

## COMMENTS AND OPINIONS

## Fill the Mind—and Exercise It, Too!

I read with pleasure Dr Rycroft's<sup>1</sup> essay titled "Going to See Jack" in the "The Art and the Calling" section of the November 2002 issue of the ARCHIVES. His paean to Samuel Johnson and to the unique turn of mind of that polyglot is a poignant reminder of our own intellectual obligations to our art and to our calling. In seeking to capture the distinctive mentality of Johnson in his own words, Rycroft quotes him as writing that after a "hard journey in the Scottish highlands . . . I should have been sorry to have missed any of the inconveniences, to have had more light, or less rain, for their cooperation crowded the scene, and filled the mind." Rycroft then continued, in his own words, as follows: "Filled the mind"—that surely is the key to our professional well-being."

After having perused the rest of the issue, I am prompted to suggest that as important as it is that the mind be filled, it is just as essential that the mind be exercised effectively by dint of logical, critical, incisive thought. And that brings me to 3 statements made in different articles in the same issue that not only are clichés but also, in my opinion, contain ideas that should be passé: (1) "Actinic keratoses (AKs) are precancerous epidermal lesions found most frequently on areas of the skin exposed to the sun."<sup>2</sup> (2) "Basal cell carcinoma (BCC) is the most common skin cancer in whites, with a steadily increasing incidence."<sup>3</sup> (3) "The annual incidence of malignant melanoma per 100 000 individuals almost tripled among American men, from 6.7 in 1973 to 19.3 in 1997, and more than doubled among American women, from 5.9 to 13.8 for the same period."<sup>4</sup>

I believe that all evidence leads to the conclusions that actinic keratoses are *not* precancerous lesions but superficial squamous cell carcinomas,<sup>5</sup> that squamous cell carcinoma (of which actinic keratosis is 1 type), *not* basal cell carcinoma, is the most common cancer of the skin,<sup>6</sup> and that there is *no* epidemic of melanoma.<sup>7</sup>

In sum, as wonderful as it is to fill the mind, it is equally as marvelous to use it in a critical manner.

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## The Unwelcome Return of the Acne Diet

Commenting on the subject of remarriage, Samuel Johnson (1709-1784) called it a triumph of hope over experience. His wisdom might well apply to dermatology's renewed interest in a possible diet-acne connection as proposed in the article "Acne Vulgaris: A Disease of Western Civilization."<sup>1</sup>

This observation presents an unbalanced comparison of processed snack foods with primitive dietary staples, implying that all westerners consume higher glycemic loads than do natives of nonindustrialized countries. In fact, contrasted with the high meat and dairy content of the US diet, primitive diets often derive a greater share of total calories from starchy foods like boiled rice, corn products, potatoes, and refined flour. Thus, American teens not inclined toward sweets and soft drinks probably consume relatively low glycemic loads yet still are acne prone.<sup>2</sup>

The authors' theories are speculative at best. Their suggestion that diet-induced hyperinsulinemia and elevated levels of free insulinlike growth factor 1 cause acne via overproduction of ovarian and testicular hormones is unlikely for several reasons. First, acne prevalence among premenarchal girls is correlated with adrenal rather than ovarian androgens, and further, hormone levels are normal in most patients with acne.<sup>3</sup> Also, there is a distinct demographic divide between populations with acne vulgaris, principally a teenage disorder, and those showing insulin resistance, mainly overweight adults. Finally, acne was ubiquitous in American adolescents 3 decades ago,<sup>2</sup> prior to the proliferation of soda and candy machines in secondary schools, when the teen obesity rate was only one third of today's 14%.

The suggestion that diet-related reduction of insulinlike growth factor binding protein 3 causes acne by interfering with retinoid metabolism might be intriguing, except that vitamin A deficiency severe enough to cause follicular hyperkeratosis is associated with sebaceous atrophy, not acne.<sup>4</sup>

In an isolated subculture, attributing disease protection to a single variable like dietary glycemic index is

an oversimplification. An indigenous group has a common genetic ancestry, the strongest determinant of familial disorders like acne. In addition, such societies share environmental conditions other than nutrition, including climate, sun exposure, work, stress, physical activity, and local microbes.

In their thoughtful editorial comments, Drs Thiboutot and Strauss<sup>5</sup> point out that the authors failed to test the western diet for acnegenicity in the native groups. In addition, acne efficacy of the primitive diet in westerners was not shown.

Whereas low-glycemic diets are appropriate for patients with polycystic ovary syndrome and insulin resistance, data are nonexistent that diet causes or cures acne.

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## Diet and Acne Redux

The science of nutrition has produced dramatic findings over the past few decades. Of particular note is the expansion of knowledge about essential fatty acids during the 1980s. Also, profound changes in the concept of daily nutritional requirements find the United States replacing "recommended daily allowances" with "dietary reference intakes." This reflects the consideration of optimal nutrient levels rather than minimum daily requirements. The vitamin paradigm changed forever when neural tube defects declined radically with folic acid supplementation.<sup>1</sup> No longer do we think only of preventing nutritional deficiency diseases. Now we are learning to provide optimal nutrient intake for optimal function.

Cardiologists have embraced this concept and now prescribe vitamin B<sub>12</sub>, vitamin B<sub>6</sub>, and folate to bring down elevated homocysteine levels in patients at risk for stroke and myocardial infarction.<sup>2</sup> Although causality has not been proved, study findings are highly suggestive, and supplementation carries few risks. The American Heart Association also acknowledges the benefit of daily fish oil supplementation for some patients.<sup>3</sup> However, few physicians in other fields seem to take advantage of recent discoveries in nutrition and apply them clinically.

Dermatology has been particularly tied to older nutrition dogma with regard to acne and diet. The article

by Cordain et al<sup>4</sup> in a recent issue of ARCHIVES should serve to awaken us to the relevance of nutrition to skin disease and stir us to review the dogma. The major textbooks of dermatology tend to view diet as irrelevant to the treatment of acne. The primary references to which the texts refer are both more than 30 years old.<sup>5,6</sup>

In 1971, Anderson<sup>5</sup> observed 27 college students on a "typical high-carbohydrate dorm diet." The students believed that specific foods caused inflammatory flares within 3 days of ingestion. They received the culprit foods on a daily basis and returned daily for facial mapping of lesions. None flared. While the uniformity of response was impressive, the study had a few glaring flaws. The sample size was fairly limited. The study was neither controlled nor blinded. The article was not peer reviewed by dermatologists (published in the *American Family Physician*). Most importantly, given the effects of chronically elevated insulin posited by Cordain et al,<sup>4</sup> the baseline diet may have obscured the findings.

In 1969, Fulton et al<sup>6</sup> explored the effect of chocolate on acne by using "pseudo-chocolate" bars made with 28% partially hydrogenated vegetable oil as the control. With our 2002 lens, we can see that the high proportion of *trans* fats in the control bar limits the usefulness of the study. *Trans* fats compete with essential fatty acids in the production of prostaglandins and appear to significantly contribute to inflammation.<sup>7</sup>

In the nutrition literature, evidence supporting dietary effects on health continues to mount, and dermatology is no exception. Many of our patients' skin conditions are affected by what they eat. It may be time for us to open our minds and our nutrition textbooks.

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## Omega-3 Fatty Acids and Acne

I read with great interest the recent article by Cordain et al.<sup>1</sup> This group makes a strong argument for the involvement of diet-induced hyperinsulinemia in the pathogenesis of acne vulgaris. In addition to the glycemic load of the typical western refined-food diet, it is also important to note that the western diet typically includes a much lower intake of omega-3 fatty acids, an