



Evidence Based Parenting

COMMON ANTICIPATORY GUIDANCE FROM PHYSICIANS

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SEARCH

< TOP H

NEWS IN BRIEF • 10.26.11

Study Finds Every Style Of Parenting Produces Disturbed, Miserable Adults



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Objectives

Intro

Anticipatory
Guidance

- ▶ Impact of Anticipatory Guidance From Physicians
- ▶ Evidence Based Strategies for Improving Dental Health in Children

Dental

Iron

- ▶ Controversies Around Iron Supplementation
- ▶ Advising Parents on the Introduction of Solid Foods

Introduction of
Foods

Conclusion

Anticipatory Guidance

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Thank you so much
for your unsolicited
advice on how to
be a good parent
30+ years ago!! But
if you don't mind I'll
listen to my doctor



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<http://www.someecards.com/usercards/viewcard/thank-you-so-much-for-your-unsolicited-advice-on-how-to-be-a-good-parent-30-years-ago-but-if-you-dont-mind-ill-listen-to-my-doctor--21f55>

Does it work?

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▶ Maybe, but outcomes are intermediate

- ▶ Parents know more about development
- ▶ Better safety behavior, no change in major injuries or trips to the ED
 - ▶ More seat belt use
- ▶ Lots of data for “Reach Out and Read”
 - ▶ Improves language development in children
 - ▶ Curr Opin Pediatr. 2003 Dec;15(6):630-5. (Systematic review)

Does it work?

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Conclusion

▶ Fewer well child visits = no health impact

- ▶ 2 trials with 700 randomized children, half as many well child visits: no difference in health, parental satisfaction, parental anxiety
- ▶ Additional nurse visits for vaccinations
- ▶ [BMJ](#). 2001 Oct 13;323(7317):846-9.

Parents Forget

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Went to doctor for fatigue,
forgetfulness and
inability to
concentrate, and I
was diagnosed with
Motherhood.



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Parents Forget

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- ▶ More than 8 topics per visit – parents forget
 - ▶ When asked by phone 1 month later
 - ▶ Ambul Pediatr. 2005 Nov-Dec;5(6):372-6.
- ▶ 8 might seem like a lot, but Bright Futures recommends
 - ▶ 21 topics to be discussed at first newborn visit
 - ▶ 16 different topics at next visit

We don't do it

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- ▶ Survey of 900 pediatricians
 - ▶ < 50% regularly counsel on > 2 topics
 - ▶ 11% counsel on all 6 topics in the survey
 - ▶ Pediatrics. 2002 May;109(5):E83-3.
- ▶ 2 medical students observed 500 well child visits
 - ▶ Clinicians addressed 42% of Bright Futures recommended topics
 - ▶ Anticipatory guidance took 8.6 min of a 20 min visit (mean)
 - ▶ Acad Pediatr. 2011 Jan-Feb;11(1):18-26

The Take-Home

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- ▶ There are too many topics
 - ▶ for amount of time
 - ▶ for parents to remember
- ▶ No large impact on child health
- ▶ It can increase knowledge and improve behaviors



Early Childhood Caries

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- ▶ Most common chronic childhood disease
 - ▶ 5 times more common than asthma
 - ▶ 4 times more common than early childhood obesity
 - ▶ 20 times more common than diabetes
 - ▶ <http://www.mychildrensteeth.org/assets/2/7/ECCstats.pdf>

Early Childhood Caries

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- ▶ Treatment often requires general anesthesia
- ▶ Children with untreated cavities:
 - ▶ 19.5% of children ages 2-5
 - ▶ 22.9% of children ages 6-19
 - ▶ <https://www.cdc.gov/features/dsuntreatedcavitieskids/>
 - ▶ **69.5% Navajo children**
 - ▶ *J Public Health Dent.* 2014 ; 74(4): 317–325.

Bright Futures Recommends

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- ▶ Don't put baby to bed with a bottle (1, 2, 4, 6 months)
- ▶ Don't share utensils (4, 6 months)
- ▶ Fluoride supplements and toothpaste (4, 6 months)
- ▶ Dental care for mother (prenatal, 4 month)
- ▶ Limit sugar (many visits, throughout childhood)
- ▶ No food from pouches, only use spoons (4, 6 months)

Background

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- ▶ Children acquire oral flora from those around them, particularly their mother
- ▶ Cavities/Caries are caused by bacteria, particularly Strep mutans
- ▶ Digest sugars to make acid
- ▶ Acid erodes tooth enamel

Bottle in bed

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<https://s-media-cache-ak0.pinimg.com/736x/d6/2c/c9/d62cc9677e001787731b1d38d391d1a9--dental-jokes-dental-hygiene.jpg>

Bottle in bed

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Conclusion

- ▶ Most parents in the US have given their child a bottle in bed
 - ▶ Most of those children don't get cavities
- ▶ Systematic Review did not find consistent link
 - ▶ Community Dent Oral Epidemiol. 1998;26(1 Suppl):32-44.
- ▶ Large (n=2400) study in WIC recipients in Arizona, found a link only for children older than 2 still using nighttime bottle
 - ▶ Community Dent Oral Epidemiol. 2001 Feb;29(1):14-22.
- ▶ Bottles with sugary beverages have very strong link to tooth decay
 - ▶ Caries Res. 1993;27(2):154-60.

Shared utensils

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- ▶ 2 studies, one in Indiana, one in Saipan
 - ▶ J Dent Res. 2011 Feb;90(2):209-14
 - ▶ Community Dent Oral Epidemiol. 2000 Aug;28(4):295-306
- ▶ Both studies examined children, and gave parents a long survey
- ▶ Indiana study: sharing utensils, but not pacifiers, was slightly linked to tooth decay on secondary analysis
- ▶ Saipan study: no link at all for sharing utensils

Transmission of oral bacteria

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Conclusion

- ▶ Happens by 48 hours of life
 - ▶ J Clin Pediatr Dent. 2015 Fall;39(5):442-6.
- ▶ Permanent colonies by 3 months
 - ▶ J Dent Res. 2001 Oct;80(10):1945-8.

Xylitol

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Conclusion

- ▶ Xylitol is not fermented by cariogenic bacteria
- ▶ Does not lower pH of plaque
- ▶ Inhibits growth of mutans streptococci in the mouth
- ▶ Reduces plaque on tooth surfaces
- ▶ Chewing any gum stimulates the flow of saliva, which enhances the buffering effect in plaque

Xylitol

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Conclusion

- ▶ Children of mothers who chewed xylitol gum while pregnant or postpartum have half the incidence of Strep mutans in saliva
 - ▶ Int J Paediatr Dent. 2016 Jan;26(1):35-44. (meta-analysis)
- ▶ Use of xylitol chewing gum (at least two or three times per day by the mother) has a significant impact on mother-child transmission of MS and decreasing the child's caries rate.
 - ▶ American Association of Pediatric Dentistry Guideline on Perinatal Oral Health Care (Rev 2011)
 - ▶ http://www.aapd.org/media/policies_guidelines/g_perinataloralhealthcare.pdf

Xylitol

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- ▶ Finnish studies – clinical outcomes:
 - ▶ Mothers at high risk for caries: daily xylitol gum, when children 3-24 months of age.
 - ▶ Control group – fluoride or chlorhexidine treatments q6m.
 - ▶ Reference group – same age cohort, not high risk moms
 - ▶ Age 4: fewer restorative treatments for xylitol group compared with both reference and control.
 - ▶ Age 5: the dental caries in the xylitol group reduced 70% compared with fluoride or chlorhexidine
 - ▶ Median caries-free age: 8 years for xylitol and reference group, 5 years for control.
 - ▶ Community Dent Oral Epidemiol 2013; 41; 534–540
 - ▶ J Dent Res. 2000 Nov;79(11):1885-9.

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< TOP HEADLINES

Blog Post Read By Mother To Shape Child's Next 18 Years



PAOLI, PA—Poised to inform future parenting decisions on medical care, dietary restrictions, and everyday well-being, the blog post “Fluoride Drops For Kids—Good Idea?” which was read by local mother Laurie Miller earlier today, will reportedly shape the next 18 years

<http://www.theonion.com/article/blog-post-read-mother-shape-childs-next-18-years-50358>

Fluoride

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Conclusion

- ▶ Brushing with fluoride toothpaste decreases cavities in populations at high risk.
- ▶ Ingesting pea-sized amounts or more can lead to mild fluorosis. “Rice-sized” recommended for young kids.
 - ▶ J Am Dent Assoc. 2014 Feb;145(2):182-9
- ▶ USPSTF: prevention of caries children <5 yo:
 - ▶ Fluoride varnish (every 6 months)
 - ▶ Oral fluoride supplementation, if water fluoride deficient
 - ▶ bottled water: may/may not have fluoride
 - ▶ Grade B

Maternal Dental Care

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Conclusion

- ▶ Theory: filling cavities (reservoirs for Strep mutans) and improving oral health in mothers decreases transmission to children, less early childhood caries
- ▶ Most data do not support this
 - ▶ Community Dent Oral Epidemiol. 1993 Jun;21(3):136-42.
 - ▶ Int Dent J. 2011 August ; 61(Suppl 1): 29–33.
 - ▶ Caries Res. 2002; 36:288–293.
- ▶ Maternal dental care is still good for maternal health

John has 32 Candy bars.
Then he eats 18 candy
bars. What does John
have now?

Cavities. John has cavities.



Sugar

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Conclusion

- ▶ Probably the most important factor in childhood cavity development
- ▶ Studies in Japanese children from 1940s and 50s
- ▶ sugars intake decreased from 15 kg/y (8.2% E) to 0.2 kg (0.1% E) and then increased again to 15 kg/y over a period of 11 y.
- ▶ Each tooth was examined separately at yearly intervals in each individual.
- ▶ clear relationship between the average sugar intake level and dental cavities
 - ▶ *BMC Public Health* 2014 **14**:863

Sugar and Cavities

Intro

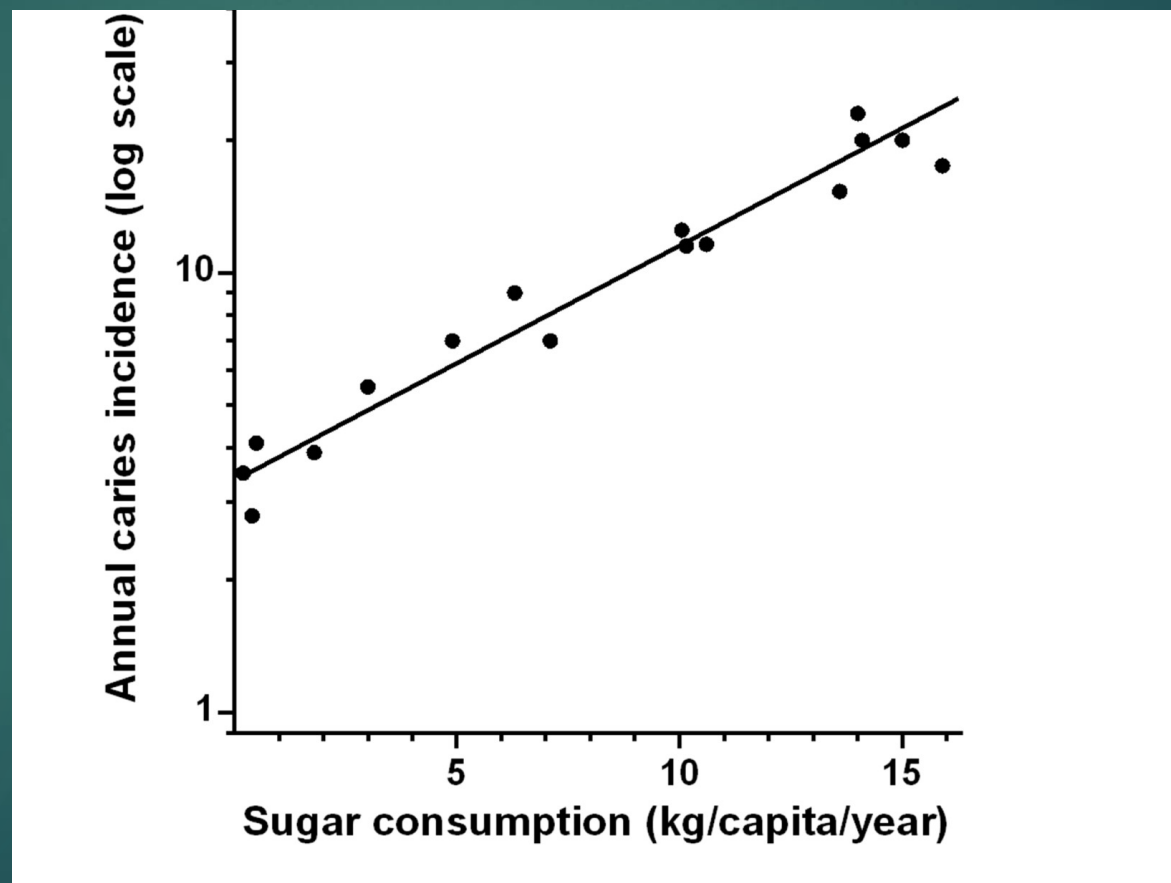
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Level of Evidence for prevention of ECC

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Conclusion

- ▶ Good:
 - ▶ Fluoride supplements and toothpaste
 - ▶ Limit sugar
- ▶ Medium:
 - ▶ Maternal use of xylitol gum
- ▶ Poor:
 - ▶ Don't put baby to bed with a bottle
 - ▶ Don't share utensils
 - ▶ Dental care for mother
 - ▶ No food from pouches, only use spoons



Iron: Screen?

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Conclusion

- ▶ Screening for iron deficiency anemia
 - ▶ USPSTF: I recommendation
 - ▶ evidence is insufficient to recommend for or against routine screening for iron deficiency anemia in asymptomatic children aged 6 to 12 months.
 - ▶ Bright Futures/AAP: universal Hb/Hct screening at 12 months

Empirically treat?

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- ▶ AAP: all breastfed babies should get iron supplements, beginning at 4 months
 - ▶ <http://pediatrics.aappublications.org/content/126/5/1040.long>
- ▶ Rationale:
 - ▶ Iron is required for development of brain, nerves, and red blood cells.
 - ▶ Iron deficiency anemia:
 - ▶ 2% of children in the United States
 - ▶ 25% worldwide

Empirically treat?

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- ▶ Rationale, contd:
 - ▶ Iron deficiency without anemia may also impair brain and nerve development in children
 - ▶ http://apps.who.int/iris/bitstream/10665/42792/1/9241580348_eng_Volume1.pdf
- ▶ Unclear if giving iron to deficient children improves neurologic outcomes
 - ▶ Cochrane Database Syst Rev. 2013 Jun 6;(6):CD001444.
 - ▶ <http://jamanetwork.com/journals/jamapediatrics/fullarticle/205766>

Background

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Conclusion

- ▶ Healthy, full term, babies are born with plenty of iron
- ▶ They use it up as they grow
- ▶ Breastmilk does not have much
- ▶ Formula has iron, although we may absorb the iron in breastmilk better
 - ▶ Pediatrics. 1977 Dec;60(6):896-900.

Why supplement?

Intro

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Guidance

- ▶ Double-blind RCT iron supplementation in healthy full term infants

Dental

- ▶ J Pediatr. 2003 Nov;143(5):582-6.

Iron

- ▶ 77 breastfed babies
- ▶ From 1– 6 months received liquid iron drops or placebo

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- ▶ 46 babies completed study

Conclusion

- ▶ Bayley mental, psychomotor and vision tests at 1 year
- ▶ test scores in both groups were normal
- ▶ iron group had better psychomotor and visual tests than placebo babies

Very controversial

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Conclusion

- ▶ AAP committee on breastfeeding strongly disagreed
 - ▶ Pediatrics. 2011 Apr;127(4):e1097
- ▶ European societies don't recommend empiric supplementation
 - ▶ J Pediatr Gastroenterol Nutr. 2014 Jan;58(1):119-29.
- ▶ In Thailand, iron and zinc supplementation of infants showed no cognitive benefit at 9 years old
 - ▶ Am J Clin Nutr. 2011 Mar;93(3):636-43.
- ▶ Larger, longer study is underway in Poland
 - ▶ BMJ Open. 2015 Nov 24;5(11):e009441.





Introduction of food

Intro

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▶ Allergies

Dental

▶ Obesity

Iron

▶ Choking risk

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Bright futures

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Conclusion

- ▶ Delaying the introduction of solid foods until the middle of the first year of the baby's life
- ▶ Signs of readiness:
 - ▶ increasing volume of human milk or formula consumed
 - ▶ continuing physical development.
- ▶ Discuss cultural or family beliefs
- ▶ Order of foods is not important
- ▶ Avoid raw honey and choking hazards



Allergies

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Conclusion

- ▶ LEAP Trial
- ▶ Infants at high risk of allergy
- ▶ Early introduction of peanut proteins
- ▶ Reduction in peanut allergy at 5 years
 - ▶ N Engl J Med. 2015;372(9):803–13.
- ▶ Less compelling results for other allergenic foods
 - ▶ Curr Allergy Asthma Rep. 2017 Aug;17(8):52.

Does earlier introduction lead to obesity?

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Conclusion

- ▶ Systematic reviews: no clear association between timing of solid food introduction and obesity
 - ▶ Matern Child Nutr. 2011 Jan;7(1):3-26
 - ▶ Aust N Z J Public Health. 2015 Aug;39(4):366-73
- ▶ Later (after 7 months) introduction of foods in exclusively breastfed infants may be associated with more obesity
 - ▶ Papoutsou S et al. Matern Child Nutr. 2017 Jun 8

Choking – AAP guidelines

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Conclusion

- ▶ Pediatricians, dentists, and other infant and child health care providers should provide choking-prevention counseling to parents as an integral part of anticipatory guidance activities.
 - ▶ *Pediatrics* 2010;125:601–607
- ▶ Staying with children when they eat
- ▶ No propping bottles
- ▶ < 4 years: no hard food like nuts or popcorn, compressible foods like hot dogs or marshmallows, or sticky foods like spoonfuls of peanut butter.



Baby Led Weaning

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Conclusion

- ▶ Infants feed themselves
- ▶ Parents given advice to reduce choking risk
- ▶ RCT vs usual care
- ▶ 35% of children 6-8 months choked at least once
- ▶ No difference between groups
- ▶ Food diary showed that most children in both groups were offered foods posing choking risk
 - ▶ At 7 months: 52%
 - ▶ At 12 months: 94%
 - ▶ Pediatrics. 2016 Oct;138(4)

Any food can do it

Intro

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- ▶ Top 3 foods causing ER visits for choking

Dental

- ▶ Children under 4 years old:

- ▶ Candy 27% >> fruits/vegetables 12% > formula/breastmilk 11%

Iron

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- ▶ Kids 5+

- ▶ Candy 28% >> non-hotdog meat 12% > bone 12%

Conclusion

Conclusions

Intro

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- ▶ Anticipatory Guidance
 - ▶ Don't worry about doing it all

Dental

- ▶ Dental

Iron

- ▶ Fluoride prevents cavities
- ▶ Limit sugar

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Foods

- ▶ Consider xylitol gum for some moms

Conclusion

- ▶ Iron supplementation
 - ▶ Limited evidence, discuss with parents
- ▶ Introduction of foods
 - ▶ Anything goes, but watch children when they eat

Thank you!

