



# Pediatrica

ONLINE

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EDITOR: DR MOHAMAD ITANI

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من مشروع "الوعي الاجتماعي في سن الشباب 2006" - مجموعة طلاب من مدارس عكار (صورة مصغرة)

## INSIDE

LPS president letter	Prof. G. Hage	2
Pediatrica Perspectives	Dr M. Itani	3
Minutes of LPS General Assembly February 2006	LPS Cabinet	4
The New Food Guide Pyramid	Mrs. A. Barhoumi	10

## Medical Literature Selections

Malaria Vaccine ?	11
Meningococcal Vaccine Updates	12
Pediatric Empyema	13
Misdiagnosis of Melanoma	15
Medication Overuse in Chronic Headache	16
Buccal Midazolam for febrile seizures	18
Minimum Ages & Intervals Between Vaccine Doses	19

## **LPS president letter**

Chers confrères et ami (e) s

Bienvenue au Site Electronique de la Société Libanaise de Pédiatrie. La Société Libanaise de Pédiatrie a pour but d'atteindre et de promouvoir la meilleure santé sociale, physique et mentale pour tous les bébés, enfants, adolescents et les jeunes adultes libanais. Notre Site Electronique a été récemment créé pour vous permettre d'affronter les défis - et de rejoindre les besoins - inhérents à la croissance du nombre et la diversité des pédiatres libanais, dans une époque où l'accès électronique devient une partie essentielle dans la formation primaire et continue en médecine. Notre Site Electronique est organisé d'une façon aisément accessible, afin de vous fournir des informations relatives à la santé de l'enfant et à la pratique de la pédiatrie au Liban.

Vous y trouverez :

1. Les missions de la Société Libanaise de Pédiatrie
2. Les programmes scientifiques
3. Les activités sociales en formation continue
4. Des publications et documents, dont le calendrier de vaccinations conseillé aux pédiatres
5. Ainsi que d'autres ressources sur la santé de l'enfant au Liban, dans la région et dans le monde.

La Société Libanaise de Pédiatrie vous assure un site digne de confiance, avec des informations provenant de ressources expertes et académiques, régulièrement mises à jour, sur la santé de l'enfant; il vous procure aussi des conseils pratiques, issus de sociétés et associations pédiatriques internationales, qui s'accordent aux guides de l'OMS et de l'UNICEF.

Notre site contient également des informations générales pour les parents, dès la naissance et jusqu'à l'âge de 18 ans. Nous sommes conscients qu'un nombre non négligeable d'enfants libanais n'obtiennent pas - ou n'ont pas accès à - de bons soins de santé; dans cette perspective, la Société Libanaise de Pédiatrie peut contribuer à améliorer la qualité des prestations des professionnels de la santé auprès des enfants au Liban.

Pour cela, nous vous invitons à adapter notre stratégie, au sein d'un programme réalisé pour vous, afin de proposer aux familles des solutions à leurs besoins essentiels en matière de protection sanitaire de l'enfant au Liban.

Notre agenda fournit une bonne qualité de soins pour nos enfants ; il développe aussi nos connaissances communes et permet ainsi d'optimiser les dépenses en santé des ménages libanais vers les vrais besoins des enfants de notre communauté. Avec cela, les pédiatres libanais deviendront de vrais défenseurs pour leurs patients à un niveau national.

Nous vous invitons à naviguer sur notre site. Nous espérons que vos visites seront fréquentes, car nos informations sont en développement continu. Nous attendons vos suggestions, qui permettront d'adapter notre site - votre site - à vos besoins d'aujourd'hui et à vos ambitions pour demain!

Avec toutes nos amitiés et notre considération,

**Professeur Georges HAGE.**

**Président de la Société Libanaise de Pédiatrie, 2005 -2007 .**

Dear colleagues;

It gives me great pleasure to edit the issue of *Pediatrica* after a long delay for reasons that are secondary to the overwhelming conflict in our beloved country which exacerbates the routine problems that are encountered during electronic website building. Today and after finishing about 50% of the lpswebsite I would like to introduce you to our new online *Pediatrica* Vol. 1, 2007 issue and to our lpswebsite in brief.

After reviewing the perspectives of the two LPS publications LPS Newsletter in 1997, and later *Pediatrica* in 2000<sup>1</sup>, I decided to widen our LPS newsletter “*Pediatrica*” perspectives to include both “hot” topic review/s, selected articles from medical literature and finally a summary of the LPS cabinet activities. From there, the current issue contains few topics related to obesity management in “The New Food Pyramid”, “The Minutes of February, 2006 LPS general assembly”, and selected articles from renowned medical sources about "Malaria & Meningococcal vaccines, Empyema, Chronic Headache, Melanoma & Buccal medazolam for febrile seizures, in addition to an immunization agenda selected from the red book 2003 issue about doses and intervals between different vaccines which I felt that each one of us my need at one time in his practice.

I believe that the current issue is humble in its contents and as a new editor to *Pediatrica* I look for your feedback in guiding the perspectives of our publication to have as scientific as possible and to become a stand where we can discuss our concerns related to national health of children of Lebanon. The latter perspective could never achieve without your support in selecting the “hot” topics that you think are relevant to your practice as pediatrician. Such communication process is now more accessible through our lpswebsite.

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<sup>1</sup> [www.lpswebsite.org](http://www.lpswebsite.org) Lebanese Pediatric Society History.

## الهيئة العمومية للجمعية اللبنانية لطب الأطفال المنعقدة نهار السبت الواقع في 2006/2/25 محضر اجتماع وقرارات

بناءً على دعوة من الهيئة الإدارية لجمعية طب الأطفال عقد اجتماع هيئة عمومية في مقر بيت الطبيب يوم السبت الواقع فيه 2006/2/25 الساعة 4 بعد الظهر، وعندما لم يكتمل النصاب عقدت الجلسة الثانية عند الساعة 4.30 بمن حضر أي 50 عضواً.

تلا أمين السر د. جوزف حداد جدول الأعمال وكان كالتالي:

- 1- كلمة ترحيب لرئيس الجمعية د. جورج حاج ثم عرض ما تم من أعمال.
- 2- CME ، ودعم الأبحاث الطبية.
- 3- جمع عناوين الأطباء وإصدار كتيب جديد للعناوين.
- 4- اللجان الطبية (القانون الجديد مدة سنتين-رئيس وأمين سر وتوسيع اللجان وبرنامج المحاضرات والبروتوكولات)- إيجاد لجان جديدة، مثلاً: إعلامية، الصحة المدرسية، المراهقة، وزيادة الوزن، الغدد والنمو، أبحاث متعددة المرتكز، وغيرها من اللجان المفيدة.
- 5- العنوان الإلكتروني.

ابتدأ الاجتماع بالنشيد الوطني اللبناني تلاه كلمة ترحيب وشكر للزملاء على حضورهم من رئيس الجمعية د. جورج حاج الذي عرض ما قامت به الجمعية حتى تاريخه من مشاركة في عدة نشاطات ومؤتمرات علمية نذكر منها المؤتمرات الطبية في مستشفى القديس جاورجيوس والمقاصد وال UMEMS وفي دبي.

ثم أعطيت الكلمات لأعضاء الهيئة التنفيذية التالية اسماؤهم:

### د. زياد نجا (نائب رئيس الجمعية):

تحدث عن الأمور التالية:

1. استمارة عنوان الطبيب حيث تم ملء 201 عنواناً حتى تاريخه وذلك بهدف تحقيق إتصال أفضل مع الزملاء ثم جمع العناوين لاحقاً في كتيب تطبعه الجمعية وتوزعه على جميع أطباء الأطفال.
2. كما تطرق الى تمثيل الجمعية في المؤتمرات التالية:
  - أ. مؤتمر الصحة المدرسية الذي عقد في آب 2005 في اوتيل المريديان كومودور ونوقشت فيه السياسات الصحية المدرسية... وقد تمنى أن يكون للجمعية بحثاً أو كلمة في ذلك المؤتمر... ومن هنا انطلقت فكرة إنشاء لجنة للصحة المدرسية تجمع جميع الزملاء أطباء الأطفال العاملين في حقل الصحة المدرسية، فيتبادلون الخبرات والأفكار ويصدرون أبحاثاً أو غيره لما فيه مصلحة طالب المدرسة.
  - ب. كما تمثلت الجمعية أيضاً في احتفال تكريم المرضعات من حليب الأم لمدة سنتين في مركز العناية بالأم والطفل... وهنا أيضاً ترى الجمعية الحاجة إلى إنشاء لجنة من أطباء الأطفال لتشجيع الرضاعة الطبيعية والإعلام عنها وإظهار منافعها للأمهات.
3. نقاط التثقيف المستمر CME بهدف تشجيع الزملاء على حضور محاضرات طبية ذات قيمة علمية.
  - أ. ناقشت الجمعية أن تتقدم الشركات إلى الجمعية بطلب تسجيل فيه اسم المحاضر ومحتوى المحاضرة والجمعية بدورها ترسله للجنة العلمية في النقابة التي تحدد علامة أو نقاط التثقيف المستمر ولكن هذه المسألة اصطدمت بان الشركات تدعو في كل مرة عدداً محدداً من الأطباء مما يحرم غيرهم من هذه النقاط.

ب. لهذا رأيت الجمعية إن تكثر من ال Workshops وان يكون كل واحد منها يعادل 2-3 نقط تثقيفية تسمح للزملاء بجمع عدد من النقاط إضافة إلى المؤتمرات الجامعية مما يسمح لطبيب الأطفال أن يجمع سنوياً على الصعيد اللبناني 30 نقطة وهو المطلوب سنوياً للمحافظة على المطلوب من نقاط التثقيف المستمر.

4. استكمالاً لدعم سياسة التشجيع العلمي أقرت الجمعية استمارة علمية للبحث الطبي تملئ من قبل الطبيب الباحث في موضوع ما وتقدم الاستمارة للجمعية التي تبحث فيها فان وجدتها مفيدة على صعيد طب الأطفال واحتمال أن يخرج منها توصيات معينة تساهم في رفع مستوى الصحة لدى الأطفال، تدعم الجمعية مادياً هذا البحث. ومن هذا المنطلق دعمت الجمعية بحثاً عن H.pylori للدكتورة أمل نعوس في مستشفى المقاصد وكتاب الدكتور علي الزين الذي صدر لاحقاً ( والذي وعد مشكوراً بإعادة المبلغ بشكل هدية كتب عدد 100 سيرسلها مجانية لتبقيها وتسترد المال)
5. وأخيراً دعا د. نجا الزملاء الى تزويد الجمعية بمشاريع أبحاث كي يتم دراستها ودعمها.

#### د. علي فواز (عضو الهيئة الإدارية والمسئول عن شؤون روابط الاختصاصات (CLUBS)).

عرض د. علي فواز خطة عمل الروابط خلال الولاية الحالية للهيئة الإدارية والتي أتت على الشكل التالي:

1. إن الروابط Club المنشأة والفاعلة حتى الآن هي أربعة: Gastroenterology Neonatology , Hemato-Oncology الوقاية من الحوادث الطارئة (CPAP). ويجري الآن العمل على إنشاء الروابط التالية: Endocrinology ,Pneumology Neurology pediatricics لتوسيع مهامها كي تشمل موضوع اللقاءات والمراقبة والصحة المدرسية والطب الوقائي.
2. نظراً لعبء المسؤولية الفردية للرابطة Club وبالتالي لحسن سير العمل تم إقرار توسيع الهيئة الإدارية لل Club لكي تصبح على الشكل التالي :
  - رئيس: الذي يتراأس ويدير كل أعمال ال Club وهو مسؤول بشكل مباشر عن عمل الرابطة.
  - نائب رئيس: الذي يقوم مقام الرئيس أثناء غيابه
  - أمين السر: الذي يتولى الاتصالات بأعضاء الرابطة وتنسيق اللقاءات بعد التشاور مع الرئيس وكتابة محاضر الجلسات .
3. تم إقرار إمكانية تجديد مهام مسؤولية ال Club لسنة ثانية وذلك للاستفادة من الخبرة ولعدم إضاعة الوقت في كثرة الانتخابات.
4. يمكن لأي طبيب أطفال أن ينتسب لأي رابطة، ولأكثر من رابطة واحدة.
5. يمكن لكل رابطة Club وبناء على رغبة أعضائها، أن تنشئ داخلها عدة لجان تقوم كل منها بالاختصاص بمواضيع محددة من عمل الرابطة ويقوم رئيس الرابطة بتعيين منسق لكل من هذه اللجان وهو يكون، أي رئيس الرابطة مسؤول مباشرة وكلياً عن تشكيل وعمل هذه اللجان.
6. إجراء لقاءات دورية شهرية داخل المستشفيات حيث تعرض ثلاث حالات مرضية Clinical Cases خلال اللقاء الذي يكون على مدى ساعة واحدة، يتبع العرض السريري للحالة المرضية محاضرة عن الموضوع حيث يتم توضيح الأمور الصعبة والمستجدة حولها. اما تحديد الحالات المرضية المعروضة فيتم بالاتفاق بين ال Club المعني وقسم الأطفال في المستشفى المضيفة وسوف تقوم الجمعية بتأمين CME CREDIT لهذه المحاضرات.
7. هذا لا يمنع أحياناً من أن يكون موضوع اللقاء محاضرة علمية نظرية لا سيما في بعض المواضيع التي لا بد من استذكارها بين الحين والآخر ومعرفة ما استجد فيها من تطور.
8. الخروج الى المناطق البعيدة ويستحسن ان تكون المحاضرات هناك على شكل Conduite A Tenir للمواضيع الشائعة التي يمكن ان يواجهها طبيب الأطفال في تلك المناطق بهدف التواصل العلمي.

9. تحث الجمعية كل رابطة على القيام بإنجاز بروتوكولات التشخيص والعلاج الأساسية التي تخصها. وستقوم الجمعية من جهتها بإدراج جميع هذه النشاطات والتوصيات العلمية على المركز الإلكتروني للجمعية LPS WEBSITE وفي مجلة ال PEDIATRICA وكذلك في كتيبات صغيرة يتم توزيعها على أطباء الأطفال لاحقاً.
10. أقرت الجمعية إقامة ما أسميناه: LPD - Lebanese Pediatric Day حيث تقوم الجمعية بتكريس يوم واحد لمجموع الروابط Clubs ويخصص هذا اليوم لل update فقط وذلك بشكل سنوي وسوف يكون لرؤساء الروابط دوراً مهماً في تنظيم هذا اليوم.
11. ستقوم الجمعية بتحديد برنامج زمني لهذه النشاطات على مدار سنة كاملة.

#### د. محمد حسن عيتاني (مسؤول تنظيم المركز الإلكتروني للجمعية ومجلة الجمعية Pediatrca).

عرض د. محمد عيتاني نتيجة استطلاع آراء الأعضاء، ثم عرض عليهم محتويات مركز الجمعية الإلكتروني التي تقوم الجمعية بتحضيره بالتعاون مع مؤسسة الحريري. وفيما يلي ملخص العرضين:  
أولاً: استطلاع آراء أطباء الأطفال لعام 2006

أ- آلية الإستطلاع : وزعت استمارة باللغة الإنكليزية من 14 سؤالاً تم الإعلان عنها عبر الإنترنت، حيث تلقينا سبعة إستمارات من أصل 120 عنواناً بريدياً مسجلاً لدى الجمعية نصفها ورد عبر الفاكس والباقي عبر البريد الإلكتروني، وتم ملء 36 إستمارة خلال ندوات ولقاءات علمية تمت في مدينة بيروت وتوزعت الأسئلة حول ثلاثة مواضيع هي:

1. الخصائص الديموغرافية للأطباء
2. تقييم عمل الجمعية في السنوات السابقة
3. إقتراحات الأعضاء حول سبل تحسين أداء الجمعية

ب- نتائج الاستطلاع :

1. الخصائص الديموغرافية للمجموعة
  - i. بلغت نسبة الذكور / الإناث 1/1.6
  - ii. بلغت نسبة الأطباء المشاركين العاملين في بيروت 84%، جبل لبنان 14%، والبقاع 2%.
  - iii. بلغت نسبة الأطباء العاملين في عيادات مشتركة / عيادات منفردة 1/1.1، الأطباء العاملين في مستشفيات تعليمية / العاملين في القطاع الغير تعليمي 1/1.9.
  - iv. بلغت نسبة أطباء الأطفال العاملين / أطباء الأطفال الإختصاص 1/1.2، ونسبة أطباء الأطفال المتعاقدين مع المستشفيات / غير المتعاقدين 1/43.

2. إقتراحات الأعضاء حول سبل تحسين أداء الجمعية

- i. مؤتمرات علمية 77%
  - ii. موقع إلكتروني متفاعل 60.5%
  - iii. دعم الأبحاث الطبية 56%
  - iv. مجلة طبية 42%
  - v. تواصل الكتروني بين الأعضاء 42%
  - vi. مكتبة طبية في مركز الجمعية 25.5%
  - vii. محتويات الموقع الإلكتروني
- a. تواصل مع مواقع إلكترونية عالمية تهتم بأمور الطفل 815%

- b. تواصل إلكتروني عبر الموقع مع مجالات طبية %74
- c. جداول نمو خاصة بالأطفال (Growth Charts) %48
- d. زاوية للأعضاء %40.5
- e. زاوية للأهل %38
- f. جدول الأعمال الطبية %24
- g. جدول التشخيصات الطبية (ICD 10) %21.5
- h. اقتراحات أخرى

- i. أن يشابه موقع الأكاديمية الأميركية لطب الأطفال
- ii. أن يحتوي إعلانات عن ندوات ذات مستوى علمي متقدم
- iii. أن يحتوي على إرشادات حول اللقاحات
- iv. أن يحتوي على معلومات طبية جديدة وحديثة
- v. أن يفتح المجال للأطباء لمناقشة حالات مرضية معينة عبر الإنترنت
- vi. أن يحتوي على دليل عن أسماء الأعضاء وعناوينهم
- vii. أن يحتوي على إرشادات بالغة العربية يمكن توزيعها على الأهل

#### viii. توقعات الأعضاء من انتسابهم الى الجمعية

- a. المطالبة بوضع قوانين تحمي الطفل.
- b. تمثيل حقيقي للأعضاء على مختلف الأصعدة
- c. تمثيل حقيقي لصحة الطفل اللبناني عن طريق توعية الأهل، المشاركة في التوعية الإجتماعية حول مشاكل الطفولة مثل تأثير التدخين الغير مباشر على صحة الأطفال، العمل على طغية شركات التأمين للأمراض الخلقية عند الأطفال.
- d. التزام الجمعية بالخدمات التي تقدمها وبشكل مستمر
- e. مشاركة الجمعية بدراسات وطنية ميدانية
- f. وضع برامج صحية وطنية مشتركة لأطباء الأطفال في لبنان توحد طريقة عملهم بالإضافة الى إصدار بروتوكولات علاجية وتوصيات.
- g. إصدار خلاصات حول المواضيع المهمة التي تتم مناقشتها في المؤتمرات الطبية العالمية والوطنية ووضعها في متناول الأعضاء.
- h. العمل على وقف إعطاء وبيع اللقاحات في الصيدليات
- i. الدفاع عن حقوق طبيب الأطفال وتحديد دور طبيب الصحة العامة وطبيب العائلة في العناية الصحية للأطفال.
- j. تواصل أكثر مع الأعضاء.
- k. إبعاد تأثير رجال السياسة في شؤون وقرارات الجمعية.
- l. العمل على وضع جداول للنمو خاصة بالطفل اللبناني
- m. الدخول كشريك مع وزارة الصحة في وضع التوصيات الخاصة بصحة الطفل في لبنان
- n. إقامة مؤتمرات وندوات علمية ذات مستوى علمي مرتفع تمنح نقاط تعليم طبي مستمر بواسطة روابط الجمعية أو يقوم بها أساتذة عالميين.
- o. إقامة ندوات في المحافظات
- p. العمل على تشجيع الأعضاء على المشاركة في الانتخابات والنشاطات العلمية
- q. تشجيع التعاون العلمي بين المستشفيات

٢. العمل على منع وصف الأدوية المضادة للالتهابات في الصيدليات.

3. تقييم عمل الجمعية في السنوات السابقة

ممتاز	جيد جداً	جيد	وسط	دون الوسط	
0	0	%16	%38.5	%41	تمثيل الجمعية للأطباء
0	%2	%32	%16	%45	تمثيل الجمعية في طرح المشاكل الصحية للأطفال
%9	%8	%26	%20	%35.5	نشاطات الجمعية
0	%2	%32	%16	%45	CLUBS(نشاطات الروابط )
%10	%14.5	%24.5	%22	%29	المجلة الطبية
%10	%10	%18	%18	%43.5	ندوات المحافظات
%14.5	%5	%31	%24.5	%24.5	المؤتمرات العلمية

ix. هل اتصل بكم أحد للإضمام الى إحدى روابط الجمعية؟  
أبداً %77 نعم %20.5

xi. هل ترغب بالإشتراك بإحدى الرابطات؟  
نعم %52 كلا %36

xii. هل تأخرت عن دفع اشتراكك في الجمعية؟  
نعم %34 كلا %63

xiii. ما سبب تأخرك في الدفع؟  
لا أحصل على الفائدة المرجوة من الاشتراك %38  
غير راضي عن سياسة الجمعية %38.5

xiv. ماهو المبلغ الأنسب لاشتراكك في الجمعية إن قامت بتأمين الخدمات المشار إليها سابقاً  
25000 ل.ل %41  
50000 ل.ل %32  
75000 ل.ل %18  
100000 ل.ل %7

وفي الختام شكر د. عيتاني الزميلة د. منى نابلسي لمساعدتها في تحليل نتائج الإستطلاع باستخدام جهاز SPSS .

ثانياً: ملخص عرض موقع الجمعية الإلكتروني

عرض د. عيتاني للمراحل التي تم إنجازها في موقع الجمعية حتى تاريخه، فشرح :

## أ - كيفية الدخول الى الموقع

1. يستطيع الأهل وأي كان أن يدخل الى الموقع للإطلاع على أماكن محددة كزاوية الأهل وأبحث عن طبيب، وزاوية إسأل طبيب؟

2. أما الأعضاء فيتوجب عليهم تسديد اشتراكاتهم في الجمعية للدخول الى الموقع الخاص بالأعضاء والذي سيحتوي على اشتراكات بأربعة مجلات علمية عالمية شهري وعبر الإنترنت تحدد لاحقاً، كما يحوي إمكانية التواصل عبر الإنترنت بين الأطباء وإمكانية استشارة طبيب أطفال أخصائي، ويحوي أيضاً على زاوية مخصصة للأدوات التي يحتاجها طبيب الأطفال في عمله كجداول النمو، وضغط الدم وجداول معدل الريقان عند حديثي الولادة وغيرها.

ب - وستعرض المعلومات حالياً باللغة الإنكليزية على أن يتم لاحقاً ترجمتها الى الفرنسية والعربية خاصة زاوية الأهل.

ج - هذا وسيتكلف تحضير المركز وإنشأؤه مبلغ ألفين دولار أمريكي دفعت الجمعية نصفها، والنصف الباقي يدفع عند انتهاء المشروع.

في الختام قدم د. عماد شكر (أمين صندوق الجمعية) نشرة حول وضع الجمعية المالي والتزاماتها وأعطى براءة ذمة عن أعمالها للعام المنصرم.

ومن القرارات الأساسية التي اتخذت:

- 1- عدم اعتماد السجل العدلي للانتساب إلى الجمعية
- 2- تخفيض الاشتراك السنوي للأعضاء إلى 30 ألف ليرة لبنانية
- 3- اعتماد ممثلين للجمعية في المناطق على النحو الآتي:
  - شحيم - د. نديم قعقور
  - صيدا - د. غسان بعاصيري
  - المتن الشمالي - د. فيرا غالي
  - المتن الأعلى - د. وليد ابو رسلان
  - بعلبك - د. اكرم دندش
  - البقاع الشمالي - د. زياد حاراتي
  - البقاع الغربي - د. عماد السيد
  - زحلة - د. بيار ابو رجيلي

و إذ كررت الجمعية اللبنانية لطب الأطفال عبر رئيسها د. جورج حاج شكرها لجميع الأطباء الزملاء الذين شاركوا في الجمعية العمومية ، أملت منهم استمرار المشاركة وتفعيل اللجان الطبية وتلبية دعوة الجمعية في دفع الاشتراكات السنوية المتوجبة عليهم. كما حثتهم على الانضمام إلى اللجان الطبية وملء الأماكن التمثيلية الشاغرة في مناطق: عين وزين وعاليه وصور وبننت جبيل و النبطية ومرجعيون وجبيل وشتورة وذلك لما فيه مصلحة العمل الطبي لأطفال لبنان.

الهيئة الإدارية للجمعية اللبنانية لطب الأطفال



## The New Food Guide Pyramid

Since 1992, the Food Guide Pyramid aimed at translating the Dietary Guidelines for Americans into a simple guide that will help reduce the risk of obesity and major chronic disease.

The new Food Guide Pyramid (Mypyramid) is posted at [www.mypyramid.gov](http://www.mypyramid.gov). It is a complete system with interactive websites and educational modules. It has been developed based on the Dietary Guidelines of 2005 and the Dietary Reference Intakes. It translates these guidelines into a total diet that meets nutrient needs from food sources and aims at limiting dietary components consumed in excess. The amounts to eat are based on a person's age, sex, and activity level.

The anatomy of the pyramid calls for moderation, proportionality, variety, activity and most importantly, personalization and gradual improvement. Being an interactive tool, it allows subjects to set their own dietary plan by entering their age, sex and level of physical activity through going to - mypyramid plan. It permits also tracking one's energy balance by entering all foods eaten each day and physical activities performed in -mypyramid tracker. Mypyramid privileged kids also to identify how to fit their food choices into this new tool - blast off game.

For professionals, mypyramid educational framework allows to calculate Estimated Energy Requirement based on gender, age, height, weight and physical activity. It allows them to address key concepts by topic area with a focus on what action should be taken, how to implement it and why it is necessary to carry it. Mypyramid gives access to food intake patterns by calorie level specifying household measure servings from each food group.

It also introduces the discretionary calories concept, which is the balance of calories remaining from the estimated energy requirement after meeting the essential calories (the number of calories needed to meet the recommended nutrients through consumption of foods in the low-fat or no added sugar forms). This facilitates the incorporation of solid fats or added sugar without exceeding total caloric allowance.

The new pyramid received many criticisms as well as many compliments. It is undoubtedly a detailed and personalized guide that can be used by consumers and professionals. Whether or not it will result in controlling obesity and major chronic disease needs to be evaluated through studies in the years to come.



[www.mypyramid.gov](http://www.mypyramid.gov)

Abir N. Barhoumi  
Therapeutic Dietitian  
Assistant Director Nutrition Services AUB-MC

**THE ALERT: UPDATE ABOUT MALARIA VACCINE**

**THE ARTICLE: Malaria.** Brian M. Greenwood. The Lancet. Vol. 365; pages 1487-1498. April 23, 2005

**THE REVIEWER: Burris Duncan, MD, FAAP. Tucson, Arizona.**

**SELECTED FOR PEDIATRICA : Drs Mohamad Itani & Georges Aramouni**

**THE JOURNAL: AAP SOICH Publication, July 2005 Newsletter.**

A review article on malaria that appeared in the April 23<sup>rd</sup> issue, 2005 of the Lancet by Brian Greenwood caught my eye as it was a very good summary of the current knowledge about this disease that is responsible for a half billion clinical attacks each year and "about 1 million deaths a year or 3000 deaths a day and most of these deaths occur in African children". "Severe attacks in children include about 1 million cases of cerebral malaria and 4 million cases of severe anemia. Of children with clinical attacks, several thousand have neurological damage and up to 250,000 will have developmental problems. In pregnant women, low birth weight associated with anemia is thought to contribute to 100,000 deaths every year." These are staggering figures! Greenwood takes us through the cycle of the infective sporozoites stage of the parasite executing from the salivary glands of the anopheline mosquitoes and are injected into the host at the time of the bite. The sporozoites migrate to the liver where some are engulfed by macrophages and others infect hepatocytes. There they multiply and then enter the merozoite stage and enter the blood stream to infect red blood cells and initiate the clinical symptoms of malaria. Greenwood gives us the bad news, citing various reasons for the deterioration of malaria control, including: climate instability with drought and floods, global warming, civil disturbances, travel, HIV that increases susceptibility to malaria, drug resistance, and insecticide resistance to pyrethroids (used to treat bed-nets). Then he gives us the good news that prompted my selecting the following three' brief articles to abstract.

1. Genetically modified Plasmodium parasites as a protective experimental malaria vaccine. A-K Mueller, M Labaied, SHI Kappe, K Matuschewski. Nature, vol. 433, pages 164-167. January 13, 2005.
2. Knockout Malaria Vaccine. Robert Menard. Nature, vol. 433, pages 113-114. January 13, 2005.
3. Malaria Vaccines: Back to the Future? AP Waters, MM Mota, MR van Dijk, CJ Janse. Science, vol.307,pages528-530.January 28, 2005.

Over many years the multiple attempts in the hands of countless investigators to find an effective malaria vaccine have not been successful. Various strategies have concentrated on preventing the sporozoite from destroying or infecting the hepatocytes and developing into the merozoite stage that infects erythrocytes and produces the clinical systems; i.e. pre-erythrocytic vaccines. The complexity of this parasite, the life cycle, plus the large number of proteins that might be responsible for establishing immunity make using subunits of the parasite as the vaccine to stimulate immunity very difficult. Researchers have therefore turned their attention to using the whole parasite as the inducer of immunity. In 1967, Nussenzweig and colleagues attenuated the sporozoite phase of the parasite by gamma irradiation.<sup>1</sup> These radiated sporozoites were incapable of infecting the host mice, but were able to generate sporozoite specific T-cell antibodies. These antibodies prevented wild sporozoites from entering the hepatocytes and hence conferred immunity. The immunity lasted at least 10 months in over 90% of the human volunteers. However, practical problems prevented the development of this vaccine such as the need for thousands of irradiated infected mosquitoes to bite and deliver the required dose of irradiated

sporozoites. There was also concern that under-radiation would fail to prevent infection and over-radiation would fail to generate immunity.

Mueller and her colleagues in Heidelberg, Germany have put a little twist on the irradiation of sporozoites. They identified specific genes that were only expressed in the pre-erythrocytic phase of the parasite and further identified one gene that was necessary for the parasite to transform from the sporozoite phase into the merozoite phase while within the hepatocyte. They used a replacement strategy to delete the upregulated in infective sporozoite gene 3 (uis3) and obtained clonal parasite lines designated uis3 (-). These sporozoites developed normally within the mosquito gut, infected the salivary glands, and showed typical locomotion and infectivity of the hepatocytes as do wild sporozoites. However, they lacked the ability to complete transformation in the liver cells to merozoites and hence the inability to cause bloodstage or clinical infections. Mice that had been injected with these uis3 (-) sporozoites were challenged two months later with the wild sporozoites and they were completely protected. They proved that the protection was specific against the pre-erythrocytic or pre-clinical stages of malaria. The article concludes: "Together, our findings lead the way to the development of a genetically attenuated, protective whole-organism malaria vaccine that prevents natural infection by mosquito bite."

#### **Reference:**

1. Nussenzweig RS, Vanderberg J, Most H, Orton C. Protective immunity produced by the injection of X-irradiated sporozoites of *Plasmodium berghei*. *Nature* 1967; 216: 160- 162.

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#### ***THE ALERT: UPDATE ABOUT MENINGOCOCCAL VACCINE RECOMMENDATIONS.***

***THE ARTICLE: Prevention and Control of Meningococcal Disease: Recommendations for Use of Meningococcal Vaccines in Pediatric Patients.*** Committee on Infectious Disease. Policy Statement. American Academy of Pediatrics. *Pediatrics* July 2005; 116;496-505.

***THE REVIEWER: Scott Cohen, M.D. ([scott@globalpediatricalliance.org](mailto:scott@globalpediatricalliance.org))***

***SELECTION FOR PEDIATRICA : Drs Mohamad Itani & Georges Aramouni***

***THE JOURNAL: AAP SOICH Newsletter Publication, July 2005.***

Summary: Invasive meningococcal disease is known to have 2 peak incidences in childhood: in infancy and in adolescence. The case fatality rate is 10-20% and survivors may experience amputations, scarring, and neurologic sequelae. Adolescents suffer the highest mortality rate, up to 20% of cases. They are the target population of the recently released meningococcal vaccine, Menactra. The FDA approved the vaccine for individuals aged 11-55 years. The vaccine offers immunity against serotypes A, C, Y, and W-135, the serotypes which cause more than 75% of adolescent cases.

This paper reviews the epidemiology of meningococcal disease and compares Menactra with its older counterpart, MPSV4, a vaccine licensed since 1981. Also discussed: Menactra's presumed higher immunity compared with the older vaccine, cost, and the MP's recommendations for its use. There are between 1400 and 3000 cases of invasive meningococcal disease each year in the U.S., an attack rate of 0.5 -1 per 100,000 population. In 1981 the original MSPV4 (Menomune A/C/Y/W135) polysaccharide vaccine was approved by the FDA for children older than 2 years of age with splenic deficiencies or anatomic or functional asplenia. In addition, this vaccine has been recommended for travelers to the world's meningococcal meningitis endemic regions, especially parts of Africa. College freshman are also encouraged to receive this vaccine. MPSV 4 covers the same 4 serotypes (A, C, Y, and

W-135) as the new Menactra, but MPSV 4 is a polysaccharide vaccine. While it is able to stimulate B-lymphocytes to produce antibodies, T-cells are not affected, and therefore the immune response is short-lived.

Most polysaccharide vaccines, such as the MPSV4, are not immunogenic in infants due to their immature B-cells. In fact, MPSV4 fails to induce immunological memory at all ages since it does not stimulate T-cell immunity, therefore no immune memory is conferred. MPSV4 appears to be effective for only about 3 years.

Menactra is chemically conjugated to a protein carrier. This stimulates a T-cell dependent antibody response. Such polysaccharide-protein conjugate vaccines (which include Prevnar and Hib) are safe, immunogenic in young infants, and induce long-term protection. Although the protection period from Menactra is not yet known, it's conjugated to protein antigens capable of promoting T-cell education. This change is felt to infer longer lasting immunity in the recipient. The basic recommendations from the MP are as follows:

1. Routine immunization with Menactra, of all patients aged 11 and older, including older adolescents and entering college freshman who will be living in dormitories. (Information on need for booster immunization should be available within the next 3 years)
2. Children age 2-10 years who are high risk (immunocompromised or traveling) should be immunized with the older MPSV4 vaccine. (Use of the new Menactra for children younger than 11 years is currently pending approval by the FDA)
3. Re-immunize patients age 11 years and older with Menactra if they have received the MPSV4 immunization 3 to 5 years earlier.

#### **Reviewer comment:**

Worldwide, the largest outbreaks of meningococcal disease are in sub-Saharan African countries, "the meningitis belt" which extends from Ethiopia in the east to Senegal in the west. The attack rates in this region range between 100 to 1,000 per 100,000 population. Six countries account for the largest numbers of cases and deaths.

In June 2001, the Bill and Melinda Gates Foundation awarded a grant of \$7 - million to a US partnership. The Foundation's intention was to facilitate the development of a vaccine against serotypes A and C and test its safety, efficacy and immunogenicity in at least 2 African countries. There have been many other vaccine initiatives against meningococcal disease in sub-Saharan Africa, but many of these efforts have been only marginally successful. Almost all the outbreaks studied in this region have involved serotypes covered by the Menactra vaccine. If this new vaccine proves successful in industrialized countries, one would hope that there would be continued concerted efforts to fund programs for mass vaccination campaigns in Africa.

#### **References:**

1. WHO Fact Sheet No. 105, Epidemic Meningococcal Disease, revised Dec. 1998
2. WHO Fact Sheet Fact sheet W14I, Revised May 2003

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***THE ALERT:*** Pediatric Empyema: Operative versus Nonoperative Primary Therapy

***THE ARTICLE:*** Primary operative versus nonoperative therapy for pediatric empyema: a meta-analysis.

Avansino I, Goldman B, Sawin R, et al. *Pediatrics*. 2005; 115: 1652-1659

***THE REVIEWER:*** Clinton Cavett, MD, FAAP. Pediatric Surgery. Carilion Medical Center for

**Children, Roanoke, VA.** (Dr. Cavett has disclosed no financial relationships relevant to his commentary).

**SELECTION FOR PEDIATRICA : Drs Mohamad Itani & Georges Aramouni**

**THE JOURNAL: AAP Grand Rounds Publication. October, 2005.**

Investigators at the University of Washington' and Children's Hospital & Regional Medical Center in Seattle conducted a systematic review of published reports of primary operative therapy and non-operative therapy to better assess the optimal mode of treatment for children with empyema. Operative therapy was defined as thoracotomy or video-assisted thoracoscopic surgery (VATS), while non-operative therapy was defined as antibiotics with thoracentesis or chest tube drainage with or without fibrinolytics. Major outcomes compared in children treated with one of these modalities included length of hospital stay, duration of antibiotic treatment, duration of chest tube drainage, and complication rates. A final outcome was failure of initial treatment, defined as a rescue operative intervention at the late stage of parenchymal entrapment.

An initial search identified 218 publications involving empyema treated operatively or non-operatively in children from birth to age 18 years. After excluding abstracts, incomplete case reports, reviews, letters, and studies including adults, 63 publications met inclusion/ exclusion criteria. Review of the citations in these papers identified another 4 studies that met the inclusion/ exclusion criteria, for a total of 67 studies analyzed by the authors. Data on 3,418 children initially managed with non-operative therapy and 363 treated with primary operative therapy were included. In addition, 8 studies met criteria for a meta-analysis comparing failure rates with the 2 types of treatment; all of these articles were published after 1999.

The main findings of the systematic review are presented in the table below. The results of the meta-analysis indicated that the failure rate was approximately 11 times higher in the primary non-operative therapy group compared to those initially managed with operative therapy (RR=0.09; 95% CI, 0.04 to 0.23) [Table].

Outcome	Non-operative (n = 3,418 cases)	Primary Operative (n = 363 cases)
Average hospital stay	20±8.3 days	10.8±4.8 days
Average duration of chest tube	10.6±3.4 days	4.4±1.6 days
Average duration of antibiotic treatment	21.3±7.9 days	12.8±3.8 days
Complication rate	5.6%	5.0%
Failure rate	23.6%	2.5%

Mortality and complication rates for the primary operative intervention group did not differ between patients treated either by open thoracotomy or thoracoscopic removal of fibrin and restricting visceral scar. The authors conclude that patients treated via non-operative methodology showed prolonged hospitalization, longer need for antibiotics, and greater need for late surgical intervention. However, the authors also note that more than 76% of patients in the non-operative group showed resolution of empyema without surgical intervention.

**Reviewer Commentary:**

Empyema affects nearly 1 in every 150 pediatric patients hospitalized with pneumonia. Therapeutic options for children with empyema range from observation and intravenous antibiotics alone, chest tube drainage with or without fibrinolytic agents, and thoracoscopic decortication or open decortication. Empyemas evolve through 3 stages: stage 1, early exudative, with collection of thin reactive fluid and few white cells; stage 2, the fibrinopurulent phase, with large quantities of white cells and fibrin deposition and formation of floculations; and stage 3, the organization phase, with thick fibrinous peel encasing the parenchyma and limiting expansion.

The findings of this study are strengthened by the authors' well-defined approach to identifying and reviewing studies. Pertinent articles were retrieved by preselected criteria, evaluated through data aggregation and statistical analysis, and reviewed by pediatric surgery experts. In addition, the authors recognized rapid advances in this area during their study period of 1981 to 2004. To account for recent trends, the authors reviewed a subset of studies published in the past 5 years to validate their findings.

The clear message here is that early intervention is the most efficient for decortication and allows the least morbidity (length of hospitalization, length of time for tube thoracostomy, length of time on IV antibiotics). There remains the need for the right study to indicate the correct therapy for each stage of empyema. When is it time for proper and early surgical intervention, and when is the patient showing that his or her empyema is resolving on its own? The rapid change of an empyema from stage 1 to stage 3 is not uncommon; thus many pediatric intensivists and pediatric surgeons feel strongly about intervention with thoracoscopic decortication in the early stages. 2.3 Advancement of an empyema to stage 3, with its fixed, leather-like covering over the lung parenchyma, is a dreaded event. At this stage, the patient may require an open thoracotomy, which poses its own set of morbidities. Early intervention by way of thoracoscopy is rapidly becoming the method of choice in these cases of progressing empyema.

#### **References:**

1. Lewis KT, et al. *Am Fam Physician*. 1992;46:1443-1455.
2. American Thoracic Society. *Am Rev Respir Dis*. 1962;85:935-936.
3. Merry M, et al. *J Pediatric Surgery*. 1999;34:178-181.
4. Hilliard T, et al. *Arch Dis Child*. 2003;88:915-917

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#### **THE ALERT: Misdiagnosis of Melanoma in Young Children**

**THE ARTICLE:** *Outcomes and pathological review of a cohort of children with melanoma.*  
Leman JA, Evans A, Mooi W, et al. *Br J Dermatol*. 2005;152:1321-1323.

**THE REVIEWER:** James G.H. Dinulos, MD, FAAP. Dermatology, Dartmouth-Hitchcock Medical Center, Lebanon, NH

**SELECTION FOR PEDIATRICA:** Drs Mohamad Itani & Georges Aramouni.

**THE JOURNAL:** AAP Grand Rounds Publication, November 2005.

For this retrospective study from the west of Scotland (population 2.5 million), the authors identified a cohort of 20 children younger than age 15 years with malignant melanoma diagnosed from 1979 to 2002. Clinical outcomes were examined, and an expert panel of 3 pathologists was assembled to review available histological slides. Mean age of the children at diagnosis was 12 years (range 6 to 15 years). One child died of melanoma (age 15, nodular melanoma, depth 1 mm). Another patient with a polypoid melanoma on the ear (depth 2.4 mm) developed a lymph node metastasis, which was treated surgically.

The remaining 18 children (followed 2 to 21 years [median follow-up 61/2 years] after the primary melanoma excision) were disease-free.

The pathologist panel reviewed 13 sets of slides. Panelists were not involved in the original diagnosis and were blinded to both diagnoses and outcomes. After an independent review, the pathologists established the same diagnosis in 12 of the 13 patients. In 1 case, 2 pathologists diagnosed a Spitzoid melanocytic tumor of unknown malignant potential and 1 pathologist diagnosed a melanoma. The expert panel changed the diagnosis of melanoma to benign nevus in 62% (8 of 13) of the children. The authors conclude that there may be a tendency to overdiagnose prepubertal melanoma. They recommend using expert pathologists to diagnose melanoma in prepubertal children.

### **Reviewer Commentary**

Melanoma in prepubertal children is rare, with an incidence of 0.8 per million in the first decade of life.<sup>1</sup> There are few large-scale studies on outcomes of malignant melanoma in young children.<sup>2</sup> The incidence of melanoma is 7 times greater in the second decade of life than in younger children, suggesting that prepubertal children differ from older children and adults.<sup>3</sup> This cohort included both prepubertal and postpubertal patients; more than half were older than age 12 years. In 4 children (2 postpubertal and 2 prepubertal), all experts agreed with the original diagnosis of melanoma. The 2 prepubertal children, both age 9 years, were alive and disease-free (follow-up time was not provided), despite having intermediate-thickness melanomas (5.5 mm and 2.1 mm). A recent Italian study supports the notion that children younger than 10 years at diagnosis tend to live longer without disease than those who are 10 or older (90% vs 46.7%,  $P=.04$ ).<sup>3</sup> In adults, disease-free survival correlates directly with type of tumor or thickness. More studies are needed to determine whether a young age at diagnosis correlates with longer disease-free survival.

Childhood malignant melanoma presents distinct diagnostic challenges, study results demonstrate. First, childhood melanoma lesions often appear atypically with ulceration and/or lack of pigment (amelanotic). In the Italian study, half the melanomas were amelanotic, resembling pyogenic granulomas. Second, benign nevi in children frequently have atypical microscopic features that can mimic malignant melanoma. In the present study, more than half of the originally diagnosed melanomas were considered by the experts to be benign nevi. These findings led the authors to suggest a tendency to overdiagnose prepubertal melanoma. Third, in some children, Spitz nevi can mimic malignant melanoma. Thus, atypical-appearing pigmented lesions, pyogenic granuloma-like lesions, and rapidly growing lesions should be excised and evaluated by a pathologist with an interest in the skin or by a dermatopathologist.

### **References:**

1. Bonifazi E, et al. *Eur J Pediatr Dermatol.* 2001;11:157-175.
2. Bader IL, et al. *Am J Pediatr Heme Onc.* 1985;7:340-345.
3. Ferrari A, et al. *Pediatrics.* 2005; 115:649-654.

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**THE ALERT:** Medication Overuse Worsens Chronic Daily Headache

**THE ARTICLE:** *Chronic daily headache in children and adolescents.* Wiendels NI, van der Geest MCM, Neven AK, et al. *Headache.* 2005;45:678-683.

**THE REVIEWER:** Gordon Millichap. *Neurology. Children's Memorial Hospital, Northwestern University Medical Center. Chicago, IL.* Dr. Millichap has disclosed no financial relationships relevant to this commentary.

***SELECTION FOR PEDIATRICA: Drs Mohamad Itani & Georges Aramouni***

***THE JOURNAL: AAP Grandrounds publication, November 2005.***

Retrospective review of medical records of 79 children and adolescents younger than age 16 years with eadache more than 15 days a month is reported from Leiden University Medical Center, the Netherlands. Chronic daily headache (CD H) occurred in 57 (72%) patients for more than 6 months. Headache duration was more than 4 hours a day in 60% of the cases. Analgesics were used by 60 children (76%), with daily use in 13 (16%). Frequent school absenteeism and sleeping problems were reported in one-third of patients. Twenty-eight patients (35%) could be classified according to the International Headache Criteria: 17 (22%) had chronic tension-type headaches, 5 (6%) had chronic migraine, 6 (8%) had medication overuse headache, 15 (19%) did not fit any category, and 36 (46%) presented insufficient data for classification. Withdrawal of all analgesic medication is recommended in CDH management.

**Reviewer Commentary**

CDH is defined as primary headaches occurring 15 or more days a month and lasting more than 4 hours a day. The International Classification of Headache Disorders (ICDHII) for Adults includes 4 types of CDH, each with or without medication overuse: chronic migraine, chronic tension-type headache, new daily persistent headache, and hemicrania continua.<sup>1</sup> CDH may evolve over time, beginning as episodic migraine or tension-type headache and becoming chronic and persistent. Secondary headache disorders, such as posttraumatic headache, are excluded. No specific pediatric CDH criteria have been developed, but the recent increased recognition and interest in this health problem has prompted recommendations by the Pediatric Committee of the American Association for the Study of Headache.<sup>2</sup> Areas of interest include: CDH prevalence in children (estimated at 0.9% in children compared to 4% in adults); a uniform definition specific for pediatric CDH; psychological profiles and interventions; and treatment strategies other than medication. Headache severity in children is dependent on coping characteristics, functional disability indicators such as missed school days and sleep disorders, and disrupted peer and social activities. Adolescents with CDH often state that the pain is severe while having symptoms of la belle indifference. A history of school phobias and family problems is common. In adults, CDH commonly is associated with medication overuse,<sup>3</sup> and in children in the above study, 16% used analgesics daily. Analgesic overuse for migraine or tension-type headache may cause rebound headache and is a significant risk factor for CDH development, sometimes delayed in onset.<sup>4</sup> Medication overuse headache is probably more prevalent in the older adolescent, leading to the recommendation of withdrawal of all medication in CDH treatment. A general, practical approach to pediatric CDH management includes: discontinuance of analgesics and caffeine; adequate sleep; elimination of tyramine-containing cheese, caffeine-containing beverages, and other headache triggers from the diet;<sup>5</sup> no skipped meals; daily exercise; biofeedback; and psychological intervention.<sup>6</sup>

**Editors' Note**

If ever there were a need to repeat this type of study prospectively using a headache diary rather than a medical record alone, this retrospective study is it. Until then, an empirical trial of removal of analgesic medication still seems like something we should be aching to try on our patients with CDH.

**References**

1. Headache classification subcommittee of the International Headache Society. *Cephalalgia*. 2004;24:8-160.

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**THE ALERT: Midazolam in the Bum or Between Cheek and Gum?**

**THE ARTICLE: Safety and efficacy of buccal midazolam versus rectal diazepam for emergency treatment of seizures in children: a randomized controlled trial.** .

McIntyre I, Robertson S, Norris E, et al. *Lancet*. 2005;366:205-210.

**THE REVIEWER: Mike Dubik, MD, FAAP . Pediatrics, Naval Medical Center, San Diego, CA.**  
Dr. Dubik has disclosed no financial relationships relevant to this commentary.

**SELECTION FOR PEDIATRICA: Drs Mohamad Itani & Georges Aramouni**

**THE JOURNAL: AAP Grand Rounds, October 2005.**

To compare the safety and efficacy of rectal diazepam and buccal midazolam for the treatment of acute tonic-clonic seizures in children, researchers in the United Kingdom conducted a multicenter, nonblinded, randomized controlled trial. The study group included 177 patients, ages 6 months and older, representing 219 separate emergency department visits to 1 of 4 participating hospitals. Participants' median age was 3 years (range: age 7 months to 15 years) and 98 of the 177 (55%) were male. All had visible seizure activity upon arrival in the ED, and none had established intravenous access. The dose of midazolam or diazepam was approximately 0.5 mg/kg based on estimated weight. The intravenous preparation of midazolam was dripped into the buccal cavity between the gum and cheeks using a needle or straw. Of the 219 episodes, 109 received buccal midazolam and no received rectal diazepam. In 68 episodes (31 %), a prehospital emergency treatment (67 rectal diazepam, 1 rectal paraldehyde) had been administered; 35 of these children subsequently were treated with buccal midazolam and 33 with rectal diazepam.

Therapeutic success was defined as the cessation of clinical seizure activity within 10 minutes of administration without respiratory depression requiring assisted breathing and without further seizure activity within 1 hour. Therapeutic success was achieved in 56% (61 of 109) of the buccal midazolam group and in 27% (30 of 110) of the rectal diazepam group (percentage difference 29%; 95% CI, 16-41). For all episodes, median time after treatment until the seizure stopped was 8 minutes (interquartile range [IQR], 5 to 20 minutes) for buccal midazolam and 15 minutes (IQR 5 to 31 minutes) for rectal diazepam ( $P=.01$ ; hazard ratio 0.7; 95% CI, 0.5-0.9). For all episodes, more children had stopped seizing within 10 minutes after receiving buccal midazolam (71 of 109, 65%) compared to rectal diazepam (45 of 110, 41 %;  $P<.001$ ). Seizure recurrence within the first hour was less likely for those given buccal midazolam (14% vs 33%;  $P=.02$ ). New-onset versus established seizure disorder and presence or absence of fever did not affect results. Overall, buccal midazolam was found to be more effective than rectal diazepam ( $P<.001$ ; odds ratio, 4.1; 95% CI, 2.2-7.6). There were 12 episodes of respiratory depression: 5 after midazolam and 7 after diazepam. There were 5 intubations: 2 after midazolam and 3 after diazepam. The authors conclude that buccal midazolam is just as safe as and more effective than rectal diazepam for treatment of children with seizure in an ED setting.

**Reviewer Commentary.**

This study found buccal midazolam superior to rectal diazepam for the treatment of seizures. Midazolam had a quicker onset and a longer duration with no greater risk of respiratory depression. These findings confirm the results of a previous trial with a smaller sample size.<sup>1</sup> The interpretation of the current study's results unfortunately is confounded by the use of the rectal solution (rather than gel) preparation of diazepam. Differences in preparations may affect onset, peak, and duration of action of any medication. The use of a rectal solution, rather than the rectal gel used in the United States, probably does not significantly change these results, but further studies would need to address this specific issue. If and when the reported results are replicated, buccal midazolam should become a welcome addition to the therapeutic armamentarium. Intravenous lorazepam remains the preferred medicine and the preferred route for the initial treatment of generalized convulsions.<sup>2,3</sup> However, other medications and other routes need to be considered. Intramuscular absorption of benzodiazepines is erratic. An upper respiratory infection, prominent secretions, or vigorous head movement can prohibit intranasal use.<sup>4</sup> Sublingual application is impractical with tonic seizures. Rectal access requires the removal of clothing (especially difficult in tonic seizures and for those with underlying motor impairment). Although buccal mucosa can be blocked by copious saliva, it has clear advantages over other ports of entry.

The intravenous formulation used in this study is relatively inexpensive. If midazolam could be formulated for convenient oral use, it could become the preferred treatment when there is no intravenous access, particularly in the nonhospital setting.

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***THE ALERT:* Recommended and Minimum Ages and Intervals Between Vaccine Doses**

***SELECTION FOR PEDIATRICA:* Drs Mohamad Itani**

***THE JOURNAL:* Red Book 2003.**

It is not uncommon to encounter in our daily practice patients who present with incomplete vaccination schedule or those who are not even vaccinated at all. The Table below and its appendix include the Red Book recommendations of how to deal with such cases and to build their individualized immunization agenda.

Dr Mohamad Itani

<b>Recommended and Minimum Ages and Intervals Between Vaccine Doses<sup>1</sup></b>				
<b>Reference: Red Book - 2003</b>				
<i>Vaccine and Dose Number</i>	<i>Recommended Age for This Dose</i>	<i>Minimum Age for This Dose</i>	<i>Recommended Interval to Next Dose</i>	<i>Minimum Interval to Next Dose</i>
Hepatitis B1 <sup>2</sup>	Birth–2 mo	Birth	1–4 mo	4 wk
Hepatitis B2	1–4 mo	4 wk	2–17 mo	8 wk
Hepatitis B3	6–18 mo	6 mo <sup>4</sup>	—	—
Diphtheria and tetanus toxoids and acellular pertussis (DTaP)1 <sup>2</sup>	2 mo	6 wk	2 mo	4 wk
DTaP2	4 mo	10 wk	2 mo	4 wk
DTaP3	6 mo	14 wk	6–12 mo	6 mo <sup>4,5</sup>
DTaP4	15–18 mo	12 mo	3 y	6 mo <sup>4</sup>
DTaP5	4–6 y	4 y	—	—
Haemophilus influenzae type b (Hib)1 <sup>2,6</sup>	2 mo	6 wk	2 mo	4 wk
Hib2	4 mo	10 wk	2 mo	4 wk
Hib3 <sup>7</sup>	6 mo	14 wk	6–9 mo	8 wk
Hib4	12–15 mo	12 mo	—	—
Inactivated poliovirus (IPV)1 <sup>2</sup>	2 mo	6 wk	2 mo	4 wk
IPV2	4 mo	10 wk	2–14 mo	4 wk
IPV3	6–18 mo	14 wk	3.5 y	4 wk
IPV4	4–6 y	18 wk	—	—
Pneumococcal conjugate vaccine (PCV)1 <sup>6</sup>	2 mo	6 wk	2 mo	4 wk
PCV2	4 mo	10 wk	2 mo	4 wk
PCV3	6 mo	14 wk	6 mo	8 wk
PCV4	12–15 mo	12 mo	—	—
Measles- Rubella - Mumps- (MMR)1	12–15 mo <sup>8</sup>	12 mo	3–5 y	4 wk
MMR2	4–6 y	13 mo	—	—
Varicella <sup>9</sup>	12–15 mo	12 mo	4 wk <sup>9</sup>	4 wk <sup>9</sup>
Hepatitis A1	>2 y	2 y	6–18 mo <sup>4</sup>	6 mo <sup>4</sup>
Hepatitis A2	>30 mo	30 mo	—	—
Influenza <sup>10</sup>	—	6 mo <sup>4</sup>	1 mo	4 wk
Pneumococcal polysaccharide vaccine (PPV)1	—	2 y	5 y <sup>11</sup>	5 y
PPV2	—	7 y <sup>11</sup>	—	—

1. Combination vaccines are available. Using licensed combination vaccines is preferred over separate injections of their equivalent component vaccines (Source: Centers for Disease Control and Prevention. Combination vaccines for childhood immunization: recommendations of the Advisory Committee on Immunization Practices (ACIP), the American Academy of Pediatrics (AAP), and the American Academy of Family Physicians (AAFP). MMWR Recomm Rep. 1999;48(RR-5):1–15). When administering combination vaccines, the minimum age for

administration is the oldest age for any of the individual components; the minimum interval between doses is equal to the greatest interval of any of the individual antigens.

2. A combination hepatitis B-Hib vaccine is available (Comvax, manufactured by Merck Vaccine Division, West Point, PA) and a combination DTaP/hepatitis B/IPV vaccine is available (Pediarix, manufactured by GlaxoSmithKline Biologicals, Rixensart, Belgium). These vaccines should not be administered to infants younger than 6 weeks of age.
3. Hepatitis B3 should be administered >8 weeks after hepatitis B2 and 16 weeks after hepatitis B1, and it should not be administered before 6 months of age.
4. Calendar months.
5. The minimum interval between DTaP3 and DTaP4 is recommended to be >6 months. However, DTaP4 does not need to be repeated if administered >4 months after DTaP3.
6. For Hib and PCV, children receiving the first dose of vaccine at 7 months of age or older require fewer doses to complete the series (see Centers for Disease Control and Prevention. *Haemophilus b conjugate vaccines for prevention of Haemophilus influenzae, type b disease among infants and children two months of age and older: recommendations of the ACIP. MMWR Recomm Rep. 1991;40(RR-1):1-7*; and Centers for Disease Control and Prevention. *Preventing pneumococcal disease among infants and young children: recommendations of the Advisory Committee on Immunization Practices [ACIP]. MMWR Recomm Rep. 2000;49(RR-9):1-38*).
7. For a regimen of only polyribosylribitol phosphate-meningococcal outer membrane protein (PRP-OMP [PedvaxHIB, manufactured by Merck Vaccine Division, West Point, PA]), a dose administered at 6 months of age is not required.
8. During a measles outbreak, if cases are occurring among infants younger than 12 months of age, measles immunization of infants 6 months of age and older can be undertaken as an outbreak control measure. However, doses administered at younger than 12 months of age should not be counted as part of the series (Source: Centers for Disease Control and Prevention. *Measles, mumps, and rubella—vaccine use and strategies for elimination of measles, rubella, and congenital rubella syndrome and control of mumps: recommendations of the Advisory Committee on Immunization Practices [ACIP]. MMWR Recomm Rep. 1998;47(RR-8):1-57*).
9. Children 12 months to 13 years of age require only 1 dose of varicella vaccine. People 13 years of age and older should receive 2 doses separated by >4 weeks.
10. Two doses of inactivated influenza vaccine, separated by 4 weeks, are recommended for children 6 months to 9 years of age who are receiving the vaccine for the first time. Children 6 months to 9 years of age who have previously received influenza vaccine and people 9 years of age and older require only 1 dose per influenza season.
11. Second doses of PPV are recommended for people at highest risk of serious pneumococcal infection and those who are likely to have a rapid decrease in pneumococcal antibody concentration. Reimmunization 3 years after the previous dose can be considered for children at highest risk of severe pneumococcal infection who would be younger than 10 years of age at the time of reimmunization (see Centers for Disease Control and Prevention. *Prevention of pneumococcal disease: recommendations of the Advisory Committee on Immunization Practices [ACIP]. MMWR Recomm Rep. 1997;46(RR-8):1-24*).