

## Discussion

Richard Steckel, PhD

**Dr Godfrey:** Postnatal nutrition was not the main focus of this conference, but we have some consensus that nutrition has its greatest impact during the first 1000 days. I wonder whether the slave heights that were measured reflected recent undernutrition of those individuals that depressed their growth rate. I think it was suggested that the slaves did not experience prenatal or perinatal undernutrition, but rather postnatal undernutrition, so that they were more amenable to catch-up growth when they went to the plantations. Presumably, they came on a trans-Atlantic voyage.

**Dr Steckel:** No, these were all American-born slaves. As early as 1750, a majority of the African-American population was native born. Some of the adults measured in 1819 or 1820 were born in Africa, but most of the measurements I described were made after 1819. By 1830 or 1840, most of the African-born slaves would have died. We did not have a big crop like sugar to export. Before 1807, we grew crops like tobacco, indigo, and rice. The demand for those products grew slowly, so we did not need to import many slaves. However, places like Jamaica that grew sugar kept importing slaves at high rates, such that 80% to 90% of the population at any one time was from Africa.

**Dr Riley:** Dr Abrams, you believe that pregnancy is a teachable moment. We brought this up previously. Do you use any tool to determine whether the people joining your study are ready to change their behavior, and do they reflect what you think the average obstetrician is seeing in his or her practice?

**Dr Abrams:** I think they do reflect what the obstetrician is seeing, but not completely, of course, because women who participate in research trials are likely to differ from the general population of all women. We had a good representation of low-income women, but we did not have many African-American women, who are at the highest risk for perinatal-related obesity in the United States.

How do you know if somebody is ready to change? I do not know. I think Dr Poston might have something to say about that.

## **Discussion**

**Dr Poston:** We do many structured interviews with women to determine the barriers to behavioral change, and I think that is important. Our intervention has an educational component, and we see a change in attitudes to behavioral change throughout the course of the intervention. I think it is important that women change their perception of perceived barriers to change in health behaviors because of the intervention. Our intervention is intense. The women are seen eight times during their pregnancy. Sessions are based on cognitive and control theory derived from work with nonpregnant, obese populations. Repeated contact points with health care professionals usually are effective.

**Dr Abrams:** This field is in its infancy, like toddlers or preschoolers now. I think what we will learn from ongoing studies in Australia and the United States will help answer your question. However, putting on my clinician hat, not my research hat, I would say that we should not stop now. We still should get the message out. Every baby that is conceived and born in an obesity-promoting environment or in an undernutrition, micronutrient-deficient environment is a life. This is an emergency. I do not want people to feel like they are off the hook until we get the results of the UPBEAT Program. We have enough evidence that we could take baby steps right now in clinical care. We could make big changes if our health care system put energy toward preventing problems, as opposed to treating them after they happen.

I just want to make sure nobody walks out of here thinking that, based on my presentations or any of the other presentations, we do not know enough. We do not know enough to make formal policy. But I believe that we do know enough to encourage every obstetrician and every front-line provider to talk to their patients about the importance of a healthy lifestyle during pregnancy, and to encourage women to eat healthy food in moderation and to walk every day. I met some of the midwives involved in Dr Poston's project, and if I were a pregnant woman in that project, they would motivate me to make healthy behavior changes. Their intervention is related to insulin levels through eating a low-glycemic diet. I believe we need intensive interventions, with lots of contact, not just pamphlets.

**Dr Poston:** I agree. The guidelines for weight management in the United Kingdom have changed quite a bit. One recommendation is that health care professionals should talk to women about the risks of obesity, the importance of a healthy diet of five portions a day of fruit and vegetables, and portion control. At the moment in the United Kingdom, that message is not getting across to obese women. Midwives have little time to talk to the women at the initial antenatal visit, and they generally skirt the topic of obesity.



**Dr Abrams:** In 1992, the Institute of Medicine followed its 1990 Institute of Medicine report on nutrition in pregnancy with a little booklet called *The Implementation Guide*. That booklet laid out a plan for nutritional care preconceptually, during pregnancy and postpartum, and it is not rocket science. Its philosophy is that the front-line provider—eg, physician or midwife—should set the tone, give some basic nutrition information and counseling, and keep following the women. Perinatal nutritionists with the time and expertise would be available for consultations, in order to work more intensively to help women who need more help to change. I worked on a team like that, and I can tell you it is possible to have an integrated team that can help women, and the impact would go beyond pregnancy, because women tend to serve as the nutritional gatekeepers for the entire family.

I do not know whether the obesity epidemic is generating more interest in nutrition among physicians. I used to try to teach the OB-GYN residents, and although they were always very nice to me, I know that compared to a topic such as hemorrhage, my topic was not very interesting.

**Dr Catalano:** What the operating room residents hear about is much more interesting than nutrition at that stage of their career.

**Dr Abrams:** When I was at the University of California at San Francisco, I worked as a clinical nutritionist and had a faculty appointment. When the medical students came to do their clerkship, they had a half day of lectures. The first lecture was on how to wash their hands before going into the operating or delivery room, and the second lecture was on maternal nutrition. I know that the symbolism of including a lecture on nutrition right from the start caught the medical student's attention. Encouraging lifestyle changes related to childbearing will require all health professionals to agree that this is important and possible, with evidence-based methods for delivering relevant, holistic, and effective interventions.

**Dr Poston:** I would like to add that we are concerned about the mental health of obese people, a topic that is neglected. We are getting depression and anxiety scores for our women. Many of them are depressed, and an association between depression and obesity among pregnant women exists. Quite a few people say that unless we pay attention to this and refer those women to appropriate care, we are not going to get anywhere with this issue. We are about to start a study to look into this in more detail.

## **Discussion**

**Dr Campoy:** We have established groups of adolescents in a program that is focused on changing behavior and lifestyle (EVASYON). Most of them were depressed, or they did not believe in the program because they had seen another doctor or participated in another program and they had not lost weight. However, as we organized the adolescents in groups of 10 to improve their health lifestyle, it worked very well, because it was only necessary that one or two participants believed in the program and were ready to change. It was these adolescents who pushed the others to accept the changes.

In the case of pregnant women, I think most of the obese women are interested in these changes of habits as well, because they are afraid of how obesity will affect their delivery, their offspring, and their retention of weight. They need help and not just to hear "do not gain excess weight," "follow this diet," or "do that physical activity," because some of them cannot do physical activity and all of them need psychological support as well.