

Senator NELSON. Are there any simple procedures for determining vitamin deficiency?

Dr. MAGEE. Most vitamin deficiencies are obvious, a child with a vitamin D deficiency, for example, gets rickets, and the early signs of this show up on X-ray, but in our society this is no longer a problem.

It hasn't been a problem for many years, but it has been presented to us as if it were an ever present problem. We are also being told that without added vitamin supplements we become more susceptible to colds and flu, et cetera. There is no shread of evidence at all for this.

Senator NELSON. Do we have any statistics on the percentage of the population that does have a vitamin deficiency?

Dr. MAGEE. I don't know of any offhand. I think perhaps these might be found in the annual publications of the World Health Organization table. Our university has a clinic which ministers to Winnebago Indians, and I am told an occasional Indian child appears with an apparent vitamin deficiency, but it is very, very occasionally.

Senator NELSON. Insofar as other children are concerned, it is rare?

Dr. MAGEE. Yes, it is not seen. I am told that occasionally in the children of migrant farm workers, vitamin deficiencies have been seen also, but today in the middle class, the vitamin buying income group, vitamin deficiency is unknown.

Senator NELSON. What is the basis for the prescription of vitamins? Or are these self-prescribed?

Dr. MAGEE. Well, some are self-prescribed. Many are not. As I said, most pediatricians will prescribe them, and to give you the statement of one pediatrician, the man who attended my children. After the children had been attending him for months my wife finally said, "No, we are not giving them their daily vitamins." He said, "Well, I should have known. Your husband is a physiologist and perhaps he wouldn't believe in these or think that they were necessary," and she replied, "Why do you prescribe them?" He said, "Because the mothers expect that I do."

Senator NELSON. That is the only reason he gave?

Dr. MAGEE. This is the only reason he gave, and I think that this is not an uncommon reason. It is expected that pediatricians and obstetricians too give vitamins.

Senator NELSON. Thank you. I have one more question. You say probably more people take vitamins than have TV sets. Are there any hard statistics on how many people take vitamins? Do we have any knowledge about that?

Dr. MAGEE. No, I don't believe we have a total, but there are figures, and I have them here, giving the annual production of vitamins in terms of dollars. I think it is about \$60.6 million worth per annum, and the production of penicillin, which is a life saving drug, is \$86 million.

I tell my students in lecturing on the subject, which I do in the pharmacology course, that we have the most nutritious sewage in the world, because of course excess vitamins for the most part are excreted in urine.

A few years ago obstetricians succumbed to the notion that molybdenum added to ferrous salts rendered them more efficacious in the treatment of iron deficiency anemia. There was no evidence and the