

DIET & ACNE REVISITED



**NO CLEANSING
NECESSARY**

**FEELING SICK?
TRY PATIENT
SOUP**

**DR. CORDAIN
RESPONDS TO
JOURNALIST**

LOREN CORDAIN, PH.D.



DIET & ACNE REVISITED (2013)

I recently received the email below regarding an article about diet and skin health in the June 2012 issue of *IDEA Fitness Journal*. Here is the link to that article, written by Martina Cartwright, PhD.: [here](#). In this article, Dr. Cartwright cites a paper I wrote to support her statement:

“Long held beliefs that chocolate, fatty foods and dairy cause acne have been largely disproved (Cordain, 2005).”

Dr. Cartwright then lists my paper (Cordain, L. 2005. Implications for the role of diet in acne. *Seminars in Cutaneous Medicine and Surgery*, 24 (2), 84-91.) to support her contention that these foods do not cause acne.

I may be getting a little bit ahead of the story, but it is apparent that Dr. Cartwright has not read my paper carefully or at all. In fact, my contention in all of my scientific writings on the link between diet and acne is that chocolate, certain fatty foods (potato chips, French fries, pizza, doughnuts, etc.) and dairy together with other high glycemic load foods represent the major environmental trigger for acne. Before I get into the most recent scientific studies showing the link between diet and acne, please take the time to read Bailey’s letter below to Dr. Cartwright and her response so that I can set the stage for my reply.

Dr. Cordain,

Please excuse the forward nature of my email as we have not previously met or communicated. I wanted to bring to your attention an article that was published in the June 2012 *IDEA Fitness Journal*. Martina Cartwright, PhD, authors an article entitled, “Recipe for Great Summer

Skin” (<http://www.ideafit.com/fitness-library/recipe-for-great-summer-skin>) and cites you as a reference to support her statement that “Long held beliefs that chocolate, fatty foods and dairy cause acne have been largely disproved (Cordain, 2005).” My email response to the editorial department of *IDEA* is below. Dr. Cartwright responded to my comments in the current, Sept. 2012 edition of the *IDEA Fitness Journal*. I have attached a scan of her response. I am interested in your comments surrounding her initial statement and also her response. Thank you for your continued efforts in the field of evolutionary medicine.

Bailey Leonard, MS, NASM- CPT
Glen Mills, PA

IDEA Fitness Journal, September 2012, p. 5.

I would like to draw attention to an inaccuracy from the article entitled “Recipe for Great Summer Skin” in the June 2012 edition of the *IDEA Fitness Journal*. The author references the work of Loren Cordain on page 71 when she states that “Long held beliefs that chocolate, fatty foods and dairy cause acne have been largely disproved (Cordain, 2005).” This passage is from a published work in 2005. An article authored by Mr. Cordain entitled “Dietary Implications for the Development of Acne : A Shifting Paradigm” was subsequently published in the *US Dermatology Review* of 2006. The more current article contains a section entitled “Dairy Products and Acne: New Findings.” This section states that “the insulin resistance caused by a high milk diet may promote acne via a hormonal cascade.” Mr. Cordain also states

in a Q & A on “The Paleo Diet” website that, “In large epidemiological studies published by researchers from the Harvard School of Public Health, cow milk drinking has been shown to be strongly associated with acne.” This work is dated March 29, 2012. With the general public and fitness industry members constantly being bombarded with conflicting information on dietary matters it is vitally important that the most current works of researchers and authors be cited when information is presented on a topic.

Bailey Leonard, MS, NASM- CPT

Glen Mills, PA

IDEA Fitness Journal, September 2012, p. 5, 6.

THE AUTHOR (MARTINA CARTWRIGHT, PH.D.) RESPONDS:

The author wishes to thank Bailey Leonard for the comments regarding the role of dairy in the causation of acne. In an excellent review by Davidovici & Wolf (2010), the collective evidence that dairy causes acne was found to be slim and, as a result, the review authors concluded that dairy products should not be removed from the diet to prevent acne. In my article, I cite a 2005 reference by Cordain; little has changed since publication of this article.

Some evidence suggests that dairy products may induce a cascade of events that increase glycemic load and hyperinsulinemia. Cordain (2006) discusses the possibility that dairy products induce acne through hyperinsulinemia and mitigation of IGF- I and, as evidence, cites a small study of preadolescent boys who were given a high-milk diet for a week. The pathogenic hypothesis put forth that IGF-I induction via the consumption of milk products mediates acne eruptions is plausible, but is not supported by the peer-reviewed scientific evidence, and, while compelling, the single-study results by no means reflect the body of data (Pappas 2009).

Further, “Western” diets are characterized by high-glycemic rich foods that include foods other than dairy. As discussed in my article, consumption of sugary foods is linked to acne. Cordain (2006) clearly states that additional studies regarding the effects of milk on acne pathogenesis need to be conducted in a controlled manner in which dairy products are included or excluded.

Leonard refers to studies conducted by the Harvard School of Public Health. Although mentioned on the Cordain website in 2010, the actual studies were published in 2005, 2006 and 2003 (Adebamowo et al. 2005, 2006, 2008). The purpose of these studies was to determine the association between acne and dietary intake. These studies relied on food frequency questionnaires administered in the mid to late 1990s, and responses showed a positive association between intake of milk and acne. Reliance on self-reported consumption is problematic, however; recollection of true consumption is often flawed, and results frequently do not reflect actual intake. Moreover, Adebamowo et al. (2008) stated that [the researchers] did not take into account lifestyle or genetic factors that influence acne. Because of these methodological issues, the American Academy of Dermatology (AAD) was reluctant to recommend dietary restrictions, citing lack of convincing evidence (Pappas 2009;



Strauss *et al.* 2007).

Leonard correctly states that there is an abundance of conflicting dietary information and that one must cite the most recent research. To this point, I stand by my statement and provide additional and more current references that reiterate the point made in my original statement, as supported by the 2005 Cordain reference. I believe Leonard provides an excellent example of why one must use caution when relying on information contained in promotional websites that do not list specific peer-reviewed scientific references to support their opinions presented as fact. Further, many websites often interpret individual study results as “cause” rather than “association” and fail to consider the body of data. Careful interpretation is paramount to reducing misinterpretation of complex dietary data and necessary to provide our clients all the best science has to offer.

Martina Cartwright, Ph.D.

DR. CORDAIN'S RESPONSE:

Before I review the most recent scientific publications regarding the relationship between diet and acne, let me point out a number of errors and shortcomings in Dr. Cartwright's original article and in her rebuttal to Bailey Leonard. In her rebuttal, Dr. Cartwright categorizes the article on diet and acne by Davidovici *et al.* (2010) as “an excellent review.” It is difficult to see how Dr. Cartwright could possibly categorize this review as “excellent,” particularly when the authors failed to even cite, let alone review, the major human experimental studies¹⁻⁴ on diet and acne that appear in the literature prior to the review article's publication in 2010. Further, Davidovici *et al.* (2010) fail to even cite or review two^{5,6} of the three⁵⁻⁷ primary epidemiologic studies linking dairy to acne that appeared prior to 2010. Hence the Davidovici *et al.* comment that, “the

association between dietary dairy intake and the pathogenesis of acne is slim” is in itself “slim” because the authors failed to review 66% of the epidemiologic studies available prior to 2010 which examined the link between dairy and acne.

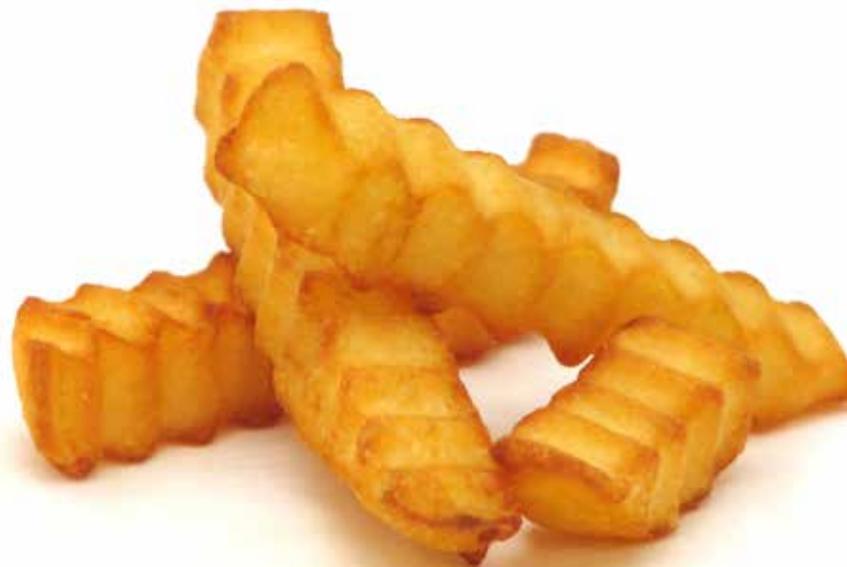
Dr. Cartwright goes on to say in her rebuttal to Bailey Leonard,

“In my article, I cite a 2005 reference by Cordain; little has changed since publication of this article.”

First off, this statement is misleading because in her original article, here is what she said,

“Long held beliefs that chocolate, fatty foods and dairy cause acne have been largely disproved (Cordain, 2005).”

In that article⁸ I didn't even remotely suggest that chocolate, fatty foods and dairy didn't cause acne. In fact my contention was diametrically opposite to Dr. Cartwright's quote. Chocolate, fatty foods (potato chips, French fries, pizza, doughnuts, etc.), and dairy together with other high glycemic load foods represent the major environmental trigger for acne. To even



suggest that “little has changed since publication of this article”⁸ in 2005 borders upon the ludicrous. To be objective, nearly everything we thought we knew about diet and acne has dramatically changed since 2005.

The publication of our seminal paper in 2002⁹ [demonstrating the absence of acne in non-westernized populations consuming traditional diets devoid of refined sugars, cereals, processed food and dairy products] challenged the dogma of the past 30 years that diet was unrelated to the development of acne. In a series of further papers^{8,10,11} we outlined the hormonal mechanisms by which dietary elements represented the major environmental trigger of acne, including the consumption of high glycemic load carbohydrates^{8,10} and dairy products.¹¹

Our hypothesis that high glycemic load foods were a cause of acne was confirmed by Neil Mann’s group in a randomized controlled trial¹⁻⁴ published in 2007 and 2008. In a review¹² published in 2010 in *The Journal of the American Academy of Dermatology* Dr. Whitney Bowe and colleagues concluded that: “Compelling evidence exists that high glycemic load diets may exacerbate acne.” This conclusion is now supported by another recently (2012) published randomized controlled trial.¹³ The authors of this experiment summarized their findings: “A reduction in glycaemic load of the diet for 10 weeks resulted in improvements in acne” in 32 patients with mild to moderate

acne. Two recent cross-sectional epidemiological studies further indicated that high glycemic load carbohydrates¹⁴ and refined sugars¹⁵ play a role in acne exacerbation. In contrast, two (Davidovici *et al.* 2010; Strauss *et al.* 2007) of the three (Davidovici *et al.* 2010; Strauss *et al.* 2007; Pappas 2009) major review papers cited by Dr. Cartwright did not review any experimental human studies examining acne and the glycemic load, and all three reviews concluded that acne was not caused by any dietary factor.

In her rebuttal to Bailey Leonard, Dr. Cartwright states,

“Leonard correctly states that there is an abundance of conflicting dietary information and that one must cite the most recent research. To this point, I stand by my statement and provide additional and more current references that reiterate the point made in my original statement, as supported by the 2005 Cordain reference.”

Again, Dr. Cartwright stubbornly holds on to her misperception that I support the notion that acne patients should consume chocolate, dairy and fatty foods (potato chips, French fries, pizza, doughnuts, etc.). Nothing could be further from the truth, and throughout all of my scientific publications⁸⁻¹¹ on diet and acne, I suggest exactly the contrary of Dr. Cartwright’s misquote of me. In reality, Dr. Cartwright has failed to provide “more current references that reiterate the point made in my original statement” (her own words). As I have extensively pointed out, her “more current references” actually are outdated, incomplete review papers which ignore most of the salient, recent, experimental and epidemiologic studies examining the role diet plays in the etiology of acne. Dr. Cartwright’s rebuttal was written in the summer of 2012, yet she herself fails to examine and review virtually all of the more recent papers



published on diet and acne between 2010 and 2012.

The evidence that dairy food is implicated in the etiology of acne is no longer “slim” as Dr. Cartwright has suggested, but rather is increasingly becoming quite evident. In addition to the pioneering epidemiologic evidence by the Harvard group which first linked diet to milk and dairy consumption⁵⁻⁷ between 2005 and 2008, more recent studies have confirmed these results.^{16, 17} The endocrine basis underlying how milk and dairy consumption may promote acne has been further documented in a series of papers^{5-7, 11} as well as a meta-analysis demonstrating that milk consumption elevates IGF-1,¹⁸ a hormone known to be associated with acne.¹¹

For sources see References

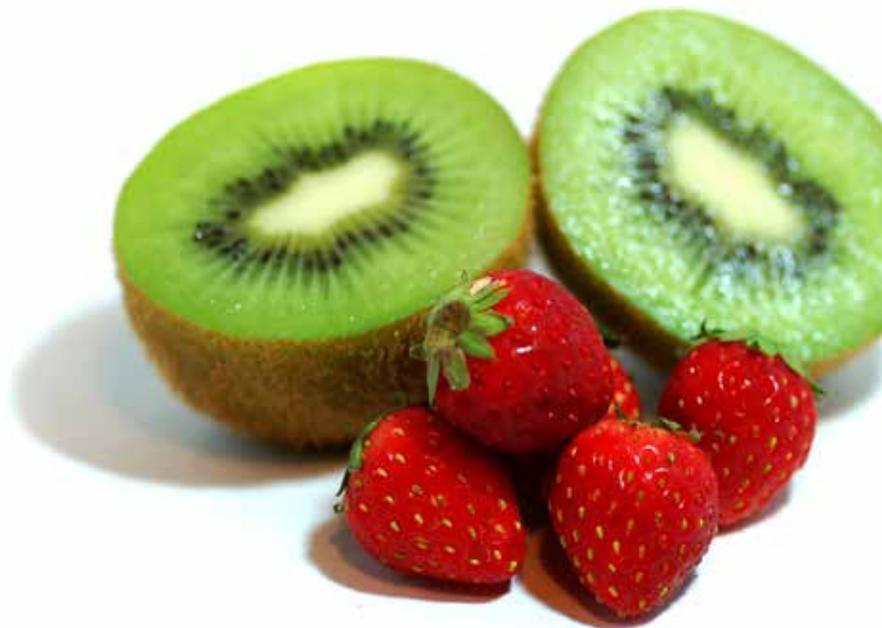
NO CLEANSING NECESSARY

As you replace grains, dairy, legumes and sugary, salt-laden processed foods with the fresh fruits, veggies, nuts, and grass-produced meats, eggs and poultry on the Paleo Diet, your gastrointestinal tract will love you for it. Your bowel function, along with just about everything else that ails you, will begin to improve and normalize, but there are no special cleanse

requirement necessary before you begin this process. If you need assistance with bowel function, some people find that ground psyllium seed in the morning for the first week or two of the diet helps.

Exercise is a wonderful panacea for health and fully complements the Paleo Diet. After a strenuous exercise bout in which you sweat profusely, nothing feels better than a nice warm shower. This is a great way to cleanse your skin. Go one step further, and at the end of your warm shower, turn the water to cold and take less than a minute under the cold water. This change of hot water with cold water on your skin increases compounds in your body called heat shock proteins, which have therapeutic effects.

It is always nice to have a support group as you begin to lose weight or make any behavioral change like diet. I know that CrossFit gyms across the U.S. maintain regular 30-day Paleo challenges to help people ease into and maintain the Paleo Diet. So, if you are the type of person who favors group support and regular input, then definitely check out your local CrossFit organization.



PRIMAL IN THE KITCHEN

Even the most dedicated Paleo followers occasionally come down with a cold or flu bug. As soon as symptoms appear, get this healthy concoction brewing. The trick to its effectiveness is the long, simmering hours necessary to bring out the delicious and soothing flavors. Once the wait is over, a “patient” patient will appreciate this amazing comfort food!



PATIENT SOUP

1 quart organic, low salt chicken broth, or make your own broth by boiling 1 whole chicken
1-2 quarts water
½ sweet onion, diced
2 pieces fresh ginger root, 2-3 inches long, thinly sliced
4-6 fresh garlic cloves, thinly sliced
3 fresh carrots, peeled and sliced into ¼ inch thick pieces
3 fresh stalks celery, sliced into ½ inch pieces
2 cans water chestnuts
2 whole Thai peppers

Pour broth into large pot, place on stove and set heat to low. Add remaining ingredients and cover. Simmer for at least 4 hours. We often keep it simmering for a full 24 hours to infuse the flavors.



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