PRELIMINARY AND SHORT REPORT

POTENTIATION OF SUNTANNING THROUGH INGESTION OF 8-METHOXYPSORALEN*

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Local application of certain psoralen derivatives to normal skin followed by exposure to sunlight results in marked erythema and subsequent hyperpigmentation. The psoralens, present in a variety of natural products such as bergamot and expressed citrus peel oils, cause the hyperpigmentation of berloque dermatitis. Whereas local application of 8-methoxypsoralen produces erythema, oral intake by albinos and patients with vitiligo confers protection against the sun (1). Recently a new effect was observed together with Dr. T. B. Fitzpatrick, namely, that oral intake of 8-methoxypsoralen followed by exposure to sunlight markedly increases the ability to tan. The latter does not result from a simple lengthening of the time that one can be exposed to sunlight but represents an actual potentiation of tanning capacity. This effect was observed in one normal person and twelve patients with vitiligo who received 8-methoxypsoralen.†

B. D., a 24 year old white male college student, had been bothered for several years by burning of the tip of the nose following exposure to sunlight. He gave a normal medical history and was in good general health. Examination showed the nasal skin texture and pigmentation to be normal. The patient was given 20 mg. of 8-methoxypsoralen to take after breakfast to try to prevent the reaction of his nose to sunlight. During the summer months he usually worked outside on building construction. Often he wore no shirt and acquired a dark tan as the summer progressed. A few days after beginning treatment with the psoralen compound—very early in the summer—his skin acquired the suntan that was customary by the end of previous summers. With continuation of treatment he became darker than ever before. His tan faded when he was no longer continuously exposed to sunlight. The drug did not relieve the burning sensation of his nose.

J. S., a 29 year old logger, had had vitiligo since the age of 8. His complaint was not a cosmetic one but burning of depigmented areas of arms and trunk while working out of doors. He was given 20 mg. of 8-methoxypsoralen to take orally after breakfast and again after lunch. One week later the non-vitiliginous skin was darker than on any occasion previous to treatment. During the winter the tan faded rapidly.

The other eleven patients with vitiligo experienced similar results. They worked outside the same number of hours after initiation of treatment with 8-methoxypsoralen as previously but became darker in a shorter period of time than ever before. The drug seemed to act not by lengthening the time the patients could be exposed to sunlight but by increasing their ability to tan.

REFERENCE

1. LERNER, A. B., DENTON, C. R. AND FITZPATRICK, T. B.: Clinical and experimental studies with 8-methoxypsoralin in vitiligo. J. Invest. Dermat., **20:** 299, 1953.

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† 8-methoxypsoralen was supplied by the Paul B. Elder Company.

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