



When Abstinence is Evidence-Based:

The Case Against Prophylactic Third Molar Extractions

Jay W. Friedman, DDS, MPH

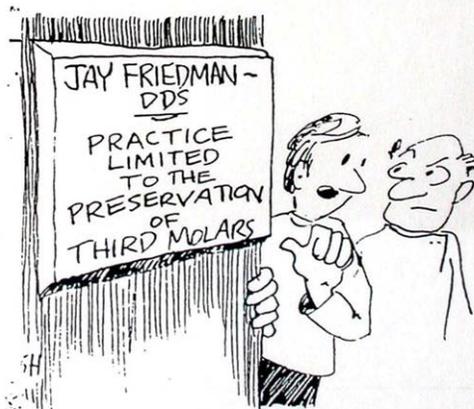
Presented at the 2012 National Oral Health Conference

May 2, 2012

NCAGD REBUTAL TO JAY FRIEDMAN



MOVE OVER, GOD! MY WAY
IS BETTER!



- GEE, I DIDN'T THINK THAT WAS
AN A.D.A.-RECOGNIZED
SPECIALTY!

circa 1975

[A True Copy]

E. G. BRUNSON. D. D. S.

PRACTICE LIMITED TO ORAL SURGERY

400 NORTH PACE BOULEVARD
PENSACOLA, FLORIDA 3215015

April 18, 1977

OFFICE PHONE
433.0011

Dr. Jay W. Friedman
8383 Wilshire Blvd.
Beverly Hills, Calif. 90211

Dear Dr. Friedman:

My worthy colleague Dr. Harry Archer forwarded to me a reprint of your paper "The Case for Preservation of Third Molars." If I had put down on paper my own findings concerning third molars I could not have said it more eloquently or more factually than you have presented your thoughts.

Over the past 28 years of my private practice and 45 years of my father's practice, I wonder where some of these philosophies that are taught in the universities come from. I would like to include a copy of your paper in a collection of information we have tried to compile locally concerning the third molar "problem."

As a matter of academic interest I have examined microscopically every third molar sac possible, and I am unable to find the incidence of dentigous cyst and other pathological anomalies that are claimed in some of the literature on this subject. I cannot understand this except radiolucencies overexcite misdiagnosis.

Our meetings with insurance companies concerning the early removal of this tooth have been almost shocking, and the U.C.L.A. philosophy of removing third molar buds at the age of 8 years places oral surgery in a most unattenable position.

I would like very much to have about six reprints of your paper and would be happy to pay any expense involved.

Sincerely,

E.G. Brunson, DDS

E. G. Brunson, D. D. S.

Excerpts from a Supportive Letter

“My worthy colleague Dr. Harry Archer forwarded to me a reprint of your paper **“The Case for Preservation of Third Molars.”** If I had put down on paper my own findings concerning third molars. **I could not have said it more eloquently or more factually than you have presented your thoughts... .”**

“I have examined microscopically every third molar sac possible, and I am unable to find the incidence of dentigulous cyst and other pathological anomalies that are claimed in some of the literature on this subject. I cannot understand this except **radiolucencies overexcite misdiagnosis.”**

E.G. Brunson, DDS

AAOMS 1 of 4-page Advertisement USA Today (Sept. 28, 2007)

**“The Number
One Reason
for Removing
your
Wisdom
Teeth –
Peace
Of
Mind”**

[AMOS Special Advertising Section
Advertising Supplement to USA Today
September 27, 2007]



**Oral and Maxillofacial Surgeons:
The Wisdom Teeth Experts**

Oral and Maxillofacial Surgeons treat conditions, defects, injuries, and the esthetic aspects of the mouth, teeth, jaws, and face, including the chin, nose, cheeks and knees around the eyes. They complete four years of dental school and a minimum of four years of training in a hospital-based surgical residency program that includes extensive inpatient and outpatient anesthesia training. Their specialized surgical expertise, along with a thorough understanding of both esthetics and function, uniquely qualify Oral and Maxillofacial Surgeons as wisdom teeth specialists.

INSIDE
Page 2
Lack of space, wisdom teeth do not improve with age.
Page 3
If I don't have my wisdom teeth removed, what's the worst that can happen?
Page 4
A noncontroversial source of stress?!



A GUIDE TO WISDOM TEETH HEALTH

Wisdom Teeth ~ RESEARCH

Pain free does not necessarily mean disease free.

What are impacted wisdom teeth... and why are they a health problem?

A wisdom tooth, or third molar, that is blocked from erupting into the mouth in a normal fashion is said to be "impacted." A tooth may only be partially impacted, meaning it can erupt only partially into the mouth, or completely impacted, totally covered by bone and not likely to erupt. Nine out of 10 people have at least one completely impacted wisdom tooth, generally resulting from a lack of space in the mouth.

Impacted teeth can lead to a variety of problems including pain, infection, crowding or damage to adjacent teeth, and can contribute to more significant health problems. For example, the sac that surrounds an impacted tooth may become cystic and fill with fluid that allows it to enlarge, causing damage to adjacent tissues such as the neighboring teeth, jawbone and other structures. Occasionally, a tumor may develop from the tissues surrounding the impacted tooth requiring a more involved surgical procedure to treat it.

Given that wisdom teeth rarely contribute to function in most patients, waiting for problems to develop generally makes their removal more difficult. As wisdom teeth develop, their roots grow longer and the jawbone becomes more dense, making them more difficult to remove and complications more apt to occur.

It is not wise to wait until your wisdom teeth start to bother you. Very often people are unaware of problems with their wisdom teeth because they experience few or no symptoms. The fact is that damage often occurs before you are aware of it. In fact, studies have found that even wisdom teeth that have broken through the tissue and erupted into the mouth in an apparently normal, upright position may be as prone to disease as impacted wisdom teeth.

Complications are impossible to predict. The longer the wisdom teeth remain in your mouth, the more likely they are to cause problems. Researchers strongly recommend that in order to prevent future problems, wisdom teeth, even those that appear problem free, be removed during early adulthood. They found that as patients age they may be at greater risk for developing disease, including bacterial infections in the tissues surrounding the wisdom teeth and adjacent teeth. As clinical trials and other research suggest, bacteria from gumline infections can enter the bloodstream and may adversely affect your general health. They may also be a contributing factor to preterm or low birthweight infants.

Impacted wisdom teeth may become painful for the patient, and may crowd the rest of the mouth. Have them removed before they become a problem.

Normal and impacted wisdom teeth



A panoramic x-ray will show the presence of impacted wisdom teeth and any problems they may present for neighboring teeth, the jawbone and other tissues.

Top Ten Health Reasons

- to remove your wisdom teeth**
10. Because there is limited space for wisdom teeth to erupt and because the surrounding gums are difficult to keep clean, infection and inflammation are common even when there are no apparent symptoms. Research shows that once inflammation takes hold, it is almost impossible to eliminate and may spread to other teeth.
 9. Research suggests that oral inflammation associated with wisdom teeth may contribute to preterm or low birthweight infants.
 8. Even when wisdom teeth erupt through the gum tissues, they rarely provide any meaningful function and are always difficult to keep clean.
 7. In some cases, impacted wisdom teeth develop associated cysts and/or tumors. Removal of such lesions may require extensive procedures to repair and restore jaw function and appearance.
 6. With age, the chance for complications related to the removal of wisdom teeth increases.
 5. Gum disease and inflammation associated with wisdom teeth may lead to receding gum tissues, deterioration of the jawbone and tooth loss.
 4. Wisdom teeth may contribute to crowding of nearby teeth.
 3. Even wisdom teeth that seem to be problem-free (asymptomatic) remain a breeding ground for oral infection and inflammation. Research supports the concept that such inflammation may enter the bloodstream and contribute to the development and/or progression of a variety of diseases, including diabetes, cardiovascular disease and stroke.
 2. Once it has been determined that a wisdom tooth will not successfully erupt into your mouth and be maintained in a healthy state, early removal of wisdom teeth is associated with faster and easier recovery.
 1. The Number One Reason for Removing Your Wisdom Teeth: **Peace of Mind.**

**Available from AAOMS
E-Store**

**Paper @ 25¢
(Members only)**

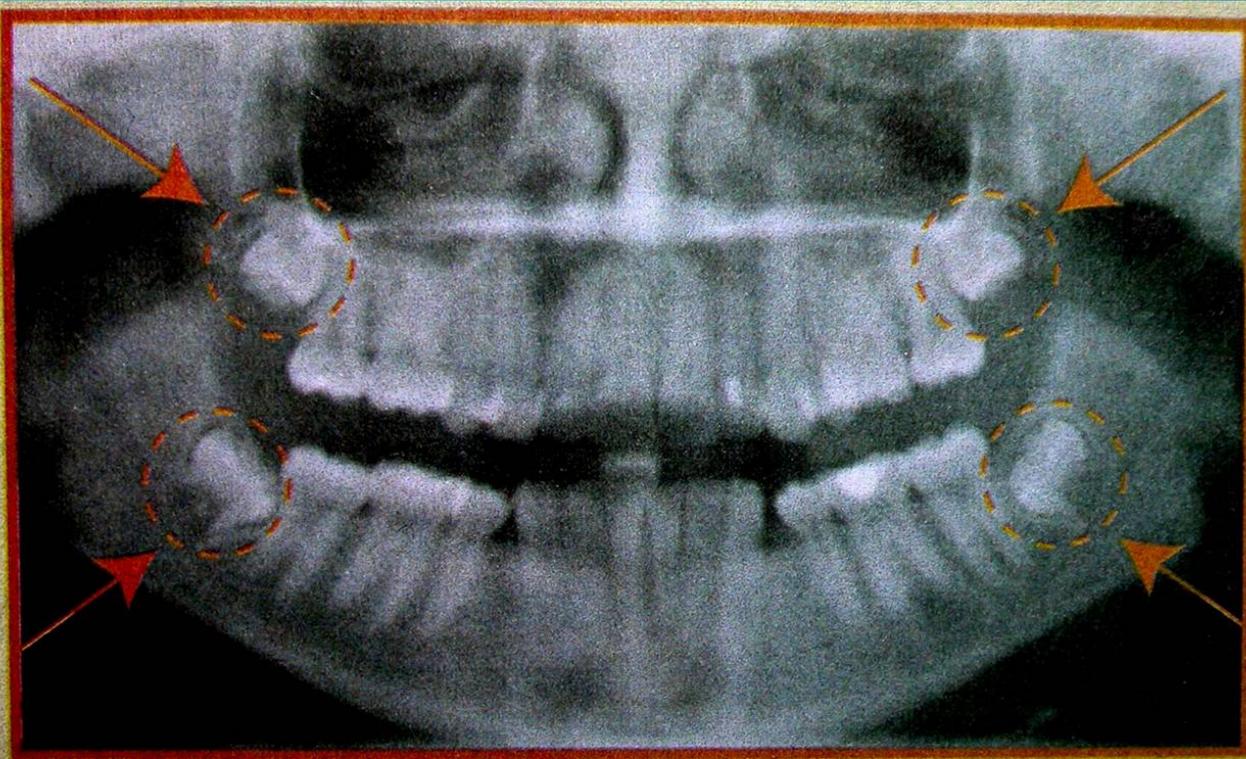
**or
(Laminated)**

Price: \$79.90

Member Price \$39.95

The Number One Reason for Removing Your Wisdom Teeth -
Peace of Mind

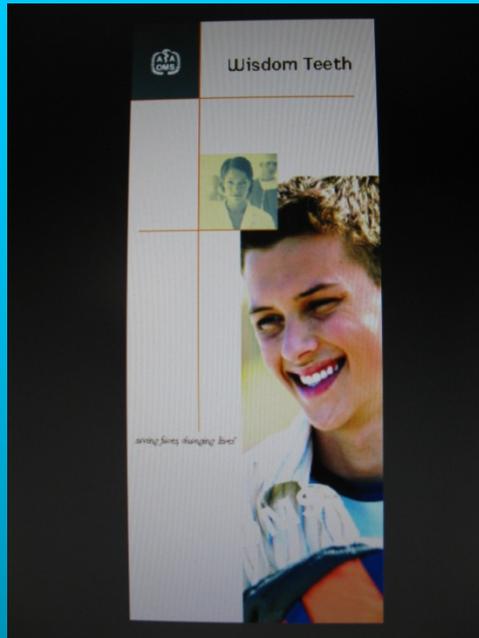
**A Pan will show Impacted Teeth-
But These are not Impacted!!**



A panoramic x-ray will show the presence of impacted wisdom teeth and any problems they may present for neighboring teeth, the jawbone and other structures.

AAOMS Pamphlet*: “Wisdom Teeth”

*http://www.aaoms.org/wisdom_teeth.php



90% of third molars will eventually need to be

removed, as requested by ABC/GMA,

but same recommendation retained

2011 The AAOMS study strongly recommends that third molars be taken out by the time the patient is a young adult.” [In other words, extract all third molars.]

Unless.....

AAOMS Pamphlet*: “Wisdom Teeth”

*http://www.aaoms.org/wisdom_teeth.php

unless...the teeth are Perfect.

2012 – “Wisdom teeth that are completely erupted and functional, painless, cavity free, in a hygienic environment with healthy gum tissue, and are disease-free teeth they [sic] may not require extraction...Your third molars must be examined regularly and **x-rays of your wisdom teeth should be taken every year to make sure that the health of your teeth and gum tissue does not change.**”

[If less than perfect, extract.]

False & Misleading Advertising?

Should not the same Truth in Advertising apply to all health professions?

Not one word on Risks of Surgery in the USA Today Advertisement

or their

Wisdom Teeth Pamphlet.

Commercial Advertisements For Drugs, in Print/TV list adverse effects and contra-indications.

Why Not AAOMS?

The Unmentioned Risks

Trismus

Hemorrhage

Alveolar osteitis

Damage to teeth

Periodontal damage

Injury to TMJ

Soft Tissue Infection

Temporary dyesthesia

Permanent dyesthesia

Anesthetic complications

Mandible/Maxilla fracture

Oroantral communication

Tulloch, JF, Antczak-Bouckoms, Ung N. Evaluation of the costs and relative effectiveness of alternative strategies for the removal of mandibular third molars. Intl. J. of Technology Assessment in Health Care 6 (1990); 505-515.

Normally developing, erupting or erupted
3rd molars
frequently classified as “impactions”

Normally Developing Third Molars

Over-classified as 4 full bony impactions when extracted by oral surgeon



“MesioAngular” Impaction or Normal Eruption

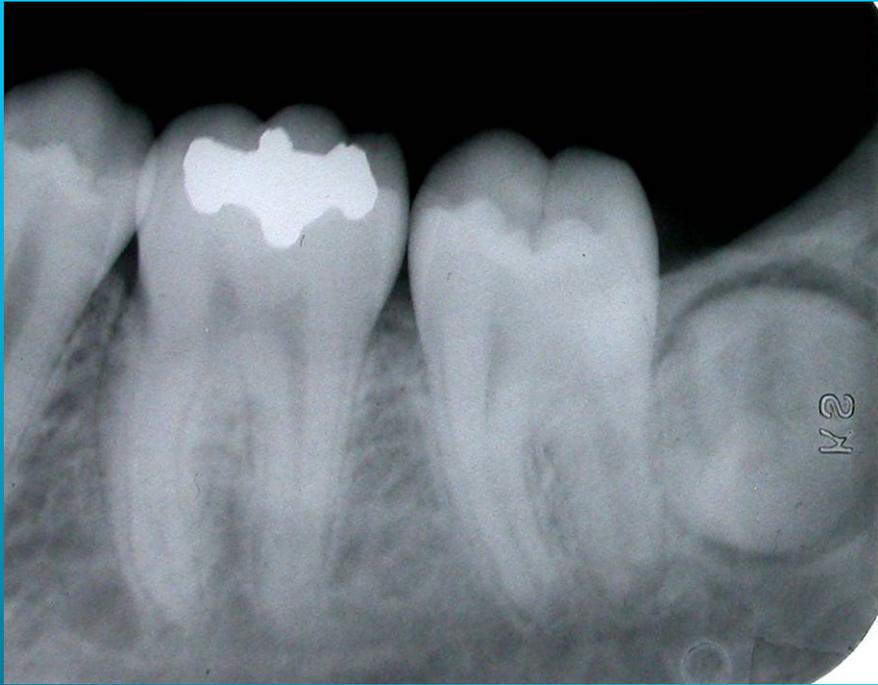


Age 14



Age 22

Impaction?
Wait & See



Age 15



Age 17

From “Impaction” to Eruption



Age 13

Age 16

Age 18

Minimal Pathology

“ [Only] **12 %** of **impacted** teeth had associated **pathology**... [excludes pericoronitis]

“no surge [in pathology] with increase in age

“similar to 10 % risk of appendicitis and 12 % incidence of gall bladder inflammation, [yet]

“**prophylactic appendectomies and cholecystectomies are not advocated.**”*

Why then prophylactic 3rd molar extractions?

Pathology Related to Third Molars Extractions*

Internal resorption	0.85%	Cysts	1.65% ?**
2 nd molar resorption	4.78%	Pericoronitis	8%,
Periodontal bone loss	4.73%		

Total Pathology = 20%

Pathology and/or Discomfort of any Kind = 30%

****Cysts** based on x-ray “diagnosis” of enlarged follicle, not biopsy determination, are **overstated**.

*Stanley, et al. Pathologic sequelae of “neglected” impacted third molars. J Oral Pathol 1988;17:113-7

Population Put at Risk

- ± 10 Million Third Molars Extracted Annually
- ± 3.8 million People
- ± 70% to 80% = Prophylactic Extractions
- ± 2.7 to 3 million People = FUN Surgery
- ± 3 days of “discomfort and disability” – pain, swelling, bruising, malaise, absence from school and loss of work income – from uncomplicated extractions.

Ref: Friedman JW. The prophylactic extraction of third molars: a public health hazard. Am J Public Health 2007;97(9):1554-1559.
APHA Policy: Opposition to prophylactic removal of third molars (wisdom teeth)

The New Mantra

Absence of Symptoms is not Absence of Disease

Clinical risk markers - **Pocket Depth at least 4mm** - around third molars or the distal of adjacent second molars in young adults = **periodontal pathology** and should not be ignored, even though no symptoms accompany these findings. The **odds** are that periodontal pathology **will worsen over time even without symptoms.**^{1,2}

What about Pseudopockets with PD \geq 4 mm but no loss of attachment & no bleeding points?

1. Garaas R, et al. Prevalence of Third Molars With Caries Experience or Periodontal Pathology in Young Adults. *J Oral Maxillofac Surg* 2012;70:507-513.

2. AAOMS White Paper on Third Molar Data

AAOMS Fights Back With Third Molar Clinical Trials

[circa 1999 to present]

*“**third molar periodontal pathology** is a major contributor to chronic oral inflammation...*

***potentially** contributing to systemic inflammatory response with negative consequences for overall health.”* [emphasis added]

White, RP. Progress report on third molar clinical trials. JOMS, 65:377-83, 2007.

AAOMS Sponsors Research On Third Molars

“This study was supported by the

- Oral and Maxillofacial Surgery Foundation,
- American Association of Oral and Maxillofacial Surgeons, &
- Dental Foundation of North Carolina.”

**Published almost exclusively in the
Journal of Oral and Maxillofacial Surgery**

**No Replication in Periodontal
Journals**

**Why are Periodontists Silent on
this Issue?**

Periodontal Journal Search for Third Molar Articles 9 Found 1985-2012

Journal of Periodontology - 5

- Treatment of **intraony defects** after impacted mandibular third molar removal....(2011)
- Prevention of mandibular third molar extraction-**associated periodontal defects**. (2008)
- Use of **orthodontic treatment** as an aid to third molar extraction....(2003)
- Mandibular second molar **periodontal status after third molar extraction**. (2001)
- **Surgical removal** of the fully impacted mandibular third molar....(1985)

Journal of Clinical Periodontology - 4

- A regimen of **systematic periodontal care after removal** of impacted third molars manages periodontal pockets associated with the mandibular second molars. (2005)
- Residual **periodontal defects distal to the mandibular second molar** 3-5 months after impacted third molar extraction. (2002)
- **Orthodontic extraction** of mandibular third molar to avoid nerve injury and promote periodontal healing. (2008)
- Treatment of **3rd molar-induced periodontal defects** with guided tissue regeneration. (1997)

Journal of Periodontal Research - 0

Periodontal Defects Worsen on Second Molars after 3rd Molar (M3) Extraction

“Given healthy periodontal status preoperatively, **48%** had **worsening** of their [**second molar**] periodontal measures after M3 removal....”

Richardson DT, Dodson TB. Risk of periodontal defects after third molar surgery: An exercise in evidence-based clinical decision-making. Oral Surg Oral Med Oral Pathol Oral Radiol Endod. 2005;100(2):133-7.

AAOMS Finding

25% of 300 healthy people aged 14-45 had at least
1 probing depth $\geq 5\text{mm}$ on a 3rd molar

[75% Didn't!]

Spreading  Periodontal & Systemic Disease.

Is that justification for extracting all 3rd molars?

Should all teeth with PD $\geq 5\text{mm}$ be extracted?

Myth: Third molars should be removed to prevent future Systemic Disease.

FACT: The same “pathological” periodontal conditions are associated with teeth other than third molars.

Should we remove all at-risk teeth to prevent future problems?

Good Grief! Periodontists would become

Exodontists!

Incidence of 3rd Molar Ext Related Mandibular Nerve Paresthesia

(Two Studies)

Minimum^{1,2} - 1.3% Temporary 0.33% Permanent

Maximum^{3,4} - 4.4% Temporary 1 % Permanent

1. Valmaseda-Castellon E, et al. Inferior alveolar nerve damage after lower third molar surgical extraction: a prospective study of 1117 extractions. Oral Surg Oral Med Oral Pathol Oral Radio Endod 2000;92:377-83.
2. AAOMS White paper on third molar data. AAOMS June 29, 2007;24 pages. (Avg of all studies = 0.3%)
3. Kipp DP, et al. Dyesthesia after mandibular third molar surgery. JADA 1980;100:185-92.
4. Swinson JW, et al. Permanent sensory nerve impairment following third molar surgery: a prospective study. Oral Surg Oral Med Oral Pathol Oral Radiol Endod. 2006;102(4);E1-7.

Conservative Estimate Permanent Paresthesia

9.9 Million 3rd Molar Extractions by O.S.*

Assume 50% = Lower 3rds = 5 million (rounded)

1.3% Mandibular Nerve Injuries = 65,000**

0.33% permanent



16,500 People

with

Permanent Paresthesia

Each Year

*Moore PA, et al. Dental therapeutic practice patterns in the U.S. General Dentistry 2006;54:92-98.

**Based on: Valmaseda-Castellon E, et al. Inferior alveolar nerve damage after lower third molar surgical extraction: a prospective study of 1117 extractions. Oral Surg Oral Med Oral Pathol Oral Radio Endod 2000;92:377-83

Worst-Case Estimate Permanent Mandibular Paresthesia

4.4% Mandibular Nerve Injuries = 220,000

1% Permanent



50,000 People
with
Permanent Paresthesia
Each Year

BY Oral Surgeons ~~Alone~~ Combined!

DO ~~NO~~ More HARM

If 70% of people having extractions had
no symptoms past or present*
and no pathology,

then AT LEAST

11,500 to 35,000 individuals are **afflicted**
EACH YEAR with **Lifetime Paresthesia**
FOR NO GOOD REASON!

*Slade GD, et al. The impact of third molar symptoms, pain, and swelling on oral health-related quality of life. J. Oral Maxillofac Surg. 2004;62(9):1118-24.

To Which Should Be Added Lingual Paresthesia

Studies of the incidence of lingual nerve paresthesia related to lower wisdom tooth extraction **range from 2.6% for all impactions to a high of 30% for mesioangular impactions.**

Avoidance of lingual tissue retraction and removal of the lingual plate of bone can avoid most of this injury.*

Lingual Nerve Injury has not been included in the number of people suffering paresthesia subsequent to mandibular third molar extractions, for reasons unclear to the author; probably an oversight due to the fewer published studies.

The total number of people injured may be doubled if lingual paresthesia is included.

*Bataineh AB. Sensory nerve impairment following mandibular third molar surgery. J Oral and Maxillofacial Surgery 2001;59(9):1012-1017.

Not to Mention TMD Temporomandibular Disorder

For age 15-20, “...**risk of experiencing TMD** after third-molar extraction was **1.2%**”

Assume 25% of 3.8 million OMS 3rd molar cases are in this age group, most of whom have IV Sedation or GA

➤ Translates to **6,000 TMD/TMJ Injuries**
in this age group alone Each Year!

Contributing Factor: “...intravenous sedation or general anesthesia ... decrease a patient’s protective mechanism.”

An Intermediate Variable?

“....The mechanism proposed for relating TMD to M3 removal **may be** trauma associated with the extraction or maintaining an open mouth position for the duration of the procedure....If the onset of TMJ symptoms is related to **prolonged mouth opening rather than the trauma of extraction itself**, then, generally speaking, any evaluation between M3 extraction and **TMD will be overestimated without controlling for the true intermediate variable ‘prolonged mouth opening.’”**

The Brits Have it Right

“Surgical Removal of Impacted Third Molars Should be Limited to Patients with Evidence of Pathology”

Unrestorable caries

Non-treatable pulpal
or periapical pathology

Cellulitis

Abscess

Osteomyelitis

Internal/external
resorption of the tooth
or adjacent teeth

Fracture of tooth

Disease of follicle including
cyst/tumour

Tooth impeding surgery or
reconstructive jaw surgery

When a tooth is involved in
or within the field of tumour
resection

Recurrent hyperculitis/pericoronitis
if hyperculectomy is not feasible

United Kingdom National Institute for Clinical Excellence 2000. Guidance on the extraction of wisdom teeth.

Evidence-Based
Vs
Economic-Based
Third Molar Surgery

\$\$ Tell the Story

\$4-5 Billion Industry*

<u>9.9 Million 3rd molar Extractions</u>	=	\$3,210,339,250¹
Panoramic films (3.8 M cases)	=	382,000,000²
3.6 M IV/GA	=	1,080,000,000³

\$4.67 Billion Gross Cost

* Excludes general practitioner extractions.

¹ Avg. fee D7220-\$200, D7230-\$300, D7240/7241-\$375 multiplied by annual number of impactions estimated by 2005-06 ADA Survey of Dental Services Rendered.

² Estimated avg. fee of \$80/case (4.9 million annual estimate for OMS, 2005-06 ADA Survey)

³ Estimated avg. fee of \$300 for I-V Sedation or General Anesthesia

\$4-5 Billion Industry

- Number of Practicing Oral Surgeons ± 6000
- ± 53 M3 cases a month = **75% of estimated annual gross income @ \$780,000**
- **Eliminating 70% of FUN Extractions would Reduce Gross Income by \$546,000**
- **Thus the Conflict: Economically-Based Practice**

VS

Evidence-Based Practice

Friedman JW. The prophylactic extraction of third molars: a public health hazard. Am J Public Health 2007;97(9):1554-1559.

The Pain*

**+10 Million Days of Standard Discomfort
and/or Disability**

**Avg \geq 3 days of pain, swelling, bruising, malaise,
absence from school and loss of work income**

– from uncomplicated extractions

Abstaining from Prophylactic Extractions

would

Save \$3.3 Billion Annually

as a result of

➤ **6.9 Million Fewer Teeth Extracted**

on

➤ **2.7 Million Fewer People**

*2005-06 ADA Survey of Dental Services Rendered.

Redundant Radiographs

Unnecessary Radiation Exposure & Cost

“Nearly everything a dentist needs to know about a person’s oral health is revealed by full mouth periapical X-rays...dispensing with the usefulness of the routine panoramic view.”*

Many Oral Surgeons take a **FUN Panoramic instead of utilizing the GPs x-ray films.**

*News Release, University of Buffalo Dental School, March 11, 2005
Re: study by Dr. Lida Radfar.

General Anesthesia, IV Sedation & Iatrogenesis

3.6 Million GA & IV Sedation **by O.S.***

Most of Which Is **FUN!**

Mortality Rate - **1/835,000****

Or **4.3 Deaths a Year**

Morbidity Unknown

(Fractures, Sinus Infection, Hypoxia)

**For Treatment, most of which could be done
With only the local anesthetic that is *a given*.**

* American Dental Association, Survey Center, 2005-06 Survey of Dental Services Rendered.

**D'Eramo, EM, et al. Adverse events with outpatient anesthesia in Massachusetts.

J Oral Maxillofac Surg. 2003;61(7):793-800.

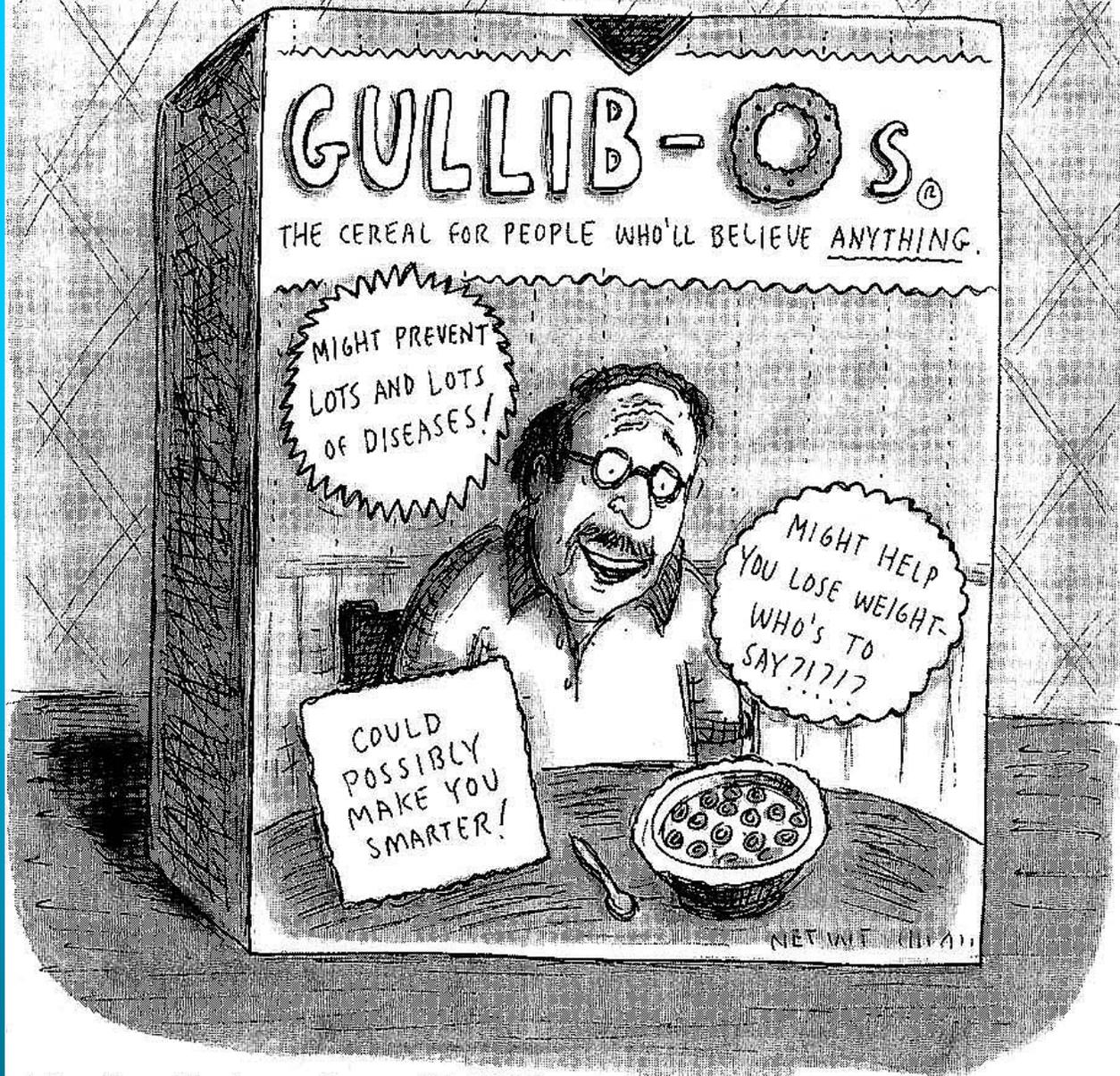
Abstaining from Prophylactic Third Molar Extractions

**Eliminating 70% of FUN Extractions would
Save \$3.3 Billion**

Prevent

- 11-34,000 ± Avoidable Permanent IAN Paresthesia
- 25,000 ± Lingual Nerve Paresthesia
- 23,000 ± TMD/TMJ Injury
- 2.7 Million People with Avoidable
Pain/Discomfort/Disability &
Absence from School & Work

We have been fed....



The New Yorker, Aug. 27, 2007

R. Chart

Gullibility & Culpability

Not all, but many

- Dental Educators
- General Practitioners
- Pediatric Dentists
- Orthodontists
- (not to mention others)

Initiate the Referral Process

Is this

- Evidence-based Practice?
 - Poor Practice? or
 - Malpractice?

U.S. Preventive Services Task Force Grade Definitions*

Level A: Good scientific evidence suggests that the benefits of the clinical service substantially outweigh the potential risks. Clinicians should discuss the service with eligible patients.

Level B: At least fair scientific evidence suggests that the benefits of the clinical service outweighs the potential risks. Clinicians should discuss the service with eligible patients.

Level C: At least fair scientific evidence suggests that there are benefits provided by the clinical service, but the balance between benefits and risks are too close for making general recommendations. Clinicians need not offer it unless there are individual considerations.

Level D: At least fair scientific evidence suggests that the risks of the clinical service outweighs potential benefits. Clinicians should not routinely offer the service to asymptomatic patients.

Level I: Scientific evidence is lacking, of poor quality, or conflicting, such that the risk versus benefit balance cannot be assessed. Clinicians should help patients understand the uncertainty surrounding the clinical service.

* Accessed at <http://www.uspreventiveservicestaskforce.org/3rduspstf/ratings.htm>

Ethical Obligation

Ethics is ‘the discipline dealing with what is good and bad and with moral duty and obligation.’*

But these must not be empty words. Our ethics compels us not only to be concerned with what is good and bad, but **it is our moral duty and obligation to do something about it.**

* Webster's ninth new collegiate dictionary. Springfield, MA: Merriam-Webster, 1989.

Put an End to Economic-Based Practice

When there is **sufficient evidence** that **abstention is evidence-based**, we are ethically bound to inform the public so that it may avoid treatment that is **potentially injurious**.

AAPHD & ASTDD Obligation

If we **really** believe in evidence-based practice, then **it is our moral duty and obligation to join APHA and adopt a policy in**

**Opposition to Prophylactic
Removal of Third Molars**

*Evidently,
that's all,
folks!*

