

# Vitamin D

needed for proper  
calcification and  
tooth health . . . at  
all ages

. . . *recent experiments show*

Now . . . Fleischmann's  
Yeast is "irradiated" to  
make it richest, most  
reliable food source of  
calcifying Vitamin D!

# Better Absorption of Calcium made possible by Vitamin D

*Shown to promote resistance to caries*

RECENT dental studies in England, Germany and America have revealed an important relationship between caries and diet *at all ages* . . . a relationship that many dentists have long suspected.

Keeping the teeth clean, these researches emphasize, is not enough. To a large extent, tooth health depends on tooth *structure* . . . and this is closely associated with the presence or absence in the body of sufficient vitamin D.

For vitamin D controls the metabolism of calcium and phosphorus. When the body's supply of vitamin D is not constantly renewed, absorption of these minerals and their conversion into dentine and enamel is retarded.

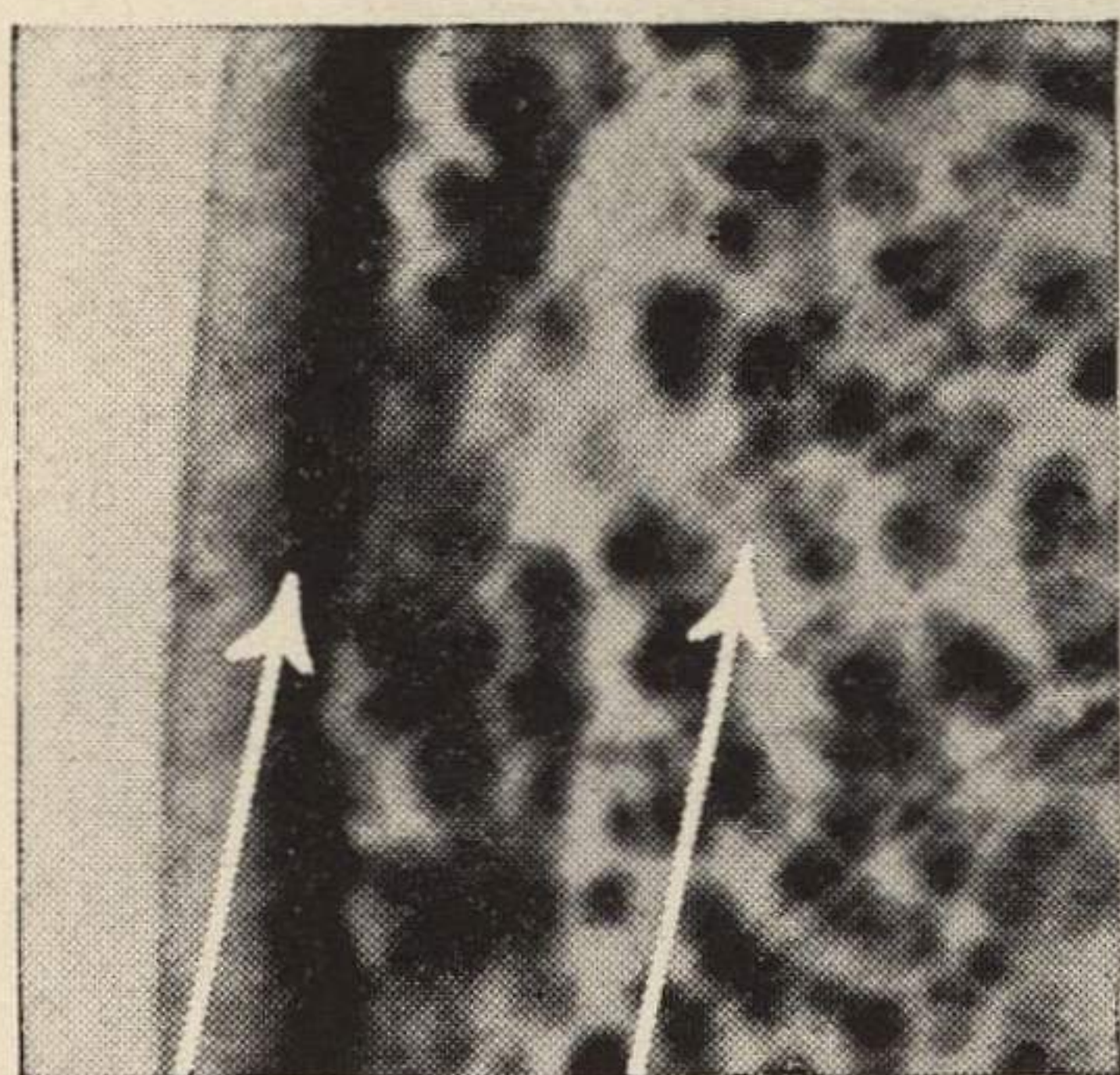
Now every dentist is assured of a convenient, *reliable* food source of vitamin D for his patients in Fleischmann's Yeast. Now that it is "irradiated," every cake is equal in vitamin D potency to a teaspoonful of standard cod liver oil!

## *For the Pregnant or Nursing Mother*

Insufficient vitamin D in the expectant or nursing mother's diet is now accepted as a major cause of faulty jaw and tooth formation in the child.

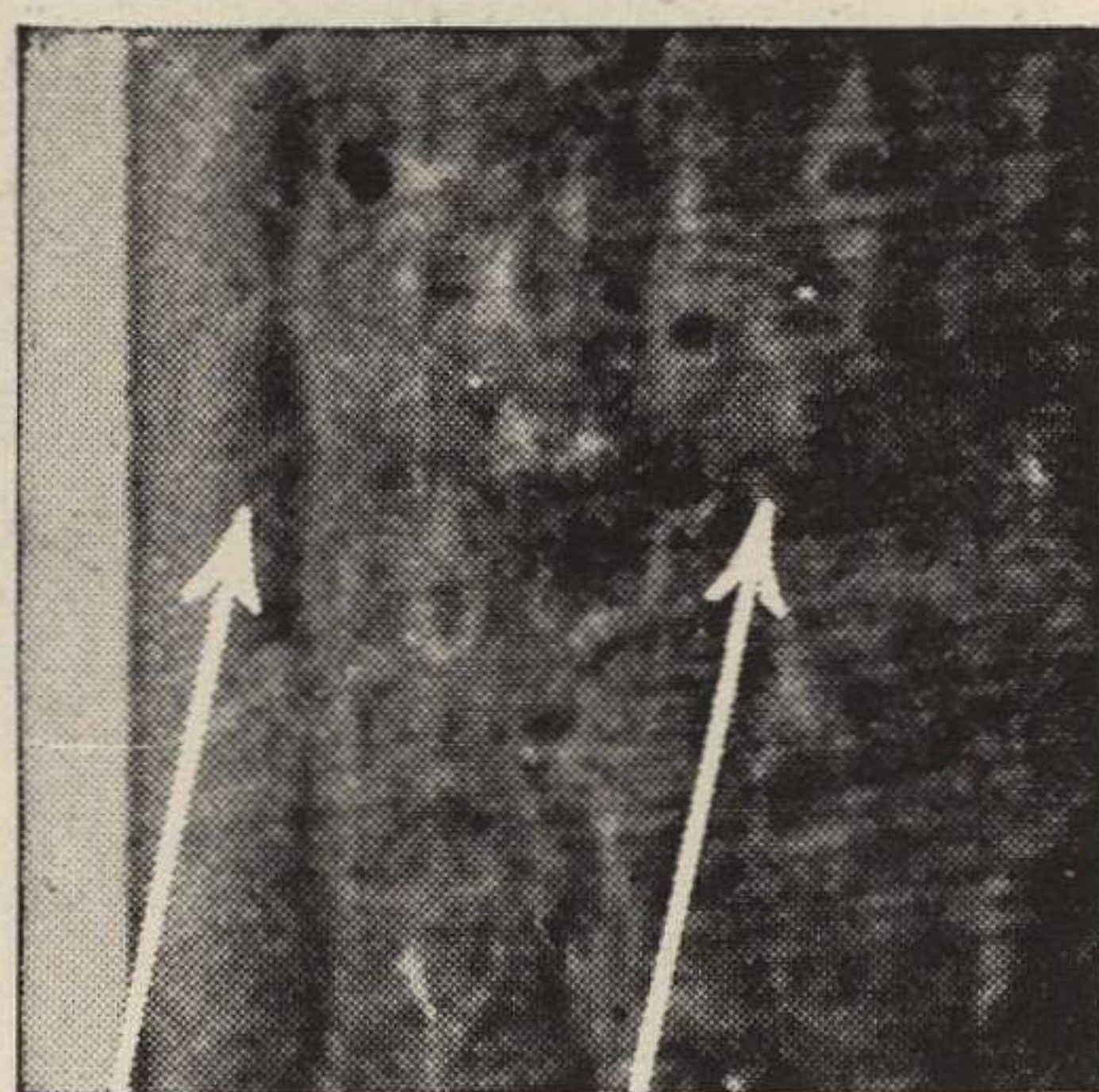
The optimum vitamin D intake which Fleisch-

FIGURE 1



... Enamel    ... Dentine

FIGURE 2



... Enamel    ... Dentine

PHOTOMICROGRAPHS show cross-section contrast between a hypoplastic tooth (Fig. 1) and a well-calcified tooth (Fig. 2). In former, note roughened, pigmented enamel and dentine honeycombed with minute interglobular spaces—inviting bacterial invasion. Calcification is now known to depend on adequate vitamin D in the diet—at all ages.

mann's Yeast assures helps the mother maintain an adequate reserve of calcium and phosphorus, so essential in arresting the onslaughts of caries in her own teeth and in laying the foundation for well-formed, uncrowded teeth in the child.

The fetal teeth begin to form in the seventeenth week of pregnancy. From then until the end of the nursing period, the child's tooth formation depends entirely on the mother. Even after weaning, the beneficial effects of a reserve store of vitamin D acquired from the mother during lactation may be observed.

### *Helps Child Tooth and Jaw Formation*

The structure of the permanent teeth is, of course, influenced to a large extent by the early calcification of the deciduous teeth, in which the mother's diet during pregnancy and lactation was such an important factor.

It has now been demonstrated (as reported in

the British Medical Journal) that even where the permanent teeth are poorly positioned and imperfectly calcified in their original structure, vitamin D powerfully aids in the corrective process. It also tends to diminish the spread of existing carious points and to check the initiation of new ones.\*

### *Fewer Dead Teeth in Adults*

Teeth are living tissues, and are now known to be responsive to certain dietary influences *throughout life*. Chief of these is the presence or absence of sufficient calcifying vitamin D.

A most important effect of vitamin D in the diet is in relation to Nature's last line of tooth defense, the secondary dentine. By stimulating its development, vitamin D tends to reduce the danger of tooth devitalization through pulp exposure.

The treatment of malposed and carious teeth is also aided by the increased calcium absorption which this vitamin helps bring about.

### *Important as a Preventive Measure*

A new era in dentistry is approaching, in which the *prevention* of dental faults will assume equal importance with their correction.

The newly discovered importance of vitamin D has given tremendous impetus to this new attitude. Its new availability in Fleischmann's Yeast—a corrective food already widely known for its other benefits—is a boon that dentists have not failed to appreciate.

The routine recommendation of Fleischmann's Yeast, not only to pregnant or nursing mothers, but to *all* your patients, both adult and juvenile, will help assure more lasting and satisfying results for your work.

\*Since Fleischmann's Yeast may be too laxative for very young children, it should be given to children under 5 only under direct medical supervision.

# Dental Researches Emphasize *Vitamin D* Need

*International Jl. of Orthodontia, Oral Surgery and Radiography* (Sept. 1929): "The importance of adequate nutrition during the period of growth of teeth and bones is well recognized. It has, however, not been so well recognized that fully developed teeth and bones may also be profoundly influenced as the result of inadequate nutrition. Teeth and bones are not fixed, inert tissues, like the structural iron of a skyscraper, but very live body tissues which can be maintained properly only when the nutritional needs are adequately met."

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*The British Dental Journal* (July 16, 1928): "... vitamin D... enables the ameloblasts and odontoblasts to make use of the circulating calcium and phosphorus and other salts and so to incorporate them in the developing dentine and enamel."

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*Edinburgh Medical Jl.* (March, 1929): "... although the calcium and phosphorus of the diet are essential for tooth formation, their importance is secondary, because the extent to which they can be utilized depends on the presence of vitamin D and the cereal factor." (Note: Certain cereals are believed to exert an anti-calcifying effect.)

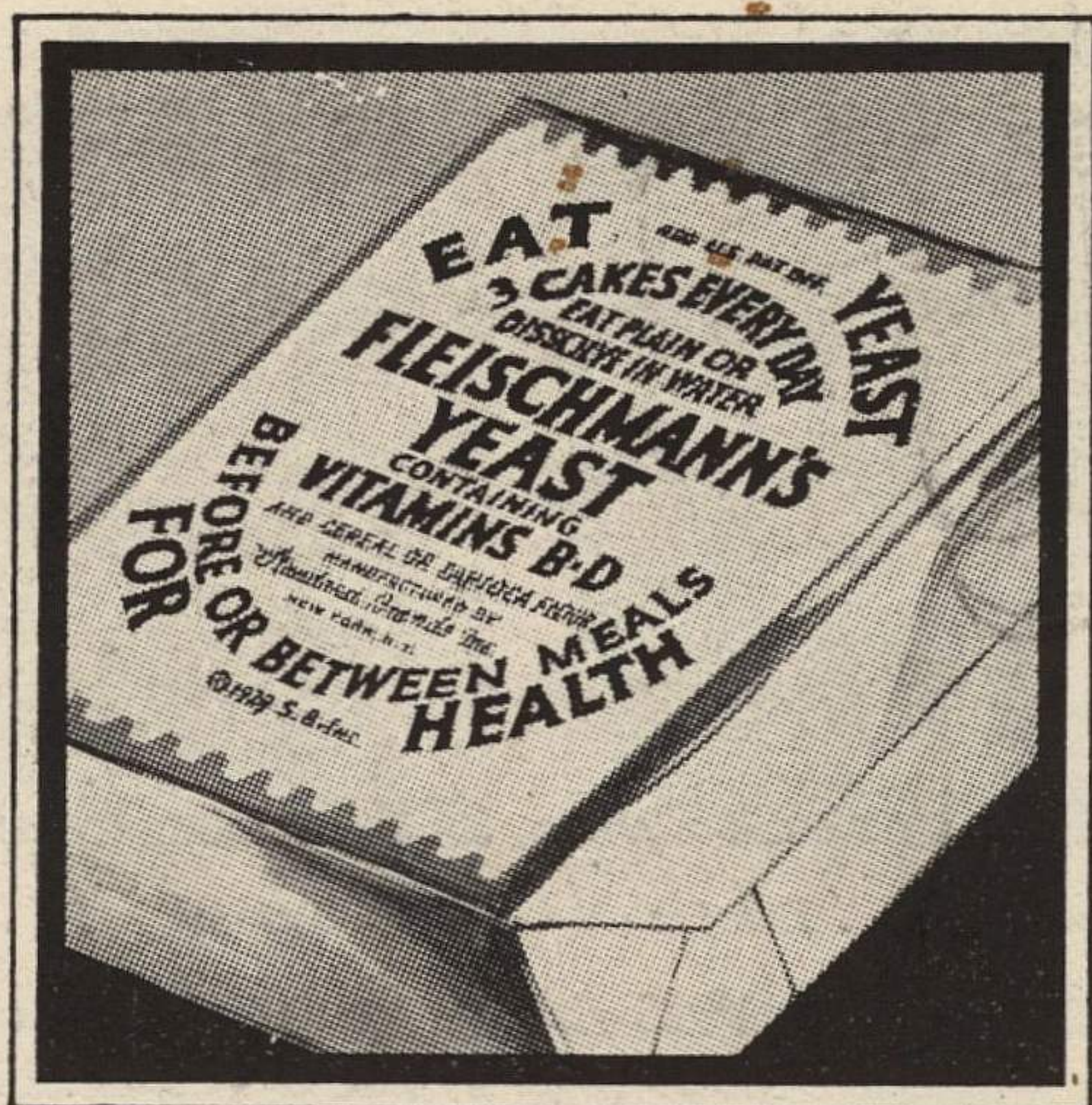
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*U. S. Public Health Service Broadcast No. 357*: "The work of preventing dental disease should begin with the diet of the mother even before the birth of the child . . .

"... in preventing disease of the teeth, 'cleanliness is good; diet is vital.'"

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*A leading Austrian authority on metabolism*: "Vitamin D fosters assimilation of calcium and phosphorus, the elements necessary to build and keep teeth strong and firm. This vitamin is present in irradiated fresh yeast."



## *Every cake of Fleischmann's* **Yeast now rich in Vitamin D**

**F**LEISCHMANN'S YEAST is the richest food source of vitamin D. Unlike other foods, its richness in this vital factor is unvarying.

Yeast, you know, contains ergosterol, a substance present in human skin. In the body, sunlight converts this substance into vitamin D. In Fleischmann's Yeast the same conversion is accomplished by ultra-violet irradiation. All *Fleischmann's* Yeast (in the familiar foil-wrapped cake with the yellow label) now contains vitamin D (produced by the Steenbock Process as licensed by the Wisconsin Alumni Research Foundation).

Fleischmann's Yeast is also rich in vitamin B. It exerts a gentle laxative action, stimulates gastric secretion and is of marked value as a general tonic.

Recommend 2 or 3 cakes daily, before or between meals—plain or in water (cold or hot). At grocers', restaurants and soda fountains.

The  
newly discovered importance  
of vitamins in the diet of  
expectant mothers . . .

*Why doctors advise Yeast  
to prevent vitamin-starvation*



*A rich supply of two certain vitamins is needed in the expectant mother's diet to insure proper development of the baby—to protect her own health . . . Fleischmann's Yeast is abundant in both essential vitamins.*

# Suggestions for the care of the Baby . .

**THUMB SUCKING** and "pacifiers" are injurious. They are apt to upset the digestion and disfigure the child's mouth.

**HANDLING THE BABY**, especially after meals, is inadvisable. The baby should not be picked up any more than is necessary. Too much playing with baby upsets his delicate digestion.

**TOYS** for the very young baby should always be washable, never have points or edges or be painted. Baby puts everything in his mouth, therefore his toys must be safe ones.

**PROTRUDING EARS** are very often the result of carelessness. Baby's ears should be flat against his head when he is laid down and not allowed to double over.

**RUBBER DIAPERS** should be used with care. Improperly used they irritate the skin and are a common cause of chafing, which may lead to serious skin disorders.

**CLOTHING** should be put on baby while he is lying flat. Clothes should be drawn on over feet and not over head.

**HABITS:** When baby is old enough, put him on his chair at regular intervals. He will then form the good habit of regular bowel movements.

**NETTING** should always be put over baby to keep off flies and mosquitoes when he is put outdoors to sleep in summer. Mosquito bites are annoying and may cause malaria, and the house-fly is a common carrier of the germs of disease.

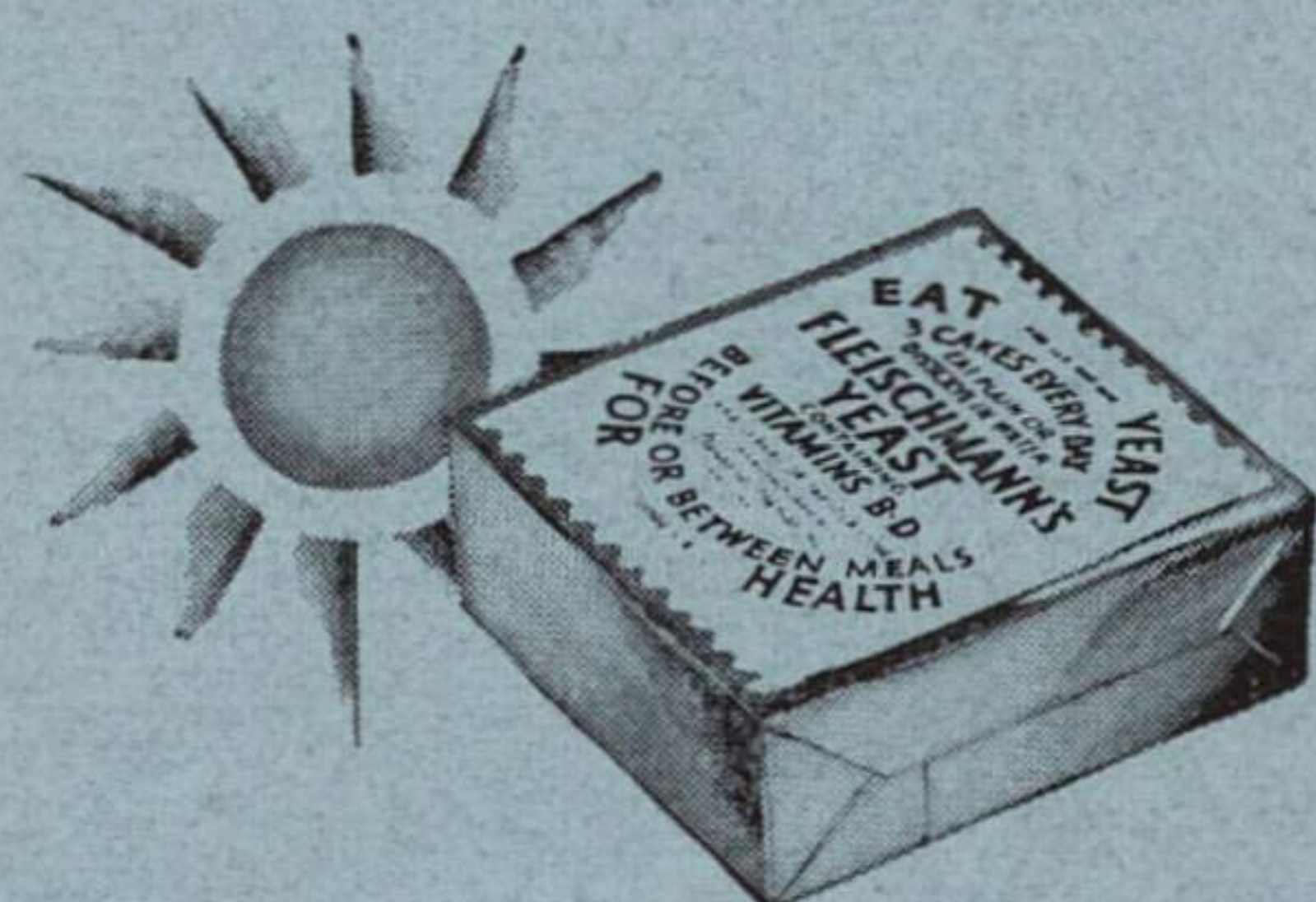
**OVERHEATING:** Dry air in overheated homes dries out the mucous membrane lining of the nose and throat, making baby more susceptible to infections and colds.

**PRICKLY HEAT** is due to too much or too rough clothing. Dress baby in cool clothing and put a tablespoonful of cooking soda in baby's bath. Use talcum powder freely.

**PRECAUTIONS:** At any sign of illness in the baby see a doctor as soon as possible.

*Yeast is not recommended for children under 5 years, except under the doctor's supervision.*





Fleischmann's Yeast is a rich food source of the vitamins B and D—so necessary to the expectant or nursing mother and her baby.

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STANDARD BRANDS INCORPORATED

595 MADISON AVENUE

NEW YORK, N. Y.

DEPT. OF APPLIED RESEARCH

June 18, 1930.

Dr. Forrest C. Allen,  
Director of Physical Education,  
The University of Kansas,  
Wittenberg College,  
Springfield, Ohio.

Dear Doctor Allen:

In reply to your letter of June 12, we are very glad indeed to send you some booklets covering the vitamin D value of Fleischmann's Yeast. We have not any booklets that particularly stress the value of vitamin D for athletes, and these which we are enclosing are, as you will see, more or less general in character. If you would like to have extra copies of them, we shall be very glad to send them to you.

Mr. Carl has asked me if I would not also write you something along the technical aspects of irradiation and our methods of standardizing the vitamin potency of our product.

The discovery, that it is possible to produce vitamin D in certain foodstuffs by subjecting them to ultra-violet irradiation, was made by Professor Steenbock of the University of Wisconsin, and the patent rights to his process were assigned to the Wisconsin Alumni Research Foundation, from whom we obtained an exclusive license for the irradiation of yeast.

Following the original discovery, it was learned that the actual substance from which the vitamin D is formed by irradiation is ergosterol, a lipoid discovered many years ago in ergot, from which it derives its name. We became especially interested when it was learned, that the best source of ergosterol is yeast.

Our own Laboratories conducted extensive investigations and developed methods that made it possible to satisfactorily extract from the yeast, ergosterol of such purity that when properly irradiated it acquired a vitamin D potency as high as 200,000 times that of high grade medicinal cod liver oil.

Dr. Forrest C. Allen - 2.

June 18, 1930.

At present we are supplying a number of pharmaceutical houses who are licensed by the Foundation, with irradiated ergosterol which they market under the trade name of Viosterol.

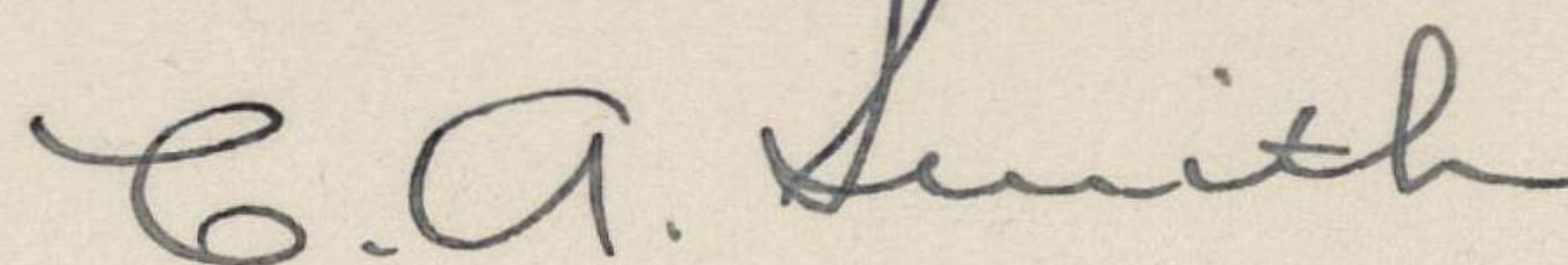
Our Laboratories also developed methods of irradiating the yeast directly; that is, without extracting the ergosterol from it, and all of our yeast sold in the familiar foil wrapped cakes with the yellow labels is irradiated sufficiently so that each cake is equivalent in vitamin D potency to a teaspoonful of standard cod liver oil. The control and standardization of the vitamin D content of our irradiated ergosterol and irradiated yeast are in charge of men who have devoted years of time to vitamin work, and frequent tests are made of the yeast as it is picked up in various parts of the country.

We have been irradiating our yeast about a year, and of course before going out with it, we had some clinical and laboratory investigations carried out to make certain that the irradiation had in no way lessened its other corrective values. We had no reason to think that it would, but wanted to be certain of it before we started to market the new product.

Assuring you that we appreciate your continuing interest in our product and your recommendation of it to your students, and hoping that your summer season on the coaching schools may be pleasant and successful, we are

Very truly yours,

STANDARD BRANDS INCORPORATED



Dr. C. A. Smith

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