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
MCAGD REBUTAL TO JAY FRIEDMAN

MOVE OVER, GOD! MY WAY IS BETTER!

JAY FRIEDMAN
DDS
PRACTICE LIMITED TO THE PRESERVATION OF THIRD MOLARS

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

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....”

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E.G. Brunson, DDS

"The Number One Reason for Removing your Wisdom Teeth – Peace Of Mind"
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

According to the American Academy of Oral and Maxillofacial Surgeons (AAOMS), 85% of third molars will eventually need to be removed. However, upon request by ABC/GMA, the wording was changed to 85% and the recommendation to remove third molars by young adulthood was retained.

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.....
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 dysthesia
Permanent dysthesia
Anesthetic complications
Mandible/Maxilla fracture
Oroantral communication

Normally developing, erupting or erupted 3\textsuperscript{rd} 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
“[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*

<table>
<thead>
<tr>
<th>Pathology</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internal resorption</td>
<td>0.85%</td>
</tr>
<tr>
<td>Cysts</td>
<td>1.65%</td>
</tr>
<tr>
<td>2nd molar resorption</td>
<td>4.78%</td>
</tr>
<tr>
<td>Pericoronitis</td>
<td>8%</td>
</tr>
<tr>
<td>Periodontal bone loss</td>
<td>4.73%</td>
</tr>
</tbody>
</table>

**Total Pathology = 20%**

Pathology and/or Discomfort of any Kind = 30%

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

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.


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 ≥4 mm but no loss of attachment & no bleeding points?

²AAOMS White Paper on Third Molar Data
“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]

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 intrabony 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….”

AAOMS Finding

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

[ 75% Didn’t! ]

Spreading → Periodontal & Systemic Disease.

Is that justification for extracting all 3\textsuperscript{rd} molars?

Should all teeth with PD ≥ 5mm 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\textsuperscript{1,2} - 1.3\% Temporary 0.33\% Permanent

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

2. AAOMS White paper on third molar data. AAOMS June 29, 2007;24 pages. (Avg of all studies = 0.3\%)
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

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!

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.

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.”

Huang GJ, Rue TC. Third-molar extractions as a risk factor for temporomandibular disorder. JADA 2006;137(11):1547-1554
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”

<table>
<thead>
<tr>
<th>Unrestorable caries</th>
<th>Fracture of tooth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-treatable pulpal or periapical pathology</td>
<td>Disease of follicle including cyst/tumour</td>
</tr>
<tr>
<td>Cellulitis</td>
<td>Tooth impeding surgery or reconstructive jaw surgery</td>
</tr>
<tr>
<td>Abscess</td>
<td>When a tooth is involved in or within the field of tumour resection</td>
</tr>
<tr>
<td>Osteomyelitis</td>
<td>Recurrent hyperculitis/pericoronitis</td>
</tr>
<tr>
<td>Internal/external resorption of the tooth or adjacent teeth</td>
<td>if hyperculectomy is not feasible</td>
</tr>
</tbody>
</table>

Evidence-Based Vs Economic-Based Third Molar Surgery

$$ Tell the Story$$
$4-5 Billion Industry*

9.9 Million 3rd molar Extractions = $3,210,339,250
Panoramic films (3.8 M cases) = 382,000,000
3.6 M IV/GA = 1,080,000,000

$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 $\pm 6000$
- $\pm 53$ 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

The Pain*

+10 Million Days of Standard Discomfort and/or Disability

Avg ≥ 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
- 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.
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...

Gullib-Os
The cereal for people who'll believe anything.

Might prevent lots and lots of diseases!

Could possibly make you smarter!

Might help you lose weight. Who's to say?!

The New Yorker, Aug. 27, 2007
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.

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.

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!