

Unripe green mangoes contain much less vitamin C and carotene, and somewhat less carbohydrate, than are found in the ripe fruit, but they are considerably richer in iron.<sup>1, 2</sup>

No information is readily available about the effects of preservation on the nutritive value of mangoes. From general considerations, however, we might expect that drying would lead to heavy losses of vitamin C and to smaller losses of carotene. Much would depend on the temperature during drying and on the time of storage afterwards. Carotene should suffer only slight losses in mangoes preserved in syrup or oil, and the losses in ascorbic acid ought to be less than after drying. Acid media, such as vinegar, are reputed to favour the preservation of ascorbic acid, but might promote the destruction of carotene.

## REFERENCES

- <sup>1</sup> *The Nutritive Value of Indian Foods and the Planning of Satisfactory Diets*, 1956, Health Bulletin No. 23. Indian Council of Medical Research.
- <sup>2</sup> *Spec. Rep. Ser. med. Res. Coun. (Lond.)*, 1945, No. 253.

## Interrupted Immunization

**Q.**—*Patients do not always return for further injections after the first or second of a course of tetanus immunization. What is the state of immunity in these cases? Should a further, full course be given?*

**A.**—It is generally accepted that a person must be considered non-immune (or incompletely immunized) to tetanus after (1) he has received only one injection of tetanus toxoid, or (2) more than six months have elapsed after two injections of toxoid. Antitoxin would then be needed in the event of injury. Adequate protection can be assumed only after three properly spaced injections.

When there is any departure from the accepted immunization course it is difficult to make general recommendations for completion of immunization after different time intervals. When a person has had only the first injection of a course, and less than three months have elapsed since the injection, the course may be proceeded with in the usual way—namely, the second injection at once and the third injection in six to twelve months' time. If more than three months have elapsed since the first injection of toxoid, a new full course of three injections should be given.

If a person has had only two of the three injections, and less than a year has elapsed since the second injection, the third injection could be given to complete the primary course. If one to five years have elapsed, two doses of toxoid should be given, spaced six weeks apart. If more than five years have elapsed, a new full course of three injections should be commenced.

Immune persons who are wounded are given 1 ml. of tetanus toxoid intramuscularly: antitoxin is not required. In order that the immune status may be maintained, reinforcement is indicated after five years.

Various other aspects of the prevention of tetanus in injured persons, involving passive and active immunization, are discussed by Parish, Laurent, and Moynihan.<sup>1</sup>

## REFERENCE

- <sup>1</sup> Parish, H. J., Laurent, L. J. M., and Moynihan, N. H., *Brit. med. J.*, 1957, 1, 639 and 1063

## NOTES AND COMMENTS

**Nail-biting.**—Dr. DAPHNE SASIENI (Hadleigh, Essex) writes: Does the question ("Any Questions?" April 2, p. 1069) mean that all other treatments have failed, therefore should hypnosis be tried? I should like to suggest to the questioner that he tackles the problem in this way, concentrating on the nail-biting aspect only. Tell the girl that lots of people who have bitten their nails for years eventually learn to stop doing so, but that it is not easy and will take several months. Tell her to get a nail-brush, a sandpaper nail-file, and a pair of sharp-pointed scissors and to scrub her nails every evening and to snip off any bits of skin or cuticle obviously torn and ragged. Then to rub her finger along a bitten nail to feel how rough it is, and, having felt the roughness, let her sandpaper off the rough pieces: this is difficult, and, if the nail has been badly bitten, may be slightly painful. Tell her to try and smooth all her nails in all directions every day, and then explain to her that it is impossible to bite a smooth nail, since there is nothing for her teeth to get hold of. The difficulty is initially to get a smooth surface. Then—and this

is most important—tell the girl not to expect to be able to give up biting ten nails at once—no one can—but let her make a pact with herself to stop biting one nail for one week. The others will be difficult to bite, since they will be kept smooth, but tell her that if the chosen one comes anywhere near her mouth she is to take it out (no one but herself knows which nail has been chosen). Then the next week a nail from the other hand should be chosen, and an extra nail should be added each week. As the nails begin to grow they should be kept smooth with the file. Long nails should not be grown at this stage because they will break, and having broken will be bitten. Ten good nails should not be expected at the end of ten weeks—six or seven in that time would be satisfactory. The girl should be told that if she has bitten a nail again by accident she should not be depressed or annoyed with herself: she should merely smooth off the rough bits and let the nail grow again. During the second three months the nails may be allowed to grow a little longer. If the patient has always bitten her nails when she is "worked up" before examinations, etc., she should not be disappointed if she finds herself biting some of her nails at these times. The treatment will soon get over the problem. After a few months, when the girl has achieved presentable hands, she will probably have gained considerably in personality and confidence.

OUR EXPERT replies: The suggested treatment could succeed only if the girl's motivation to stop nail-biting were much stronger than her unconscious need for relief from tension or the emotional satisfaction found in the continuing habit. In any case, no adolescent could carry through the régime proposed without very strong adult support—kindly, and completely uncritical. The original question about using hypnosis suggests that either the girl herself is in a state of acute anxiety about the habit or that her parents are. If it is the former, then help is needed not only with breaking the habit but also with the excessive anxiety attached to what is, after all, a fairly innocuous habit. If it is the latter, the parents will not be able to be truly supportive and uncritical when the steady progression of the "cure" is interrupted. Therefore, outside help is needed. The suggested régime might well prove highly successful if the doctor proposing it first formed a therapeutic relationship with the girl, after satisfying himself or herself that the underlying cause of the symptom would not be aggravated by the removal of the symptom.

**Corrections.**—The structural formula of guanethidine shown in "To-day's Drugs" (April 30, page 1359) should have contained an 8-membered ring instead of the 6-membered ring.

In the annotation on the new Poisons Rules (May 7, p. 1418) the abbreviated summary of the instructions regarding repeated dispensing of Schedule 4A and 4B prescriptions may have been misleading. According to the Rules the number of times a prescription is to be repeated or the intervals at which it may be dispensed must be stated. If the number of repeats is not given but the interval between repeats is, then the prescription may be dispensed three times in all. On the other hand, if the intervals between repeats are not stated but the number of times the prescription may be repeated is, the prescription may not be dispensed more often than once every three days.

In the *Journal* of April 30, p. 1375, the sum of £125,000 said to have been given to the Royal College of Obstetricians and Gynaecologists by the Nuffield Provincial Hospitals Trust was made up of £75,000 given by Lord Nuffield himself and £50,000 given by the Trust.

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