Evidence-Based Practice for K-12 Health Professionals

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Agenda

- Levels of Evidence
- Study Design
- The PICO Question
- Evidence-Based Resources
- Assessing the Evidence
Introduction to Evidence-Based Resources
Some Studies That I Like To Quote

URL for Source (James McCormack)
Definition - EBM

Evidence-based medicine requires the integration of the best research evidence with our clinical expertise and our patient’s unique values and circumstances.

Definition - EBP

Evidence-Based Practice: A way of providing health care that is guided by a thoughtful integration of the best available scientific knowledge with clinical expertise.

This approach allows the practitioner to critically assess research data, clinical guidelines, and other information resources in order to correctly identify the clinical problem, apply the most high-quality intervention, and re-evaluate the outcome for future improvement.

NLM MeSH 2009
Steps in Evidence Based Research

1. Asking answerable questions
2. Finding the best evidence
3. Critically appraising the evidence
4. Applying a decision
5. Evaluation

There is a lot of Research!

- Over 24 million citations in PubMed
- Added in 2012: 777,559
- Smoking cessation: **29774**
- Asthma: **148345**
- Diabetes: **497871**
Levels of Evidence
Levels of Evidence

EBM Pyramid and EBM Page Generator, © 2006 Trustees of Dartmouth College and Yale University. All Rights Reserved. Produced by Jan Glover, David Izzo, Karen Odate and Lei Wang.
Types of Studies

- Case Series and Case Reports
- Case Control Studies
- Cohort Studies
- Randomized, Controlled Clinical Trials
- Systematic Reviews
- Meta-analysis
Case Series and Case Reports

- Collections of reports on the treatment of individual patients or a report on a single patient.
- No control groups with which to compare outcomes, so limited statistical validity.
Case Series
Case Control Studies

- Patients who already have a specific condition are compared with people without the condition. Researcher looks back to identify factors or exposures possibly associated with the condition, often relying on medical records and patient recall.

- Less reliable because showing a statistical relationship does not mean than one factor necessarily caused the other.

- Starts with patients who already have the outcome and looks backwards to possible exposures.
Case Control Series

Group of interest (e.g. cancer patients)

Comparison group (e.g. non-patients)

Take histories

Draw conclusions

Compare histories

URL for Image Source
Cohort Studies

- Take a large population who are already taking a particular treatment or have an exposure, follow them forward over time, and then compare for outcomes with a similar group that has not been affected by the treatment or exposure.

- Observational and not as reliable as randomized controlled studies, since the two groups may differ in ways other than in the variable under study.

- Starts with the exposure and follows patients forward to an outcome.
Cohort Studies: Diagram

Group of interest (e.g. smokers)

Follow over time

Comparison group (e.g. non-smokers)

Follow over time

Compare outcomes

URL for Image Source
Randomized, Controlled Clinical Trials

- Carefully planned projects that introduce a treatment or exposure to study its effect on patients.
- Include methodologies that reduce the potential for bias (randomization and blinding) and allow for comparison between intervention and control groups.
- Is an experiment and can provide sound evidence of cause and effect.
- Randomly assigns exposures and then follows patients forward to an outcome.
RCTs

[Diagram showing patients being randomly assigned to treatment and control groups with follow-up and results comparison.]
Systematic Reviews

- Usually focus on a clinical topic and answer a specific question. An extensive literature search is conducted to identify studies with sound methodology. The studies are reviewed, assessed, and the results summarized according to the predetermined criteria of the review question.
Meta-analysis

- Thoroughly examines a number of valid studies on a topic and combines the results using accepted statistical methodology to report the results as if it were one large study.
- The Cochrane Collaboration has done a lot of work in the areas of systematic reviews and meta-analysis.
Creating the Well-Built, Answerable Question

PICO
### The 5 A’s

<table>
<thead>
<tr>
<th>ASSESS the patient</th>
<th>1. Start with the patient -- a clinical problem or question arises from the care of the patient</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASK the question</td>
<td>2. Construct a well built clinical question derived from the case</td>
</tr>
<tr>
<td>ACQUIRE the evidence</td>
<td>3. Select the appropriate resource(s) and conduct a search</td>
</tr>
<tr>
<td>APPRAISE the evidence</td>
<td>4. Appraise that evidence for its validity (closeness to the truth) and applicability (usefulness in clinical practice)</td>
</tr>
<tr>
<td>APPLY: talk with the patient</td>
<td>5. Return to the patient -- integrate that evidence with clinical expertise, patient preferences and apply it to practice</td>
</tr>
<tr>
<td>Self-evaluation</td>
<td>6. Evaluate your performance with this patient</td>
</tr>
</tbody>
</table>

[URL for Image Source]
Assess, Ask & Form the ?

Assess and Ask

Forming the Clinical Question

- Identify key patient problem
- Phrased to facilitate finding an answer
- What treatment might be considered?
- Alternative treatments to consider
- Outcome to avoid or promote
Appraise & Apply

- Appraise information for validity
- Apply:
  - Talk to patient
  - Integrate evidence into clinical practice, patient preference, and apply
Critical Appraisal Questions

- Are the results of the study valid?
- What were the results?
- Will the results help me in caring for my patients?
Critical Appraisal Worksheets

Main
- Introduction to EBM
- Practising EBM
- Formulating Answerable Clinical Questions
- Searching for the Best Evidence

Critical appraisal worksheets
- Diagnosis worksheet
- Harm worksheet
- Prognosis worksheet
- Systematic review (of therapy) worksheet
- Therapy worksheet

URL for Knowledge Translation Clearinghouse
And PICO was HIS Name-O!
PICO

P= Patient or problem
I = Intervention, prognostic factor, or exposure
C=Comparison
O=Outcomes
(T)=Time
In ______________________ (P),
How does ________________ (I)
Compared to ______________ (C)
Affect ____________________(O)
Within ___________________(T)?

Etiology

Are _____________________ (P)
Who have ________________(I)
Compared with those without _____ (C)
At ________ risk for ___________ (O)
Over _____________________(T) ?

Diagnosis

In __________________________(P),
Are/is _______________________(I)
Compared with _________________(C)
More accurate in diagnosing _____(O)?

## Identifying the Best Study

<table>
<thead>
<tr>
<th>Type of Question</th>
<th>Suggested best type of Study</th>
</tr>
</thead>
<tbody>
<tr>
<td>Therapy</td>
<td>RCT &gt; cohort &gt; case control &gt; case series</td>
</tr>
<tr>
<td>Diagnosis</td>
<td>Prospective, blind comparison to a gold standard</td>
</tr>
<tr>
<td>Etiology/Harm</td>
<td>RCT &gt; cohort &gt; case control &gt; case series</td>
</tr>
<tr>
<td>Prognosis</td>
<td>Cohort study &gt; case control &gt; case series</td>
</tr>
<tr>
<td>Prevention</td>
<td>RCT &gt; cohort study &gt; case control &gt; case series</td>
</tr>
<tr>
<td>Clinical Exam</td>
<td>Prospective, blind comparison to gold standard</td>
</tr>
<tr>
<td>Cost</td>
<td>Economic analysis</td>
</tr>
</tbody>
</table>

Let’s Try it!

Jane brings her three-year-old son in to the emergency room. She says that her son has been having frequent fevers, which she has judged by feeling his forehead. Because she hasn’t been using a thermometer, you wonder if she could have accurately determined if he had a fever.

What Kind of Question is it?

Therapy
Etiology
Diagnosis

URL for worksheet
Diagnosis Template

- In ________________________________(P),
- Are/is ____________________________(I)
- Compared with _____________________(C)
- More accurate in diagnosing ______(O)?
REMEMBER PICO

P= Patient or problem

I = Intervention, prognostic factor, or exposure

C=Comparison

O=Outcomes

(T)=Time
Resources for EBP
- Clinical effectiveness research
- Summaries for practitioners and consumers
- Systematic Reviews
Abstracts from DARE

Database of Abstracts of Reviews of Effects (DARE): Quality-assessed Reviews [Internet].

A meta-analytic review of obesity prevention in the schools: 1997-2008

C Cook-Cottone, CM Casey, TH Feeley, and J Baran.


Link to full article: [Journal publisher]

CRD summary

This review concluded that school-based obesity prevention programmes resulted in small improvements in body mass index and that much more work is required to establish best practice for obesity prevention in schools. The review had some limitations, but overall the conclusions seem reasonable and appropriately cautious.

Authors' objectives

To examine the research conducted over a 10-year period on school-based interventions to reduce obesity in children.

Searching

PsycINFO, MEDLINE, CINAHL, Academic Search Premier and Cochrane Database of Systematic Reviews were searched for English-language articles published between January 1997 and July 2008. Reference lists of retrieved articles were searched.

Study selection

Randomised and nonrandomised trials of school-based obesity prevention programmes targeted at children who were normal weight, overweight or at risk for being overweight were eligible for inclusion. Studies needed to report an objective anthropometric outcome measure such as body mass index (BMI) or skinfold thickness. An obesity prevention programme was defined as aiming to decrease cardiovascular risk factors for obesity, increase physical activity or decrease sedentary behaviours. Studies of eating disorder programmes were excluded.

Included studies were diverse and included children from elementary, middle and high school age groups (four to 18 years approximately). Programmes varied in intensity, duration, content, who delivered the intervention and in the extent of parental involvement as well as other characteristics. The main outcome of interest in the review was BMI or BMI Z score.

The authors did not state how the papers were selected for the review.
Atypical antipsychotic drugs for disruptive behaviour disorders in children and youths

This version published: 2012; Review content assessed as up-to-date: February 15, 2012.

Plain language summary

Children and young people with disruptive behaviour disorders often present with aggression and severe behaviour problems. These can result in families seeking psychiatric services, where a number of medications, including atypical antipsychotics, may be used to reduce these symptoms. There is evidence that the use of atypical antipsychotics for disruptive behaviour disorders in youths is on the increase. We searched for clinical studies of atypical antipsychotics used for disruptive behaviour disorders in children and young people to evaluate whether these medications are effective and safe. We found eight studies. Seven of these studies investigated the efficacy of risperidone and one study used quetiapine. The analysis suggested that risperidone led to a reduction of aggression and conduct problems to some extent after six weeks of treatment and that the medication appeared safe during the study period. Use of medication, however, was associated with significant weight gain. The findings need to be considered with caution because of the limitations of the evidence. For example, the studies measured and reported different outcome measures, which limited our ability to combine the findings, and there were no studies with children under the age of five years. We recommend that more research is carried out in this field to find out the long-term efficacy and safety of these medications in treating disruptive behaviour disorders in children and youths.

Abstract

Background: Disruptive behaviour disorders include conduct disorder, oppositional defiant disorder and disruptive behaviour not otherwise specified. Attention deficit hyperactivity disorder (ADHD) is frequently associated with disruptive behaviour disorders. The difficulties associated with disruptive behaviour disorders are demonstrated through aggression and severe behavioural problems. These often result in presentation to psychiatric services and may be treated with medications such as atypical antipsychotics. There is increasing evidence of a significant rise in the use of atypical antipsychotics for treating disruptive behaviour disorders in child and adolescent populations.

Objectives: To evaluate the effect and safety of atypical antipsychotics, compared to placebo, for treating disruptive behaviour disorders in children and youths.
Structured Abstract

Objectives: (1) Compare effectiveness and adverse events of interventions (pharmacological, psychosocial, or behavioral, and the combination of pharmacological and psychosocial or behavioral interventions) for preschoolers at high risk for attention deficit hyperactivity disorder (ADHD); (2) compare long-term effectiveness and adverse events of interventions for ADHD among persons of all ages; and (3) describe how identification and treatment for ADHD vary by geography, time period, provider type, and sociodemographic characteristics, compared with endemic prevalence.

Data Sources: MEDLINE®, Cochrane CENTRAL, EMBASE, PsycINFO, and ERIC (Education Resources Information Center) were searched from 1980 to May 31, 2010. Reference lists of included studies and gray literature were searched manually.

Review Methods: Reviewers applied preset criteria to screen all citations. Decisions required agreement between two independent reviewers, with disagreements regarding inclusion or exclusion resolved by a third. The Effective Public Health Practice Project (EPHPP) process was used to evaluate internal validity of publications regarding interventions for preschoolers at high risk of ADHD and long-term outcomes following interventions for ADHD in persons of all ages. Overall strength of the evidence (SOE) was assessed using the GRADE approach, accounting for risk of bias and study design, consistency of results, directness of evidence, and degree of certainty regarding outcomes of interest.
Overall PubMed Health Contents

- Health A-Z
- For Consumers
- DARE Reviews
- Executive Summaries
- Clinical Guides
- Full text Reviews
- Methods Sources
- Drugs A-Z
Sources

- Cochrane Collaboration-Plain Language Summaries
- National Institute for Health and Care Excellence (NICE) (UK)
- Agency for Healthcare Research and Quality (US)
- National Cancer Institute-PDQ (Physician Data Query)
- Dept. of Veterans Affairs-Evidence-based Synthesis Program
- Canadian Agency for Drugs and Technologies in Health.
Results: 3

Antibiotics for whooping cough (pertussis)

Whooping cough is a highly contagious disease caused by pertussis bacteria and may lead to death, particularly in infants less than 12 months of age. Although it can be
Cochrane Database of Systematic Reviews: Plain Language Summaries [Internet] - John Wiley & Sons, Ltd.
Version: 2013

Treatment of the cough in whooping cough
We reviewed the evidence from 12 studies about the effect of treatments for cough in patients with whooping cough.
Cochrane Database of Systematic Reviews: Plain Language Summaries [Internet] - John Wiley & Sons, Ltd.
Version: 2014

Respiratory Tract Infections - Antibiotic Prescribing: Prescribing of Antibiotics for Self-Limiting Respiratory Tract Infections in Adults and Children in Primary Care
Respiratory tract infection (RTI) is defined as any infectious disease of the upper or lower respiratory tract. Upper respiratory tract infections (URTIs) include the common cold,
NICE Clinical Guidelines - National Institute for Health and Clinical Excellence (UK).
Version: July 2008

Sample PubMed Search for Pertussis
Results: 1 to 20 of 253

Interventions for the Prevention or Management of Childhood Obesity: A Review of the Clinical Evidence [Internet]

Over 30% of children and youth in Canada are considered overweight or obese. Obesity is caused by long-term energy imbalances, whereby daily energy intake exceeds daily energy expenditure. Rapid Response Report: Summary with Critical Appraisal - Canadian Agency for Drugs and Technologies in Health.

Version: December 13, 2013

Childhood Obesity Prevention Programs: Comparative Effectiveness Review and Meta-Analysis [Internet]

Childhood obesity is a serious health problem in the United States and worldwide. More than 30 percent of American children and adolescents are overweight or obese. More than 20 percent of children aged 6-11 years are overweight and more than 15 percent of children aged 12-19 years are obese in the United States. Comparative Effectiveness Reviews - Agency for Healthcare Research and Quality (US).

Version: June 2013

Interventions for preventing obesity in children

Childhood obesity can cause social, psychological and health problems, and is linked to obesity later in life and poor health outcomes as an adult. Obesity development is influenced by biological and behavioral factors. Cochrane Database of Systematic Reviews: Plain Language Summaries [Internet] - John Wiley & Sons, Ltd.

Version: 2013
Caution

- Searching functionality needs work
- Expect enhancements over time
- Be as specific as possible—use words such as Prevention, Screening, Treatment, Management
National Guideline Clearinghouse

NGC is a public resource for evidence-based clinical practice guidelines.

- Search evidence-based guidelines from a variety of sources
- Compare Guidelines side by side
- Save your favorite guidelines and organizations.
Advanced Search

Select topics within the lists below to create a targeted search of summaries. As you make your selections, the number of available results will automatically update.

Specify a keyword: 

Search indexing keywords only:
- [ ] Disease or Condition
- [ ] Treatment or Intervention
- [ ] Health Services Administration

Filter by:
- [ ] U.S.-based organizations only

Make selections to target your search

Clear all selections

Age of Target Population:
- [ ] Adolescent (13 to 18 years)
- [ ] Adult (19 to 44 years)
- [ ] Aged (65 to 79 years)
- [ ] Aged, 80 and over
- [ ] Child (0 to 12 years)

Clinical Specialty:
- [ ] Allergy and Immunology
- [ ] Anesthesiology
- [ ] Cardiology
- [ ] Chiropractic
- [ ] Colon and Rectal Surgery

Methods Used to Assess the Quality and Strength of the Evidence:
- [ ] Expert Consensus
- [ ] Expert Consensus (Committee)
- [ ] Expert Consensus (Delphi Method)
- [ ] Subjective Review
- [ ] Weighting According to a Rating Scheme (Scheme)

Publication Year:
- [ ] 2014
- [ ] 2013
- [ ] 2012
- [ ] 2011
- [ ] 2010
Compare Guidelines

Generate side-by-side comparisons for any combination of two or more guidelines. For optimal readability, we recommend comparing no more than three guidelines at once.

The guidelines collected are retained throughout your session, so you may compare guidelines from multiple searches and browsers. However, closing your browser will clear all collected guidelines. For more information on which guideline attributes are compared, see the Guideline Comparison Template.

Select all | Deselect all

[Compare] [Delete]


- Clinical practice guidelines: depression in adolescents and young adults. 2011 Feb. NGC:009655
  beyondblue: the national depression initiative - Nonprofit Organization.

[Compare] [Delete]
What is the Task Force and what does it do?

Announcements

- Final Research Plan: Screening for Dyslipidemia in Children and Adolescents 1/16/2015
- USPSTF Announces Appointments of New Vice Chair and Member 1/12/2015
- Public Comment on Draft Research Plan: Screening for Thyroid Cancer 1/8/2015

Search for Recommendations

Find a specific recommendation quickly by searching through the entire library.

Enter keyword(s) here...

Search

URL for U.S. Preventive Task Force
Want to know what combination of interventions increase vaccination rates?

See two new Community Preventive Services Task Force recommendations on this topic.
Major Content Areas

- Biomedical Sciences
- Nursing, Dentistry, Pharmacy and Allied Health
- Veterinary Medicine
- Preclinical sciences

URL for PubMed
Introduction to Evidence-Based Practice

Searching PubMed

PubMed

Here is a short video demonstrating this search.

Step 1: Use PICO to formulate the search strategy; start with the Patient problem(s) and Intervention
Enter the term for the patient problem and the intervention: **obesity AND diabetes type 2 AND bariatric surgery**. PubMed attempts to map your terms to appropriate Medical Subject Headings (MeSH). MeSH is the standard terminology used by the indexer and helps find articles on specific topics, regardless of the exact wording used by the authors.

URL to Searching PubMed Using PICO Tutorial (Duke University)
My NCBI allows you to:

- Save records (Collections, My Bibliography)
- Save searches (Saved Searches)
- Customize your results (Filters, My NCBI Preferences)
Register for an account
A PubMed Subject Search

- Be specific
- Don’t use quotation marks
- Don’t worry about capitalization
- Use key words for main concepts
- Leave out words like the, of, for
- The word “and” is a Boolean operator; it is assumed and automatic
Automatic Term Mapping

- Subject
- Journal
- Author and Investigator names

- As soon as PubMed finds a match, the mapping stops. That is, if a term matches in the MeSH Translation Table, PubMed does not continue looking in the next table.

- If no match is found, PubMed breaks apart the phrase and repeats the process until a match is found.
Entry Terms and Mapping

- NSAIDS ➔ anti-inflammatory agents, non-steroidal
- Heart attack ➔ myocardial infarction
- Varicella ➔ herpesvirus 3, human OR chickenpox
- Nurse ➔ nurses OR breastfeeding

- DVT ≠ Deep Vein Thrombosis
- PID ≠ Pelvic Inflammatory Disease
(Will demonstrate using MeSH Browser)
Search Details

PubMed.gov
US National Library of Medicine
National Institutes of Health

PubMed ▼ Narcan overdose youth

Create RSS  Create alert  Advanced

Query Translation:

("naloxone"[MeSH Terms] OR "naloxone"[All Fields] OR "narcan"[All Fields]) AND ("drug overdose"[MeSH Terms] OR ("drug"[All Fields] AND "overdose"[All Fields]) OR "drug overdose"[All Fields] OR "overdose"[All Fields]) AND ("adolescent"[MeSH Terms] OR "adolescent"[All Fields] OR "youth"[All Fields])

Search  URL

Result:
77

Translations:

narcan  "naloxone"[MeSH Terms] OR "naloxone"[All Fields] OR "narcan"[All Fields]
overdose  "drug overdose"[MeSH Terms] OR ("drug"[All Fields] AND "overdose"[All Fields]) OR "drug overdose"[All Fields] OR "overdose"[All Fields]
youth  "adolescent"[MeSH Terms] OR "adolescent"[All Fields] OR "youth"[All Fields]
Adjacency Searching
Phrase Searching

When searching for phrases:

• Search the phrase first without quotes or search tags.
• Check Search details to see how the search was translated.
• Use quotes only when your phrase is broken apart.

Sometimes even quotes won’t work because not all phrases are recognized as phrases.

Searching a phrase in quotes shuts off Automatic Term Mapping
Phrase Searching Example

\[ \text{aids drugs breast feeding} = 418 \]
(processed using ATM, many relevant results)

“aids drugs” AND “breast feeding” = 3
(very limiting; okay for specific items)

Retrovirus meeting. Hope on new AIDS drugs, but breast-feeding strategy backfires.
Cohen J.
Combining Search Terms

AND – OR - NOT

URL for Pub Med Tutorial Demonstration
Use Filters to Narrow Searches


Filters-Subjects

URL for PubMed Subject Filters
Filters - Journal Categories

Subjects
- AIDS
- Cancer
- more...

Journal categories
- Core clinical journals
- Dental journals
- MEDLINE
- Nursing journals

Clear all
Show additional filters

Related citations

Additional filters
- Text availability
- Publication dates
- Species
- Article types
- Languages
- Sex
- Subjects
- Journal categories
- Ages
- Search fields

Show

URL for PubMed Subject Filters
Search Results with Filters Applied

PubMed search results for "aids drugs breast feeding". Filters applied: Abstract available, published in the last 5 years, English. 63 free full-text articles in PubMed Central.
One Good article Leads to More!

Results: 1 to 20 of 209

1. Legal. PCTs taken to court over use of cheaper drug.
   Calkin S.  
   Health Serv J. 2012 Apr 26;122(6303):10-1. No abstract available.  
   PMID: 22741353 [PubMed - indexed for MEDLINE]  
   Related citations

2. Rate of serious adverse effects in a series of bevacizumab and ranibizumab injections.  
   Sharma S, Johnson D, Abouammoh M, Hollands S, Brissette A.  
   PMID: 22687306 [PubMed - indexed for MEDLINE]  
   Related citations
Does daily recess improve physical activity in school age students?
Clinical Queries

Search by Clinical Study Category

- **Category**
  - Etiology
  - Diagnosis
  - Therapy (default)
  - Prognosis
  - Clinical prediction

- **Scope**
  - Narrow specific search
  - Broad sensitive search (default)

Systematic Reviews
Medical Genetics Searches
Use of lipid-based nutrient supplements by HIV-positive women during lactation has no effect on infant weight.


Pregnancy and infant outcomes among HIV-infected mothers on long-term ART with and without tenofovir.

A randomized trial of nicotine-replacement therapy patches in pregnancy.


Division of Primary Care, U.K. Centre for Tobacco Control Studies and National Institute for Health Research School for Primary Care Research, University of Nottingham, Nottingham, United Kingdom.

Abstract

BACKGROUND: Nicotine-replacement therapy is effective for smoking cessation outside pregnancy and its use is widely recommended during pregnancy. We investigated the efficacy and safety of nicotine patches during pregnancy.

METHODS: We recruited participants from seven hospitals in England who were 16 to 50 years of age with pregnancies of 12 to 24 weeks' gestation and who smoked five or more cigarettes per day. Participants received behavioral cessation support and were randomly assigned to 8 weeks of treatment with active nicotine patches (15 mg per 16 hours) or matched placebo patches. The primary outcome was abstinence from the date of smoking cessation until delivery, as validated by measurement of exhaled carbon monoxide or salivary cotinine. Safety was assessed by monitoring
At the conclusion of this activity, participants will be able to:

- Describe the 5 major steps in conducting a systematic review.
- List the evidence-based resources available on the AHRQ Web site, including those available through the EHC Program.
- Locate the resources available on the USPSTF Web site, including the ePSS tool.
- Explain how the EHC Program resources, the USPSTF recommendations, and the ePSS tool can be integrated into APRN clinical decision making.
- Demonstrate how to download the ePSS application to a PDA or mobile device.

[URL for AHRQ CE for Nurses]
New policy: Doctors should encourage early literacy
Evidence established long ago that reading to young children—especially if you engage in a dialogue with them while you’re reading—helps them develop language skills and prepare for school.

Now the American Academy of Pediatrics has issued a new policy encouraging doctors to talk with parents about reading aloud to children, and providing books to low-income families at pediatric well visits. [Read more...]

Recess before lunch to improve eating habits?
When my son started kindergarten last year, I was astonished at how little of his lunch he actually ate. I would pack a nutritious meal displayed in a cute, compartmentalized tray, and often he only took a small bite of each item I packed. [Read more...]

Lunch hour? Try going for a walk
If I drive past the local business park around lunchtime, I typically see at least three or four groups of people walking outside. The practice seems like a good idea. It provides light aerobic exercise, gets people outside to soak up some Vitamin D, and can serve as a social hour if you’re walking with friends and colleagues. [Read more...]
Questions
Viva La Evidence!

Always an honest word

Now it's how I view the world

URL for Viva La Evidence (James McCormack)
Thank You!

Lydia N. Collins, MLIS
National Network of Libraries of Medicine, Middle Atlantic Region
http://nnlm.gov/mar/
lydia@pitt.edu

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