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In Reply.—

Jason et al¹ argue that it is premature to abandon youth access programs despite the fact that they do not affect youth smoking prevalence because the studies of youth access are so seriously flawed methodologically that we cannot use them to support policy-making on this issue. This is not a compelling argument for continuing to devote substantial resources to this intervention. Rather than the convoluted explanations for the fact that youth access laws are not associated with reductions in youth smoking that Jason et al (and other defenders of this politically popular policy) offer, there is a simple empirically validated explanation for this result: as you make it harder to buy cigarettes, youth get them in other ways.²⁻⁷

In addition, youth access interventions are counterproductive because they reinforce the tobacco industry's "smoking is a way to look adult" message⁸ as well as assist the tobacco industry in its local organizing efforts.⁹

If youth access were a drug or vaccine to prevent nicotine addiction and the manufacturer was to offer such an explanation for the failure to demonstrate efficacy to the Food and Drug Administration, the Food and Drug Administration would never approve it. We should be putting our limited tobacco control resources¹⁰ into programs of proven effectiveness, such as media campaigns^{11,12} and clean indoor air.^{13,14}

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Is Mother's Milk Programmed for Long-Term Results and Prevention of Adult Diseases?

To the Editor.—

After reading the article by Owen et al¹ on a possible reduction of low-density lipoproteins in adolescents fed mother's milk (MM) and that of Martin et al² on a positive influence on adulthood height, the answer is yes.

However, recently it has been shown that the prolonged feeding of MM has a negative influence on arterial stiffness³ and increases over the long-term the risk of atopy and asthma.⁴ Furthermore, higher levels of immunoglobulin E (IgE) were seen in children fed MM compared with those that were formula-fed.⁵ In these cases, the answer is no.

A possible explanation of these contrasting findings would be derived if we consider the targets of nature and the changes of life habits in the last century.

The targets of nature are: a) to eliminate abnormal or weak subjects at conception, during pregnancy, birth, and first periods of extrauterine life; b) to ensure a normal growth (including the brain); c) to protect from infections in infancy and early childhood; and d) to allow "normal infants" to reach the reproductive age to continue the species.

MM (in this case human) is at least programmed to allow normal infants to grow normally, probably also reducing the risk of childhood obesity,⁶ to have good brain development, and to ensure a favorable gut flora. And it does.

Late allergies or degenerative diseases are mainly attributable to the more toxic environment (including inadequate nutrition with an excess of animal proteins and fats and refined sugars) we have been exposed to since the last century. In the previous centuries after MM the diet was mainly made of vegetables and cereals with a modest supply of animal proteins and fats. Subjects came into contact with numerous germs that were not antibiotic-resistant, they did a lot of physical activity, and air pollution was limited.

All these factors can explain at least, in part, why with the same genetics (unless we will consider epigenetics) allergies and degenerative diseases were less frequent.

As for the IgE rise in MM-fed subjects, it should be pointed out that this is not an univocal finding because we have observed an opposite pattern.⁷ In fact IgE levels are influenced by different ratio ω^3/ω^6 in the diet,⁸ and it could be possible that mothers and infants in the Wright et al study⁴ assume an unbalanced intake of long chain polyunsaturated fatty acids.

Anyhow, we have to consider that IgE was originally built up to antagonize intestinal parasites so frequent in the past, and it could be that nature, under some circumstances, will probably enhance this line of defense.

Furthermore, the actual role of IgE in development of asthma is not so clear because doubtful results have been observed in the treatment with antibodies against IgE.^{9,10}

Therefore, there are no reasons to blame nature if MM is not able to protect from all later degenerative disease even if, as far as allergies are concerned, MM is effective in reducing atopic dermatitis, rhinitis, and asthma in childhood.¹¹⁻¹³ Nature did not expect such dramatic changes, and it might well be in the future that it will provide with favorable adjustments in MM. But, in the meantime, shall we choose artificial feeding only because late allergies are more frequent in infants fed MM?

Even if early massive contact with foreign antigens in artificial feeding might prepare subjects for future battles, the advantages of MM are great with regard to overcoming late doubtful disadvantages that can be reduced with different lifestyle habits.

Finally, we must remember that breastfeeding is good for mothers and, among the psychological and medical advantages, reduces the risk of breast cancer and maybe ovarian cancer.¹⁴

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Sinusitis and Bacterial Resistance

To the Editor.—

Sinusitis is pandemic. As antibiotic resistance has gradually increased, guidelines have been developed which ratchet up coverage to overcome resistance. Doses of 80 to 90 mg/kg of amoxicillin for the treatment of acute, subacute, and recurrent bacterial sinusitis are the current recommendations when highly resistant pneumococcal organisms are suspected.¹ However, in practice, very few clinicians may be pushing doses to the proposed levels in all children.

Thirty-six physicians—12 internal medicine/pediatricians, 9 family practitioners, and 15 pediatricians—in a major metropolitan area were surveyed and asked to consider the following hypothetical case study:

A 5-year-old, nonallergic child weighing 30 kg (66 lb) has a history of recurrent sinusitis. Water's view shows bilateral maxillary sinusitis. Child has been on repeated antibiotics, most recently Augmentin (40 mg/kg), for congestion and cough. Pulmonary functions are normal. There are no known drug allergies. Physical examination reveals florid mucopus in both nasal vestibules.

A total of 33/36 respondents (12/12 internal medicine/pediatricians, 6/9 family practitioners, and 15/15 pediatricians) said that they did prescribe high-dose amoxicillin that they most often defined as 80 to 100 mg/kg. When asked specifically, only 4/12 internal medicine/pediatricians, 2/9 family practitioners, and 5/15 pediatricians said they would give 2400 to 2700 mg (high-dose amoxicillin) in this hypothetical case. Three of eleven clinicians who said they would give such a large dose to this patient said that they had never done so in a similar clinical situation.

Where lies the disconnect between the theoretical and what is practiced? Most of the 36 respondents said they would not exceed amoxicillin doses they normally gave to adults, or, in the case of the pediatricians, that they might take themselves (upwards to 875 mg bid). Since the survey, Augmentin XR (4 g/d amoxicillin/250 mg/d clavulanic acid) tablets have been released.² Further, the majority expressed concern of an increased incidence of diarrhea with higher dose of amoxicillin and/or clavulanic acid. Surprisingly, incidence of diarrhea reflects a dose response to clavulanic acid, not amoxicillin. A new formulation of amoxicillin/clavulanic acid, Augmentin 600 mg-ES, has provided more amoxicillin with proportionally less clavulanic acid in an oral suspension.³

As sinus contents are thought to be heterogeneous in regard to strain variation and bacterial resistance, suboptimal treatment with antibiotics may promote recalcitrance of sinusitis. It is incumbent, therefore, that clinicians give high doses of amoxicillin in the setting of sinusitis when the patient 1) has severe symptoms, 2) has been on recent (<90 days) antimicrobial treatment for same, 3) is <2 years of age, 4) is not responding to other antibiotic treatment after 48 to 72 hours, and/or 5) attends day care. Antibiotics should be given for a minimum of 10 days upwards to 4 weeks.¹ Failure to give adequate recommended doses of antibiotics may result in clinical failure and the promotion of bacterial resistance.

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Ethylmercury in Vaccines*

To the Editor.—

In their article, Drs Shete and Daum criticize the AAP and USPHS for recommending suspension of the hepatitis B vaccine birth dose because these organizations “placed the theoretical risk of thimerosal toxicity above the real public health burden of failing to immunize children at risk of hepatitis B . . . beginning at birth.”¹ In defense of their position, the authors comment “. . . at the time of the 1999 recommendation [to delay the birth dose of the hepatitis B vaccine] (and even now, according to the recent Institute of Medicine report) no conclusive evidence existed to show that ethylmercury, at doses administered with vaccines, was toxic.” Although true in a literal sense, the fact is, no preclinical or clinical studies were ever conducted to specifically examine the safety of thimerosal (ethylmercury) at the doses found when used in multiple infant and childhood vaccines. Thus, there was no conclusive evidence because there were no studies. (Filling this void was one of the principal recommendations recently made by the Institute of Medicine’s Immunization Safety Review Committee.²)

Faced with the knowledge that some infants, through routine vaccination, might be exposed to unsafe levels of ethylmercury,³ a potential neurotoxin, particularly to developing brains, the AAP and USPHS made the appropriate decision to recommend suspending the hepatitis B vaccine birth dose until thimerosal-free vaccines were available. By doing so, newborns in this coun-

* This letter was written in the private capacity of the author. No official support of endorsement by the Food and Drug Administration is intended or should be inferred.

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