Letters to the Editor

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This series is coordinated by Kenny Lin, MD, MPH, Associate Deputy Editor for *AFP* Online.

Effects of Contraceptives on Weight Gain or Loss

Original Article: Update on Office-Based Strategies for the Management of Obesity

Issue Date: September 1, 2016

See additional reader comments at: http://www.aafp.org/afp/2016/0901/p361.html

TO THE EDITOR: In their article, Erlandson and colleagues do a good job of providing physicians with up-to-date and practical information on the outpatient management of obesity. However, in *Table 4* in the row for hormones, progestins are incorrectly labeled as weight negative and estrogens are incorrectly labeled as weight positive. In a recent Cochrane review, progestin-only contraceptives (POCs) were found to be weight neutral or modestly weight positive (weight gain of about 4.4 lb [2 kg] over six to 12 months).[1] Another study looking specifically at injectable progestin-only contraceptives (i.e., medroxyprogesterone [Provera]) shows more robust weight gain of 13.7 lb (6.2 kg) over five years.[2] In addition to weight effects, many obese females on progestin-only contraceptives struggle with hyperandrogenic symptoms such as acne, facial hair, and dyslipidemia. These effects can be exacerbated depending on the generation of progestin used, with third-generation progestins being the most advantageous *(Table 1)*.

Estrogens are generally not considered weight-positive medications. In a Cochrane review of 49 trials, mixed oral contraceptives and contraceptive patches were found to be weight neutral.[3] Compared with a sham method, oral contraceptives and patches did not lead to additional weight gain, a perception of additional weight gain, nor discontinuation because of weight gain.[3] Family physicians should reassure their female patients about the generally weight-neutral effects of these medications. The optimal oral contraceptive for an obese patient would be an estrogen plus third-generation progestin.

Table 1. Progestinic and Androgenic Effects of Contraceptives

Generation	*Medication*	*Effect*
First	Norethindrone	Androgenic
Second	Levonogesterel	Most androgenic
Third	Norgestimate (Ortho-Cyclen)	Nonandrogenic

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IN REPLY: I would like to thank Dr. Virji for his comments regarding the effect of estrogens and progestins on weight. Estrogens and progestins are hormonal agents that are used in a wide range of doses and combinations and for multiple indications, making generalizations about their effects difficult. Our characterization of these medications was taken from the Obesity Medicine Association's obesity algorithm, which has been updated recently to include potential weight gain with progestins.[1] I agree that the cited reviews show limited effect on weight when these agents are used for contraception, despite common perceptions. In addition, systematic reviews have shown that postmenopausal hormone therapy, including unopposed estrogen and combination

therapy, has no effect on weight.[2,3] It does seem appropriate to classify estrogens and progestins as weight neutral, with progestins having the potential to be mildly weight positive. This is consistent with the Endocrine Society's 2015 clinical practice guideline that recommends choosing an oral contraceptive over an injectable option in women with a body mass index greater than 27 kg per m^2 or greater than 30 kg per m^2 in those with comorbidities.[4]

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Acupuncture Is Ineffective for Treatment of Low Back Pain

Original Article: Complementary/Integrative Therapies That Work: A Review of the Evidence

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TO THE EDITOR: I was disappointed that in the case of acupuncture for chronic low back pain, the authors cited a narrow selection of the available literature: a few recent articles that suffered from being poorly interpreted or of poor quality.[1] This gives the incorrect impression that acupuncture is an effective intervention for chronic low back pain, and led the authors to ascribe an A level of evidence and recommend as a first-line therapy an intervention that has no evidence of effectiveness compared with placebo, and very real risk of harm.[1-5]

The Vickers article cited by the authors is one meta-analysis of many on this subject. Another meta-analysis using similar inputs came to an opposite conclusion.[1,5] Chronic low back pain is certainly a condition ripe for demonstrating false positives because of poor research design and/or bias, given that an approximately equal initial response to any therapy has been well demonstrated.[1,2,6]

I also dispute the authors' assertion that "In general, acupuncture is extremely safe, with the most common risk being transient mild discomfort." The reality is quite different, as demonstrated in a 2011 review that failed to show any benefit from acupuncture and detailed the possible harms, including some deaths and other major adverse effects such as septic arthritis, spinal epidural abscess, retroperitoneal abscess, necrotizing fasciitis, and infectious aortic aneurysm.[2]

As a whole, the available evidence shows unequivocally that acupuncture is not an effective therapy for any condition.[1-5] When an intervention has no evidence of effectiveness beyond placebo, no risk of harm—however small—justifies its use or recommendation by family physicians, especially for a condition that is well known to respond equally as well to any treatment offered.[1,2,6]

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IN REPLY: We thank Dr. Wright for his critique of our conclusions about the effectiveness and safety of acupuncture for low back pain.

Regarding effectiveness, it is often possible to find individual trials or systematic reviews that do not demonstrate benefit, even for well-established therapies. We based our recommendations on a preponderance of the most recent evidence, which strongly supports the effectiveness of acupuncture for chronic back pain. A recent review commissioned by the Agency for Healthcare Research and Quality on noninvasive treatments for low back pain confirmed that there is moderate evidence of effectiveness for acupuncture.[1] This level of effectiveness is equivalent to that for nonsteroidal anti-inflammatory drugs and superior to that for long-term opioid therapy. A recent review from the National Institutes of Health also included acupuncture as an effective complementary and integrative treatment for pain management.[2]

Regarding safety, the 2011 review that Dr. Wright cited included multiple examples of case reports of adverse effects from acupuncture. Evidence on safety needs to be based on large-scale prospective surveys, not on single case reports. In one rigorous survey, 12 prospective studies of more than 1 million acupuncture treatments showed the risk of a serious adverse event to be 0.05 per 10,000 treatments, and 0.55 per 10,000 patients.[3] Systematic reviews and surveys have clarified that acupuncture is safe when performed by appropriately trained practitioners.[4,5] Every effective treatment, including acupuncture, has the potential for adverse effects. The proper approach is to evaluate the frequency of serious adverse events and balance this against the evidence of benefit. In the case of acupuncture for chronic low back pain, this risk-benefit analysis clearly favors including this approach on the list of potential therapies.

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