

Nutrition in Africa at the Crossroads

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Adedotun J Owolabi with his poster presentation at FANUS 2015.

The third Federation of African Nutrition Societies (FANUS) Conference was held in Arusha, Tanzania, from May 25–29, 2015. The conference – which brought together nutritionists, politicians, policy-makers, country representatives from various organizations, government experts, field practitioners and program experts, academics, NGOs, research institutes and other specialists from around the world – analyzed and debated the challenges of improving nutrition in Africa.

I came to FANUS 2015 with great expectations, and these guided the sessions I attended. The conference attracted the presence of nutrition experts from all corners of the globe, such as Andrew M Prentice, Lawrence Haddad, Tola Atinmo, Paul

Amuna, Francis Zotor and Joyce Kinabo (President, FANUS), as well as Nutrition Society executives from other countries in Africa. The scientific program comprised four plenary lectures and 40 parallel symposia. Two hundred and fifty delegates from over 20 countries attended the conference, whose theme was “Nutrition in Africa at the Crossroads.” This broke down into the following seven sub-themes, each of which generated extensive discussion:

- > Nutrition in Africa: Changing patterns and causalities
- > Nutrition as a human right
- > Nutrition governance and accountability: Who is responsible?
- > Breastfeeding and complementary feeding: Why is the obvious so difficult?
- > Maternal nutrition: The neglected factor
- > Obesity and NCDs in Africa: Time to act!
- > Nutrition training and education: Are we providing the right skill-set?

Targeting optimal nutritional status during pregnancy

During the Nestlé-sponsored satellite symposium on Developing a Continuum of Care: The Importance of Nutrition in the First 1,000 Days, Andrew Prentice of the MRC International Nutrition Group gave a lecture entitled “The Importance of Nutrition Throughout the Lifecycle,” which focused on the development of the very early embryo within the first few hours after fusion of the egg and the sperm.

It has been estimated that it requires 47 differentiating cell cycles to make a human being, and that 45 of these occur before the baby emerges from the womb. Each cell division requires an appropriate mix of all the nutritional building blocks and the metabolic cofactors necessary for the smooth running of the anabolic machinery.

Prentice explained how by studying “metastable epialleles” (genomic regions that have highly correlated epigenetic patterns in all tissues) it is possible to study the impact of a mother’s nutritional status right at the time of conception. Using this device, Prentice and his team have been able to show that the season in which a baby is conceived in The Gambia has a profound effect



Adedotun J Owolabi with Eva Monterrosa,
Scientific Manager *Sight and Life*.

on that baby's epigenetic inheritance and that this is mediated by nutrients involved in the machinery required to provide the methyl groups used to modify DNA. The key nutrients are folic acid, vitamins B₂, B₆ and B₁₂, methionine, choline, and betaine.

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“At first sight this may all seem rather esoteric, but we have evidence that it is likely to be vitally important,” observed Prentice. “Imagine the impact that could be achieved if we could ‘clean up’ most of the errors involved in these processes by ensuring that mothers-to-be had an optimal nutrient status in readiness for pregnancy.” Prentice's last slide asked: “Can we translate this basic science into a practicable intervention to benefit mothers and babies worldwide?” That was a real crossroads for me!

Breastfeeding and complementary feeding

As if that were not enough, there were several breakout sessions on “Breastfeeding and Complementary Feeding: Why is the obvious so difficult?” Idemudia Shulamite Omowunmi from Nigeria assessed workplace support for breastfeeding in southwestern Nigeria. Her view was that there is little or no support

for exclusive breastfeeding in Nigeria as most workplaces in that country do not have crèches where mothers can breastfeed their babies. She argued that places of work should have crèches as a matter of policy. Moreover, breastfeeding mothers receive only three months' maternity leave in Nigeria. Idemudia Shulamite Omowunmi called for this period to be extended, so as to encourage exclusive breastfeeding in the first six months of life. That was another crossroads!

Root crops in Africa: An underutilized resource

I was delighted to give a poster presentation entitled: “Low Investment in Production and Utilization of Root Crops: The ultimate cause of change in African nutrition patterns.” My presentation emphasized the fundamental factors militating against the development of some of the less utilized root crops in Nigeria – yam, cocoyam, cassava and potatoes, which are considered good, cheap sources of energy.

The objective of this study was to assess the extent of production of root and tuber crops in Lagos State, Nigeria, and to advocate the promotion of these crops in order to meet both nutritional and economic needs. The study revealed that the production of root and tuber crops in Lagos State has not received sufficient attention or investment. The conclusion of the study was that small-scale farmers should be provided with the tools and technologies that will help transform root and tuber crops into food security crops, earners of foreign exchange, and vehicles for economic development.

For me, the icing on the cake at FANUS 2015 was the presentation on Implementation Science given by Eva Monterrosa, Scientific Manager at *Sight and Life*. Many nutrition programs have been run in Africa with the aim of achieving optimum nutrition, but numerous of these have not been as effective as they might have been. Implementation Science guides policy-makers, researchers and scientists in the design and scale-up of effective nutrition interventions, and Eva's presentation on the topic was both stimulating and informative.

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