

cate in their child (the usual signal for toilet use) may help to decrease the parents' frustration, increase compliance with the toilet schedule, and decrease the child's guilt and blame.

In children with an inability to defecate voluntarily, we stress the importance of inducing regular bowel habits with milk of magnesia and then using the toilet as soon as an urge to defecate is felt in order to avoid unnecessary straining at stool. Because children with an inability to defecate balloons are less likely to recover in 12 months than children with the ability to defecate balloons, we discuss the reduction of the frequency of soiling as the treatment goal and encourage frequent follow-up.

Poor compliance is not the only reason for continued soiling, but it may be in the child with normal rectal sensation, an ability to relax the external anal sphincter during bearing down, and the ability to defecate rectal balloons.

As in most studies, nothing is 100%. Chronic constipation and encopresis is multifactorial. Only approximately half of the 180 patients evaluated with the balloon defecation test contracted abnormally the external anal sphincter during defecation attempts. Many have impaired rectal sensation.

In a recently submitted manuscript we discussed our evaluation of noncompliance as a factor that might contribute to treatment failure in 97 children with chronic constipation and encopresis. Stepwise logistic regression revealed that noncompliance with treatment did not add significantly to the prediction of treatment failure.

4. Few children  $\geq 5$  years of age do not cooperate with the testing or refuse testing. As part of our evaluation, the children describe the sensation produced by the 30-, 50-, and 100-mL water-filled rectal balloon as sensing the balloon or feeling a slight urge, a strong urge, or a pain. None of the children has ever reported pain with balloon distention or during defecation. We also found that the ability or inability to defecate a balloon was independent of the perceived rectal sensation.

The prognosis is hopeful for all of these children. What is the rate of recovery in patients treated by Dr Schmitt? We found that only 14% of patients were unable to defecate balloons, but 64% of those able to had recovered by 1 year.<sup>5</sup> Recovery was defined as not taking laxatives for 1 month and having three or more bowel movements per week and two or fewer fecal smears per month.

We continue to suggest that children with chronic constipation and encopresis should have their rectal sensation and their ability to defecate evaluated. By studying the pathophysiology of chronic constipation and encopresis we hope to develop and evaluate more individualized treatment programs.

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## Prevention of Lead Poisoning in Children— An Issue for Both Developing and Industrialized Countries

To the Editor.—

This is in response to two articles<sup>1,2</sup> concerning lead exposure in fetuses and children. Recent evidence has begun to document the threat to the human species of prenatal, as well as postnatal, exposure to low levels of blood lead concentration. Studies in Australia<sup>3</sup> and the United States<sup>4-6</sup> have described the problem for industrialized countries, and reports from England<sup>7,8</sup> and the United States and Kuwait<sup>9</sup> have produced evidence for developing countries.

What is particularly disturbing is that the blood levels of prenatal as well as postnatal exposure that have produced permanent deficits in the CNS of children are not much greater than the blood levels found in most of us living in modern, industrialized society. The widespread use of lead in our economy and the resultant pervasive extent of it in our environment make it unlikely that this problem will become widely recognized, and effective steps taken toward its solution, in the near future.

In developing countries the problems of lead exposure are somewhat different. In addition to "backyard battery factories" in Jamaica and folk medicines in Asia and Latin America, there is the widespread use of a black eye cosmetic in Northern Africa, the Middle East, India, Pakistan, and Bangladesh called kohl or surma. This eye cosmetic often contains powdered galena, or lead disulfide, the presence of which gives a glitter due to light reflected from platelets of the latter substance. This practice must be present in migrants from those countries in the United States, as has been found to be the case in the United Kingdom.<sup>7,8</sup> Such an eye cosmetic, used from cradle to the grave in women, causes prenatal exposure that leads to lead lines in the skeleton of young infants,<sup>10</sup> as well as postnatal exposure that can lead to lead encephalopathy and even death in infants and young children.<sup>10,11</sup> Kuwait has now banned the use of lead in kohl, but it will probably be generations before the use of galena in kohl or surma is abandoned.

When will our economic dependence on this toxic element, dating back before recorded history, be replaced by an awareness of its great, but subtle, threat to us all?

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### *In Reply.*—

Should we be correct in reading Dr Guthrie's summary question as a statement that might begin, "It is time that our economic dependence . . .," we have but a one word reply: Amen.

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## RULE OF THUMB ABOUT CONFIDENCE INTERVAL FOR ZERO NUMERATORS

When no side effects are observed in  $N$  patients, it is unlikely that the probability of side effects is larger than 3 in  $N$ , and this probability will almost surely not exceed 5 in  $N$ .

Submitted by Student

From Rümke CL: Implications of the statement: No side effects were observed. *N Engl J Med* 1975;292:372-373.