional cleaning at least once every two weeks; perhaps more often.

Doctors extensively trained in Oramedics philosophy consider personal hygiene consultation to be one of the most single important aspects of the doctor-patient relationship. Once the patient learns the proper methods of maintaining his own oral 'ecology,' he is in charge of his own oral health.

Watch out, now! You may think you are already cleaning your teeth properly, but unless you've had several consecutive checkups with *zero symptoms*, your present method is not effective.

Are the right methods more complicated or difficult than the popular concept of tooth cleaning? No, just different. For example, we're not going to insist that you avoid sweets. We'd like you to clean often – it's impossible to keep your teeth too clean – but we'll settle for the right method, once a day before bedtime.

Money? Of course, you have to be concerned with the cost. Fortunately, proper hygiene costs no more than ordinary brushing and flossing. How much can that be? Five or ten dollars a year?

Bluntly speaking, most Americans have dirty, disease-prone mouths. Remember the double standard? Most people would be angry or ashamed if they were accused of not keeping their bodies clean. Everybody knows how to take care of personal hygiene and it is a matter of course for most of us. *But it wasn't always!*

Somebody had to show every one of us the right way to keep the body clean. Many, many people who believe they are conscientious about oral hygiene are still suffering from odontosis because *nobody ever showed them how* to avoid it.

Should the test results be unsatisfactory even though the patient is manifestly performing his end of the bargain and using the right methods of hygiene, there is another weapon in the medical dentist's arsenal. In stubborn odontosis cases there is a chemical that is the 'blockbuster bomb' to eliminate disease germs.** This chemical has no effect on your body, because you use it as

a rinse and spit it out. You don't swallow it. Used in the proper concentrations and formulations, this rinse is universally effective in elimination and prevention of odontosis.²⁷

Since use of the compound is 'controlled,' you'll need a prescription. A medically-oriented dentist would provide you with the right prescription after evaluation of your medical dental history and your test results. Incidentally, this chemical is not expensive and is readily available.

When the test levels are acceptable and your continuing freedom from dental disease is assured, the 'medical' part is finished. Now you're ready for the mechanical dentistry.

There are two things this will accomplish. The immediate benefit will be a prophylaxis – a thorough cleaning. This will remove all calculus and tarter; the teeth will be cleaned cosmetically so they are attractive. Now your continued attention to the avoidance and preventive methods will ensure that your teeth remain healthy and pleasant looking.

The other reason for visiting a dentist is to have a complete examination and a full series of x-rays. The dentist will complete a 'treatment plan,' telling you in writing what he sees as necessary to repair all existing damage caused before you brought odontosis under control.

The dentist can then discuss treatment and expense necessary to correct existing damage, tailored to your personal condition and finances. It *can* be done, without straining a budget. When the time comes, you'll want this information. At least then you will be completely in charge of your own 'dental destiny.' Fully informed you can decide carefully what repair schedule best suits you – the disease will no longer be worsening the damage.

You'll be planning your last dental repair schedule.

All of that lies in the future – your own disease-free future. For now, you need only consider the first step: the decision to be one of the few Americans who no longer suffer odontosis... dental disease.

Your basic training is now completed. Advance training and active participation in the war on disease begins as soon as you decide you want to eliminate odontosis from your life.

BIBLIOGRAPHY

Part One

1. Dental Survey, 2/74; Ppg 4&6
2. J. ADA, 4/73, 'letters,' S.J. Rosen
3. J. ADA, 7/72, editorial
4. Fox Press (1819), L.S. Parmly (not available: rare antique. Copy in Oramedics files)
5. Dental Survey, 2/74, Jerge
ADA News, 8/76, Blendon

Part Two

6. J. Prev. Dent., 2/76, V.3 No. 1, Ripa, et. al.
7. Dental Survey, 2/74, 'Topics & Trends'
Int. J. Health Edu., Jan/Mar '70, Young
8. J. Dent. Child., 4/77, Chaet & Wei (And universality of research this topic. No serious disagreement exists as to pathogenic nature of dental disease.)
9. American Heritage Dictionary for definitive application of key italicized words.
10. Bulletin, U of MI Dent. Res. Inst., V.1, No.2 Silverstone et. al., winter, 1978
11. U.S. Pub. Health Svc. GPO No. 1973/0-508-760
12. Caries Res., 1977, 11:166, McDougall
Bulletin, U of MI Dent. Res. Inst., 1978, Grn. Sognaes
13. American Heritage Dictionary (direct quotation)
14. J. Clin. Periodont., 1976, 3:38

Part Three

15. J. Prev. Dent., Jan-Feb/76, Ppg 25,26
16. J. Sch. Health, 1/70, Cohen et. al.
17. Horowitz, reporting to Nat. Inst. Dent. Res., U.S. Dept. H.E.W., 'Fluorides for Prevention of Dental Caries'
18. Statistics, U.S. Dept. H.E.W., incidence of disease
19. J. Clin. Periodont. 1974, V.1, No.2, Axelsson et. al.
20. J. Dent. Res., 1977, 56: 1001, McDonald, J.L.
21. J. Prev. Dent., Jan-Feb/76, V.3, No.1, Ripa, et. al.
22. Dent. Res. Inst. Bulletin, U of MI, fall, 1977, V.1, No.1
23. Research Explores Plaque, Nat. Inst. Dent. Res., 1973
24. J. Dent. Res., 1977, 56: 894, Fitzgerald et. al.
25. Research Explores Plaque

Part Four

26. Pathology, 1953, Mosby, p. 372, W.A.P. Anderson
27. J. ADA, 1960, 60:438, Weisz, W.S.
Acta Oodont Scand., 6/65, 23:287, Torell & Ericsson

About this Publication

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This booklet was written by Robert O. Nara, D.D.S. and Steven A. Mariner in the spring of 1978.

References in the text, keyed to the bibliography, were selected as representative of scientific research on this subject, and particularly more recent research. Many research papers other than are represented here are available.

Publisher's Notes

* Part Two, par. 15: While at the time it was considered that lactobacillus considered high risk in decay, it is no longer considered to be a major player, however, both of these pathogens can be considered for risk of dental decay. Equally important, however are pathogens considered as high risk factors beyond enamel decay, which might be considered a 'first stage' of the disease. As you read, holes in the enamel, abrasion of the gum tissue, etc. open the way for other germs to colonize. Three of these major culprits are *t. denticola*, *b. forsythus* and *p. gingivalis*. Fortunately, the methodology for controlling strep and lacto is beneficial against the three just mentioned, as well as others not mentioned. We generally have upwards to 500 different pathogens inhabiting our oral cavity. Between 50 and 75 of these are considered harmful. Going after those pathogens mentioned above also works for the rest, as a rule of thumb. For more information on the colonization of pathogens, see the 4/28/09 OraMedia Newsletter: <http://tinyurl.com/cvxpda>

** Dr. Nara is referring to a fluoride rinse. When OraMedia began in 1997, an inquiry was made of Dr. Nara regarding the availability of this rinse. Dr. Nara had long since retired and the rinse was retired as well. He recommended I look into a rinse called TheraSol, which I did, and now we offer that as the 'blockbuster bomb' treatment. TheraSol does *not* contain fluoride, yet is very effective. <http://mizar5.com/products.htm>