WN *Feedback*

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WN *Nepal*

Junk food aid

Access April 2015 Ashok Bhurtyal, Dushala Adhikari on vitamin A in Nepal here
Access May 2015 Ashok Bhurtyal Vision here
Access June 2015 Ashok Bhurtyal, Dushala Adhikari et al on Langtang here

'What are we supposed to do with these?' Apparently bewildered Nepali children are given packets of instant noodles to hold for food aid publicity. They may get into the habit of eating junk products

Aruna Uprety writes:

I warmly welcome the commitment of *World Nutrition* to the people of Nepal and their future, after the earthquakes in April and May. Your focus on the food systems and culture of Nepal, and the implications of the earthquakes, in the excellent contributions of Ashok Bhurtyal and Dushala Adhikari (access these above) are getting to the heart of a number of matters. Please continue your coverage *[Editor – with support from Ashok, Dushala, you, and others, we will!]*

My letter here concerns the current food aid to Nepal. There has been much discussion in the media about the quantity of food distributed, and delays and failures of delivery. What I and very many colleagues in Nepal – and in all countries and territories in receipt of food aid – are concerned about, is quality and consequences.

A Hercules aircraft (left) delivering 9 tonnes of high-energy biscuits (right) from the UN World Food Programme at Kathmandu airport. These should be used only when proper food is unavailable

Packaged junk products

Many million packages of instant noodles and energy-dense biscuits (as shown above) have been distributed as food aid to Nepal after the initial earthquake. Many public health professionals have strong opinions against such products being distributed at all, but immediately after the calamity they did not speak out. However, in late June, two months later, these junk food products were still being distributed to disaster-struck communities.

In many earthquake-hit areas, I have seen survivors eating only junk food products, because many aid organisations distributed only packaged noodles and biscuits. Pregnant mothers, and children as young as 2 years, were seen eating junk products in earthquake-hit areas. In some places, it was decided by some health workers that there would be 'no more junk food for earthquake survivors'.

Health workers also fear that many organisations will now come to Nepal in ever-greater numbers with so-called 'micro-nutrition' and ask guardians or parents to feed children from those packets, which are expensive, unhealthy, and not sustainable. In Nepal, we have much nutrient-rich food. This fact is ignored by those who bring in ready-to-eat products from the outside and pressure local communities to use them.

When I was working in Sudan, an Ethiopian doctor shared an experience of how Ethiopia has addressed reduction of malnutrition among children. He said

> We made flour from dry-sprouted soya beans and chickpeas and used that to make food. Being full of protein, vitamins, calcium and other micronutrients, it helped us combat malnutrition among children. It was cheap and easily available and very easy to disseminate information about.

I am remembering his words in these difficult days as one of the solutions to combat malnutrition in earthquake-affected districts. In Nepal, flour can be made from sprouted beans and could be distributed to earthquake-affected areas. This flour, useful for a long time, is much cheaper and more nutritious than packaged products.

Box 1

Nepali instant noodles and energy-dense biscuits

Binod Chaudhary, Nepal's first billionaire, owns a transnational conglomerate corporation whose biggest food product is Wai Wai™ instant noodles, selling 2 billion packets a year

Instant noodles are rather suddenly, a colossal global business. Currently 100 billion packages of these ultra-processed products are sold every year. The World Instant Noodle Association burnishes the image of instant noodles by giving them as food aid. In Nepal the WINA partner is Choudhary Group Foods, owned by Nepal's first billionaire Binod Chaudhary (above), whose leading brand is *Wai Wai*™ instant noodles, which can be heated as a kind of soup or eaten direct from the package. After the Nepal earthquake CG Foods and WINA together had between them by 5 May distributed 700,000 packages of *Wai Wai* as food aid. Binod Chaudhary reports that sales are not affected by the earthquake, which did not damage any of the factories where *Wai Wai* is made. He is proud of the CG Foods Nepali food aid work, as shown in his tweeted photograph and message below.

Binod Chaudhary@BinodKChaudhary
Boy holding *WaiWai* Quake relief pack; he felt his prayers answered & held packet tight with Big Smile @devastated Dhading

Biscuits are also a colossal global business, with whole aisles of supermarkets stacked with these ultra-processed typically fatty and sugary and often salty products. Biscuits made 'high-energy' with extra fat and sugar are also a Nepalese as well as transnational business. The Sarvottam™ product, patented in Nepal, is manufactured by Shree Pashupati Biscuit Industries, also owned by Choudhary Group Foods. The Sarvottam website says it 'offers a perfect blend of nutrition & taste and is good for adults and children alike. It is available in convenient packs for normal use and emergencies'. 'Normal use' – therein lies the problem. The effect of distributing instant noodles and high-energy biscuits as food aid, is to introduce these enticing ultra-processed products that are already booming business for big Nepali manufacturers, in effect as free offers to hundreds of thousands of grateful families.

Eat what is available

Nepal is rich in very many varieties of plant food, and many of these in combination are available, cheap, and rich sources of the energy and nutrients that are needed day to day and in emergencies

Nepal has many other kinds of food that are ignored by society and policymakers but are healthy with a lot of micronutrients.

Sesame has good fat, calcium, and mineral content and it is one of the healthiest foods. It is used during some festivals but it is not yet used in Nepal as a food that can combat malnutrition among children. This should be done. Along with rice, lentils, and potatoes, sesame seeds and flour can be provided to villages so that children will not suffer from malnutrition in the aftermath of the earthquake.

In the same way, flax seed (*alas* or *aalsi*) can be used to make food rich in micronutrients. It contains omega-3 fatty acids and dietary fibre and has antioxidant properties. It can be used in a salad, with lentils, or with vegetables, and is easily available and cheap.

Amaranth (*latte*) can also be used as a vegetable or mixed with wheat or rice flour. It contains iron, magnesium, and high quantity of protein, which most vegetables do not contain. Per 100 grams, amaranth contains 9.50 grams of protein and 69 grams of carbohydrate as well as over 2 grams of fibre, which makes it an excellent food. But very few people use it because of a lack of information.

On the fifth day after the first earthquake in Nepal, with companions I drove to the village of Botechour within the district of Sindhupalchok, two hours from Kathmandu, and while passing the town of Sandku we saw that many farmers, both men and women, were working in the fields, and there were many sacks of potatoes to sell. One 80 kilogram sack cost the equivalent of around $US 10, and I bought one to distribute to people. Local governments should store durable nourishing foods like potatoes, and in times of need recruit relief organisations to help with distribution, rather than passively accept energy-dense biscuits and instant noodles.

Dal bhat is the basic everyday food of the Nepali people. It is mainly made up from rice and lentil soup, which in combination are nutritionally balanced, delicious, warming, cheap, and sustainable.

The Nepali agriculture ministry has published a booklet on amaranth, potato, and cassava (*simal tarul*) showing their nutritional value, but sadly, this knowledge has not been applied in practice.

It is time for various international and national organisations to refrain from creating a junk food aid dependency, as they have done in many countries, such as Haiti or Sudan. The Nepalese people grow enough food to feed the whole population. Will the Nepalese government ever explain this to industry-connected non-government organisations? In this waiting time, community leaders, citizens and family members need to be assured that they can combat malnutrition with their own local food, and thus understand the value of what is locally available, and act accordingly. This may take some time but it will be sustainable and therefore is the rational solution.

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Uprety A. Junk food aid. Nepal
[Feedback]. World Nutrition July-August 2015, ***6****, 7-8, 637-640*

Editor's note. Aruna Uprety is a distinguished physician who has worked for women's rights for many years, and with others succeeded in making abortion legal in Nepal. She has worked in South Sudan, Iran, Sri Lanka, Laos, India, and Afghanistan as well as Nepal. She translated Where There Is No Doctor into Nepali, and works with many non-government organisations in Nepal and internationally. She specializes in teaching, speaking and writing about public health and nutrition. In this letter, developed and updated from a blog written after the first earthquake, she raises a series of interrelated issues of importance in Nepal and in all under-resourced countries. Like interventions of many types, disaster relief and food aid are obviously needed and have obvious benefits, which are emphasised, but also adverse effects, which tend to be overlooked. How serious these are, in different circumstances, is a matter of judgement. World Nutrition will return to this theme in future issues.

WN *Nepal*

Yaks

Access April 2015 Ashok Bhurtyal, Dushala Adhikari on vitamin A in Nepal here
Access May 2015 Ashok Bhurtyal Vision here
Access June 2015 Ashok Bhurtyal, Dushala Adhikari et al on Langtang here

The yak has nourished Himalayan communities for thousands of years, and is a greatly respected part of Nepali culture. It is a source of food, clothing, and carries loads. Photograph: Tsering Sangpo

Ashok Bhurtyal and Dushala Adhikari write:

WN readers have asked about yaks. Here above is a herd of these bovids, native to the Himalayan region. Their natural habitat is between 3000 and 5500 metres. Males can weigh well over 500 kilograms. They are very hardy. In Nepal there are about 40,000. In the Himalayan region, notably China including Tibet and Mongolia, there are about 15 million. They have been domesticated for thousands of years for milk, cheese and butter, and their hair is used to make clothes, rug, ropes and sacks. In Langtang, when a yak dies of an accident its meat is dried, stored and consumed in regular but small amounts, and cooked in a soup made of cereals, potato, and wild vegetables. Females are reared for milk and milk products. Males are used to plough fields and to carry loads. Intelligent and sensitive, in Nepali and other cultures they have a symbiotic relationship with human communities.

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Bhurtyal A, Adhikari D. Yaks. Nepal
[Feedback]. World Nutrition July-August 2015, ***6****, 7-8, 641*

WN *Project Phoenix*

The need for a general theory

Access April 2012 Appetite David Raubenheimer et al on protein leverage here
Access October 2014 Brit J Nutrition David Raubenheimer on nutrition ecology here
Access April 2015 Update David Raubenheimer on protein leverage here
Access April 2015 Update on Project Phoenix here
Access May 2015 Update special on Project Phoenix here
Access June 2015 Update special on Project Phoenix here
Access June 2015 Guest editorial. Brooke Aksnes on nutrition curricula here
Access June 2015 Brooke Aksnes on nutrition curricula here
Access June 2015 Maria Alvim on nutrition curricula here

David Raubenheimer writes:

I read with great interest the indictment of 'modern conventional nutrition science' on the charge that it is burned out, and the associated correspondence in the June 2015 issue of *WN*. (Access these above). I agree that there is room for improvement, but I prefer to look on the brighter side where it's easier to discern detail that otherwise might be lost in the gloom. What I see for human nutrition is challenges, but also tremendous accomplishments and above all opportunities.

With a background in nutritional ecology, I've had the privilege of doing nutritional research on a wide range of animals, from insects and spiders to reptiles, fish, birds, and several species of mammals including primates (lemurs, monkeys, gorillas and orang-utans).

The work has ranged from the tightly controlled conditions of the experimental laboratory (equivalent of clinical trials in human nutrition) to the wild and domesticated (in the case of companion animals and livestock) habitats in which my study species live. It's been a fascinating journey, driven largely by the pure research goal of understanding the similarities and differences in the nutritional biology of my study species, their environments, and most important the ways that nutritional biology interacts with the environment to generate outcomes (such as health and disease).

A general theory is needed

A dozen years ago, long-term collaborator Steve Simpson and I extended our nutritional ecology programme to humans. What we have seen, not unexpectedly, is that humans and their environments are in many ways very different from other species; but these differences are for the most part in degree rather than kind.

Among the most marked differences have to do not directly with the study species or their environments, but rather the research cultures, opportunities and constraints associated with the fields of human nutrition and nutritional ecology.

Human nutrition science has produced an immense amount of biological detail on a single species, involving nutritional, biochemical, cellular, physiological and psychological understanding unsurpassed for any other species except perhaps those, such as laboratory mice, adopted as 'surrogates' for human health research.

The field also has a phenomenally detailed knowledge of the environments with which human biology interacts to produce health and disease, including entire academic disciplines such as food science, economics, law and politics on which to draw. To an ecologist, this is an admirable and enviable situation, setting what is almost certainly an unrealisable benchmark for most of the species that we study.

What I see as poorly developed in human nutrition science is the theory for pulling together the abundant information to understand how the myriad pieces fit together. There is no equivalent in human nutrition science of the theory of relativity in physics, the Periodic Table of elements in chemistry, homeostasis in physiology, or Darwin's theory of natural selection in biology. In the absence of theory, a data-rich science risks being rudderless, with little hope of identifying those threads of causality which if pulled in the right combinations can help mould the system for favourable outcomes.

Ecologists, in contrast, work with a wide range of species and ecological habitats, most of which are from a nutritional perspective very poorly understood. While limited by detail, and driven by the need to make sense of the complexity and diversity of animal-environment interactions that they observe, ecologists do have a history of critically evaluating the theoretical underpinnings of their science.

Although I wouldn't go so far as to say that nutritional ecology has reached the point where it has a theory equivalent to the Periodic Table in chemistry, something broadly comparable is beginning to emerge, involving elements of homeostasis theory and Darwin's theory of natural selection. This is not the place to discuss the details, except to say that these two principles provide a strong theoretical basis for nutritional ecology which helps to understand, predict and manage nutrition-related outcomes. I see no equivalent theory in human nutrition science.

Nutrition is ecological

Now to my main point. The issues of human nutrition – under-nutrition, over-nutrition, and increasingly a combination of the two – are nutritional ecology issues. They are driven by changes in the human environment involving initially agriculture, then industrialisation, and most recently rampant globalisation of the human food chain and an unprecedented intrusion of commercially-motivated misinformation into decision-making processes.

The challenge is to understand how human biology interacts with the human environment to generate health and disease. The theoretical underpinnings for this are already in place in nutritional ecology. What is needed is a synthesis of largely isolated sub-fields of nutrition into a single science that combines the tools of modern biology with ecological theory and with elements of the many disciplines that study aspects of the human environment that impinge on health.

Time for global collaboration

This project is already under way. As professor of nutritional ecology in the Charles Perkins Centre, and concurrently the veterinary faculty and the school of biological sciences at the University of Sydney, I am working with colleagues from across faculties to develop a new inter-disciplinary Masters-level nutrition course. We are using the concepts of nutritional ecology to assemble the necessary combinations of content from across disciplines.

The Charles Perkins Centre is an inter-disciplinary research institute founded on an innovative approach to health science. Rather than have disciplinary capability lead research questions, as is the case in the conventional discipline-structured university model, we identify the important problems and assemble teams with the requisite combination of expertise to solve them. The new course is therefore not exclusively forward-looking. It reflects an existing research model that respects the need to combine depth, breadth and theory in problem-focused research.

Ultimately the problems of human nutrition are global, and global collaboration will best direct us to solutions. The ongoing critiques of 'modern conventional nutrition science' in *WN* and elsewhere, suggest that there is a widespread, if not global, awareness that change is needed. I will welcome discussion of how the new nutrition education can be shaped to address the problems and maximise the opportunities in human nutrition science.

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Raubenheimer D. The need for a general theory. [Project Phoenix] [Feedback]. World Nutrition July-August 2015, ***6****, 7-8, 642-644*

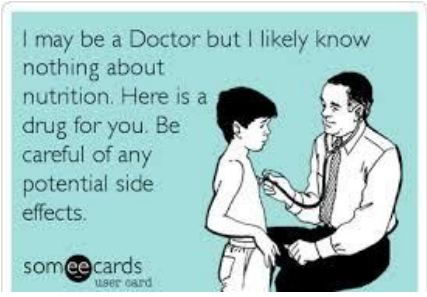
Editor's note. As shown above, WN has carried a summary of the work of David Raubenheimer and his team, in our April 2015 Update section. David Raubenheimer gives a cogent account of this work and some of its special findings, in a brief video presentation. Central to his thesis is that the biological dimension of nutrition, while vital, should not be predominant, because it is just one of the many aspects of nutrition that need to be understood and integrated in order to repair, maintain and strengthen the health and well-being of humans within the living world and the biosphere.

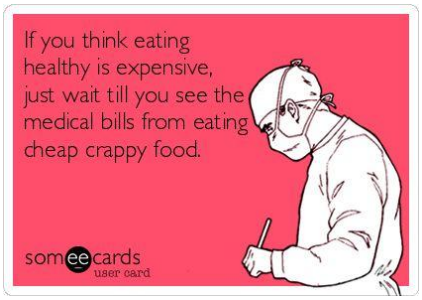
WN *Project Phoenix*

Too many doctors don't know about nutrition

Access April 2015 Update on Project Phoenix here
Access May 2015 Update special on Project Phoenix here
Access June 2015 Update special on Project Phoenix here
Access June 2015 Guest editorial by Brooke Aksnes on nutrition curricula here
Access June 2015 Brooke Aksnes on nutrition curricula here
Access June 2015 Maria Alvim on nutrition curricula here

Claus Leitzmann writes:





The curriculums for medical students include a few courses on the biochemistry and physiology of nutrition, but very little is about the causes, prevention and treatment of diet-related ill-health

It is salutary while rather depressing to read the editorial by Brooke Aksnes on the shortcomings of nutrition training in the June *WN*, supported by letters from her and Maria Alvim in the same issue of *WN* (access these above). The underlying cause of these failures may be the narrow concept of conventional nutrition itself, as principally a biochemical discipline that has adopted the medical model. *[Ed: This is being scrutinised in Project Phoenix, which continues in WN in this issue].*

This all reminds me of the situation 40 years ago in the 1970s, when I returned to Germany and to the University of Giessen, after living and working for twelve years in the US and five years in Thailand. In Germany at that time, nutrition was presented in homoeopathic amounts at medical schools within lectures on gastroenterology and paediatrics. And it was not so much we medicine faculty members, but the medical students themselves, eager to learn more about nutrition, who convinced us to start regular lectures and then courses for students of medicine.

Learning at home

In the 1980s, three of my four children studied medicine at various universities. They confirmed the lack of nutrition in their lectures and seminars. Most of what they learned about nutrition was communicated at home. Now one of our four grandsons

studies medicine. He also wonders about the small amounts or even absence of nutrition in his curriculum. Apparently not much has changed during the last four decades. It is repeatedly agreed that this deplorable and even scandalous state of affairs must not continue, given the central importance of nutrition in prevention and therapy of all forms of malnutrition (1-6).

Back in Germany in the later 1970s I personally discovered how children can influence the eating habits of their families. From personal as well as professional observation, I knew about the benefits of plant-based diets. This was already documented in the – at that time - scant orthodox scientific literature, and also could be observed in Asian countries.

Then one day our youngest daughter came home from school and told us that she would no longer eat any kind of meat and would refuse meat if offered it. Her teacher had told her class that meat-eaters are responsible for the widespread hunger in the world. Corn, soya beans and manioc grown on what had been forest, or on land from which subsistence farmers had been evicted, was – and is – produced as animal feed and exported to high-income countries to fatten industrially-reared animals and thus the human populations of these countries, mostly on products like burgers. Impressed, our whole family voted to follow her lead. We still do.

Invention of new courses

At that time in the 1970s the lectures given in the department of nutrition at Giessen covered all aspects considered then to be necessary. Dozens of courses and seminars dealt with the physiology and biochemistry of nutrition and its role in the treatment of diseases. The immense importance of prevention was barely touched upon.

For my own work as professor of international nutrition, I knew it was crucial to integrate social, economic and ecological dimensions, to understand the causes of malnutrition and poverty, and to design and test ways and means for the prevention and treatment of under-nutrition. So my students and I developed the concept of 'wholesome nutrition' and in the 1980s a whole new field of 'nutrition ecology', both intended to encompass the many aspects of nutrition and to enable the development and implementation of recommendations for population good health and well-being throughout the life-course.

The problem is reductionism

Although 'sustainability' is now practically an obligatory term in the titles and texts of high-level reports, the concept and its implications still hardly features in courses of nutrition. Reductionism in research as well as in teaching prevails. The controlled experimentation of reductionism has greatly contributed to understanding of nutrition as a biological science. But it has become the mainstream, despite being obviously ignorant and devoid of the all-embracing complexity of nutrition.

Most deaths in industrialised countries are due to or at least are associated in some way to nutrition. So nutrition should be a foremost subject in medical education. But the opposite remains true. Nutrition does still receive very little attention. Only a few hours are devoted to this crucial subject in training and consequently in practice. For the many requirements to pass tests to practice internal medicine, nutrition is hardly mentioned. Here is a recent summary of this lamentable situation: (1) Written from a US perspective, I believe it applies internationally:

> A whole foods, plant-based diet low in refined carbohydrates and animal products has been proven to reverse coronary heart disease and confer potent protection against type 2 diabetes and cancer. How has this knowledge affected medical education? A recent survey of medical schools revealed an average of fewer than 20 hours over 4 years devoted to nutrition education – most of which occurs in the early years when basic science courses are taught, typically with little apparent connection to human diets or common diseases.
>
> Nutrition education is in even shorter supply after medical school graduation. A 2013 document from the Accreditation Committee of Graduate Medical Education specifies detailed requirements for specialty training in cardiovascular disease. Training must include, for example, performance of 10 cardioversions, interpretation of 150 echocardiograms, and participation in 100 cardiac catheterizations….There is no mention of a requirement for nutrition education…. In an Accreditation Committee of Graduate Medical Education document for Internal Medicine residency training, from which many doctors go on to serve as primary care physicians, the word 'nutrition' is absent.

In spite of this lack of knowledge in the field of nutrition, medical doctors are the favourite sources for nutrition counselling. Advice by physicians untrained in and therefore ignorant of nutrition may contribute to nutrition problems instead of helping patients and lessening the epidemics of nutrition-associated diseases.

The limited nutrition education for physicians must be upgraded in scope, duration and quality, to decrease disease development and mortality. Many experts in health care are inadequately trained to deal with life-course recommendations including those for nutrition and physical activity. There is a need to markedly improve nutrition education for health care professionals by establishing appropriate curriculums in medical schools. An increasing number of physicians are aware of the fact that they lack competence to advise their patients adequately.

This dreadful situation is dangerous, both for the health of the public and also the reputation of the nutrition profession. The gap in nutrition education is filled by a myriad of media-friendly nutrition advocates who all too often lack either relevant professional qualifications or reliable life experience. Some provocative practitioners have contributed important insights. But many, especially in the business of weight-loss regimes of the 'a new you in 21 days' type, peddle false hopes. Their often self-acquired knowledge in nutrition is likely to be scanty or far from scientifically-based. In Germany we are fortunate to have plenty of well-trained nutritionists. But they are not allowed to counsel patients; only doctors (physicians) may do so!

The need to end malnutrition

There are no final answers to all forms of malnutrition. But there is abundant information and experience, more than adequate to address the common errors in nutrition and drastically to reduce nutrition associated diseases and the immense costs that go along with it. Most nutrition-related diseases can be prevented or successfully treated. Also, it is now completely feasible to end world hunger. Diversion of 10 per cent of military expenditure would ensure production and supply of adequate and nourishing food by and for all populations and communities on earth. The call to action in the US below (1) applies worldwide, and to under-nutrition and hunger as well as to obesity and chronic nutrition-related diseases:

> By emphasizing the powerful role of nutrition in medical training and practice, we stand to dramatically reduce suffering and needless death – not to mention the colossal cost savings. The annual cost of cardiovascular disease in the United States alone was recently estimated at $315 billion. Imagine the savings if, as the data suggest, we could reduce the risk of vascular events by at least one third with widespread adoption of proven nutritional strategies. Although we have much to learn about the optimal diet for each individual and how best to deliver nutritional counseling, we need no more studies to know that we must take nutrition education seriously – immediately.

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*Leitzmann C. Too many doctors don't know about nutrition [Project Phoenix] [Feedback]. World Nutrition July-August 2015, **6**, 7-8, 645-648*

Claus Leitzmann, emeritus professor of international nutrition at the University of Giessen, Germany, is a former Treasurer of the International Union of Nutritional Sciences.

***WN** Project Phoenix*

What they did teach me in school

Access June 2015 Guest editorial by Brooke Aksnes on nutrition curricula here
Access June 2015 Brooke Aksnes on nutrition curricula here
Access June 2015 Maria Alvim on nutrition curricula here

The Mexican children here are learning to grow their own food – and also to enjoy it! Community interaction is part of some Bachelor courses in nutrition programmes in several Mexican universities

Sara Garduño-Diaz writes:

Brooke Aksnes and Maria Alvim were disappointed by the narrowly focused nutrition courses in their universities in the US and Brazil (Access the links above). My own experience in Mexico has been positive. My first degree was completed at the Universidad Veracruzana in the city of Xalapa. The programme was well rounded, and included nutrition as a whole – nourishment, as championed by *WN*.

Throughout my five years in Mexico at university I was indeed taught about the biochemistry of food components and about pathologies linked to food selection and ways of life. As well as this I was taught about the cultural aspects of food, the need to include community members as partners when designing intervention programmes, and the value of traditional Mexican food, cooking and cuisine.

Some of the most influential and memorable classes I took were those that assumed I knew the basics (biochemistry and clinical nutrition) and was ready to go further. My teachers emphasised the importance of local knowledge and experience, passed on from elder community members. While such knowledge was generally accepted, it was also challenged, but respectfully and out of a need to understand, not in the form of rejection.

Here is a Mexican nutrition student in the community. Students and community members show, teach and learn, all at the same time. The education in a full sense of the concept, flows both ways

As part of my nutrition training I was taught management of food services, public policy, and even the integration of sustainability into eating practices. Later in the UK, my research allowed me to appreciate other aspects of nourishment. I worked with migrant populations and learned about the influence of culture on food selection and eating practices. My research group was well aware of 'non-traditional' drivers of health and disease, beyond food composition and isolated nutrients.

Contrasts in the Arab world

Later I moved to Morocco and was able to begin my appreciation of food in the Arab world. In Morocco it is necessary to be resourceful, and therefore to be well aware of and respect traditional food culture and dietary patterns. Local food production is of great importance, as much of the food from Morocco is exported. Moroccans are careful to ensure their basic food needs. Now I am in Kuwait, a very different story. I see so much food wasted, yet so much nourishment missing from everyday eating practices. I see families and friends maintaining traditional Friday meals, yet Big Food is all around, 24/7. Understanding comes only when aspects such as culture and economics are taken into consideration.

Like Brooke Aksnes and Maria Alvim, I support *Project Phoenix*, and fully agree that so much nutrition science training needs urgent radical revision. But it is not all bad. Some of us have had great mentors. Many of us are still avidly learning.

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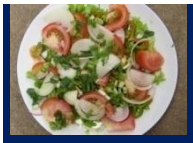
*Garduño-Diaz S. What they did teach me in school.[Project Phoenix] [Feedback]. World Nutrition July-August 2015, **6**, 7-8, 649-650*



WN *Nourishment*

What are nutrition students eating?

Access October 2014 Geoffrey Cannon on healthy meals are beautiful here
Access November 2014 Brazilian dietary guidelines here
Access December 2014 Maria Alvim Healthy food is beautiful

From theory to action. Here are some dishes made by nutrition students at my university. The six in the upper rows are made by our star, Kely. Those below are made by Michely, Isabella – and by me!

Maria Alvim writes:

Good food looks good, is one message from our new Brazilian dietary guidelines, as published in *WN* last year (access the contributions above). I decided to find out how students at my university reacted to this. So after giving a class about the guidelines with my colleague Maíra Macario, we suggested to students to send us pictures of dishes they had made. We also asked them if and how learning about nutrition had encouraged them to change their eating habits.

Three brave students responded. The star is Kely Gama, who is vegetarian. The six upper pictures above are all of dishes she has made. Let's see what Kelly has eaten: peach palm palmetto yakisoba with broccoli, shiitake, red onion, leek, tomato and carrot; rice and broccoli with roasted garlic, mashed potatoes and a Mediterranean salad with croutons, beet juice with red fruits; brown rice, mashed potatoes, beans, lettuce salad, corn, carrots and croutons, natural pineapple juice without sugar; tomato salad with lettuce, corn and croutons; rice, beans, lettuce, green onions, grated carrot, manioc; parmesan cheese with lettuce, red peppers and broccoli.

Michely Bessa's dish is in the lower row, left: full rice with seven grains, red beans, beefsteak with onions, lettuce and tomato salad. Isabella Barbosa (next to Michely) prepared lettuce, carrots, cooked cauliflower, brown rice, beans and homemade hamburger. Then comes me, with eggs plus oregano, sweet potatoes and broccoli.

About changing their food habits, here is what Kely says:

> I believe that not only me, but all students who are serious about nutrition do change. It is inevitable that we adopt a healthier eating habit because we learn about the importance of having a balanced diet, varied and as natural as possible. We learn also the benefits and harms of food, and how to use this knowledge in positive ways to enhance health and well-being.
>
> Now I eat more consciously, choosing more healthy options, discovering new flavours, and sometimes being enchanted with the results. Now I know more about this beautiful science of nutrition, I eat real food, which has changed my health, my body, and my life.

Here is what Michely says:

> Yes, learning about nutrition has changed my eating habits. Now I eat more fruits, vegetables and whole grains. I do have my 'relapses', but I am aware that it is best to sustain healthy eating habits every day.

Here is what Isabella says:

> Before starting to studying nutrition I was concerned about reducing my weight, and so I did several crazy diets and stopped eating some meals. I was seduced by fashion products, by the influence of people who did not understand nutrition, and by magazines with headlines like 'Discover how to lose weight in seven days.' Imagine if it were that easy!
>
> Now I have a new vision, it is not about to reducing weight, not just to follow fashion and have a beautiful body, but more to enhance quality of life and well-being. It was not easy to change my eating habits - as a teenager my daily lunches were of white rice, french fries and chicken nuggets. When I began to study and to understand how food impacts on our health, I started to pay more attention to what to consume. These days, most people want to reduce weight just for aesthetic reasons, and they don't think about improving their quality of life, health and well-being.

I am proud of these students that are preparing their meals mostly with fresh and minimally processed food. Changing their own eating habits is the first step to convince other people to do the same. Let's hear from students in other countries – with your pictures of your dishes, please.

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*Alvim M, What are Nutrition students eating? [Nourishment] [Feedback]. World Nutrition July-August 2015, **6**, 7-8, 651-652*

Eduardo Galeano. Oppression
Reasons to be passionate

Access May 2015 What Do You Think Geoffrey Cannon on Eduardo Galeano here
Access June 2015 What Do You Think Geoffrey Cannon on Eduardo Galeano here

'In order to change reality it is first necessary to recognise it'. Trades unionists from 25 countries met in solidarity in Latin America this April (above), recognised and celebrated Eduardo Galeano

Hetty Einzig writes

I am responding to the wonderful tributes to Eduardo Galeano in *WN's What Do You Think* column, in May and also in June (access these above). I am now out the door to buy *Open Veins of Latin America* and am coming to Latin America in August!

This saying of Eduardo Galeano sums up my feelings exactly. I wish I'd said it:

> I don't believe in charity. I believe in solidarity. Charity is so vertical. It goes from the top to the bottom. Solidarity is horizontal. It respects the other person. I have a lot to learn from other people.

The trouble with heroes

The June piece identifies Eduardo Galeano as a 'hero', likewise Geoffrey Cannon's May piece on Vandana Shiva as his previous monthly 'hero'. For me the modern idea of 'hero' is problematic. We so want heroes. We put them on pedestals and idolise them for a while, sometimes in ecstasy and awe –which gives us a nice spaced-out-loved-up feeling.

But lurking always is the primal need of the child, which remains in the adult as a childish demand – protect me, nourish me, be omnipotent, omniscient, be my god. Inevitably we are disappointed when our heroes are fallible, which is to say human, and so we knock them off the pedestals. It's a recipe for infantilism, for self-deception, for not growing up and for abdication of self responsibility. This natural

infantile need, unhealthy in the adult, is deliberately exploited through the cult of celebrity. Celebrities are marketed so that we will feed from the troughs of consumerism – so we buy the hero's dress, her lipstick, his car, or The Book – in our attempt to assuage a hunger never be satisfied in such ways. We have forgotten today that Odysseus, the archetypal hero of the Western canon, was a flawed human!

But what a mensch!

Mohandas Gandhi apparently slept sexually with young women. It is known that Martin Luther King was a philanderer. But I suggest that such weaknesses matter only when we try to see *great* people as *perfect*. Whatever their failings, their work and achievements remain admirable and inspiring. So with Eduardo Galeano, Vandana Shiva and others, I would not fan flames of celebrity, go in for idol-worship, nor alternatively dish the dirt on their human frailties. Rather, as in the beautiful tributes to Eduardo Galeano, focus on the passion and wisdom of their human life and work. These make him a noble-spirited man to admire and emulate – in the expressive Yiddish word, a *mensch*.

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*Einzig H. Reasons to be passonate. Eduardo Galeano. Oppression [Feedback]. World Nutrition July-August 2015, **6**, 7-8, 653-654*

Geoffrey Cannon replies: How nice to have an excuse to write a bit more about Eduardo Galeano, thank you! While you are at the bookstore please also ask for or order the three-part Memory of Fire, written a decade after Open Veins. It is his history of Latin America beginning in primaeval times and mainly as from the European conquests, up to 1984 when he returned to Uruguay where death squads had been on his tail, from exile in Spain. The epic is a series of snapshots of events and occasions that are so awe-full that you know that they are all true, in some sense of that word. Necessarily a lot of the book is tough stuff. So also acquire and devour Days and Nights of Love and War, written in the same period and style, but about himself, seething with shortcomings and failures. As for Open Veins, here it is, just click and pass on the news of access to all good friends.

And as for heroes… Yes I agree, in the sense of 'hero' as an idol, an object of adoration. But I feel that the word should not be sequestered in that way. Plinths away! Yes, when people great or small behave in ways that contradict what they stand for, that is a failing. But the Wounded King who figures throughout mythology is real, whereas any figure identified as immaculate is unreal. Where I do think the identification of people as heroes is often wrong, is when this takes them out of context. Few astounding people spring from nowhere. It never makes full sense to identify people as isolated geniuses. Eduardo Galeano, and his older comrade José Mujica, once a leader of the Tupamaro Marxist urban guerillas, shot full of holes and imprisoned, then later president of Uruguay, are men sprung from their times and places in Latin America. Hopefully the 'my hero' pieces in my WN column make context clear. They better had. Thanks for the reminder. Meanwhile I think we are safe from Galeano lipstick, but you never know.

Eduardo Galeano. Oppression
A language of hope, a way to feel rage

Access May 2015 What Do You Think Geoffrey Cannon on Eduardo Galeano here
Access June 2015 What Do You Think Geoffrey Cannon on Eduardo Galeano here

Benjamin Dangl writes:

During Argentina's 2001-2002 economic crisis, Eduardo Galeano's words accompanied every protest and activist meeting. Factories were occupied by workers, neighbourhood assemblies rose up, and, for a time, revolutionary talk and action replaced a rotten neoliberal system. Galeano's upside-down view of the world blew fresh dreams into the tear gas-filled air.

In the streets of La Paz, Bolivia, pirated copies of *Open Veins of Latin America* are still sold at nearly every bookstall. There too, Galeano's historical alchemy has added to the fire of many movements and uprisings, where miners of the country's open veins tossed dynamite at right-wing politicians, and the 500-year-old memory of colonialism lives on.

Up the mountain roads of Chiapas, past Mexican state military checkpoints, lies the autonomous Zapatista community of Oventic. One day a few years ago, Galeano's voice floated over the foggy land, reciting children's stories over stereo speakers.

At a World Social Forum in Porto Alegre, Brazil, Galeano entered a steaming hot tent where hundreds had gathered to hear him speak about the Uruguayan water rights movement in which the people had 'voted against fear' to stop privatisation. What I remembered most about the talk is how much he made the crowd laugh.

And one night in Paraguay, with the smell of cow manure and pesticides lingering in the air, small farmers besieged by toxic soy crops gathered to tell stories of resistance, stories they linked to his accounts of the looting of Latin America and struggles against greed and empire that were centuries in the making.

With the small mountain of books and articles he left behind, Eduardo Galeano gives us a language of hope, a way feel to feel rage toward the world while also loving it, a way to understand the past while carving out a better possible future. 'She's on the horizon' he once wrote of utopia. 'I go two steps, she moves two steps away. I walk ten steps and the horizon runs ten steps ahead. No matter how much I walk, I'll never reach her. What good is utopia? That's what: it's good for walking.'

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*Dangl B. A language of hope, a way to feel rage. Eduardo Galeano. Oppression [Feedback]. World Nutrition July-August 2015, **6**, 7-8, 655*

WN *Hot stuff. Vitamin A*

Adverse effects of massive dosage

Access May 2010 Michael Latham The great vitamin A fiasco here
Access June 2010 letters in response to Michael Latham here
Access July 2010 letters in response to Michael Latham here
Access November 2010 letters in response to Michael Latham here
Access October 2014 IJE John Mason, Ted Greiner et al on Vitamin A here
Access November 2014 John Mason, Ted Greiner et al on Vitamin A here
Access December 2014 Update on Vitamin A here
Access December 2014 Feedback on Vitamin A here
Access January-February 2015 Feedback on Vitamin A here
Access April 2015 Ashok Bhurtyal, Dushala Adhikari on vitamin A in Nepal here
Access April 2015 Feedback on Vitamin A here

In India all children between 6 months and 5 years are given massive doses of vitamin A, whether or not they have signs of deficiency. Benefits are doubtful. Dangers are evident. There are better policies

Umesh Kapil and Neha Sareen write:

Michael Latham's severe criticism of the still-dominant universal vitamin A supplement programme, published in *WN* in May 2010 (access it above) was welcomed in India in letters published in June, July and November 2010 (also access these above). The arguments against current policies and programmes are conclusive. *WN* then returned to the topic in November last year with a commentary by John Mason, Ted Greiner and others, followed up by further correspondence between December 2014 and April 2015, also supportive of Michael Latham's 'great vitamin

A fiasco' thesis, and a severely critical commentary by Ashok Bhurtyal and Dushala Adhikari concerning the situation in Nepal. (These too can be accessed above). Our letter emphasises known and suspected ill-effects of vitamin A when administered in huge doses to young children, which tend to be overlooked and ignored

Adverse effects

The recommended daily dietary intake of vitamin A is 400 international units (IU). In India all children aged 6 months to 5 years are given 500 times this amount every six months. This is 500 times the normal recommended amount. The evidence we cite is from India, but is likely to apply worldwide. Actual and potential adverse effects of giving pharmacological doses of vitamin A to young children, including the great majority with no signs of deficiency, are troublesome, have not received due attention, and are not being properly investigated.

Bulging fontanelle

Nearly 12 per cent of young children when administered 50,000 IU of vitamin A develop bulging fontanelles (1). A significant proportion of brain development takes place before 3 years of age. The development of the brain is not complete at birth, and the first 12 months are crucial. During infancy billions of brain cells are multiplying and establishing thousands of synaptic connections. The impact of prolonged increased intra-cranial tension on brain development is not known. In India, 48 per cent of children are undernourished as conventionally defined (2). Subjecting malnourished young children to repeated episodes of increased intra-cranial tension could contribute to retarded brain development. (3-4)

Bone demineralisation

Vitamin A is a potential antagonist of vitamin D. Massive doses of vitamin A intensify the severity of bone demineralisation and inhibit prevention of demineralisation by vitamin D. Increasing amounts of retinyl acetate produce progressive and significant decrease in total bone ash and increase in epiphyseal plate width, and prevent vitamin D from elevating levels of serum calcium (5-8). Prevalence of vitamin D deficiency in India is epidemic. Interventions that do or may compromise bone health should be avoided (9).

Growth retardation

Zinc is required for growth. Administration of massive doses of vitamin A to children who may be deficient in multiple vitamins including vitamin D and zinc could retard growth (9).

Acute respiratory infection

Vitamin A supplementation is associated with significant increase in rate of pneumonia in well nourished children. A meta-analysis concluded that it 'has

no consistent overall protective effect on the incidence of diarrhoea, however, it slightly increases the incidence of respiratory tract infections'. Hence, 'high dose vitamin A supplements are not recommended on a routine basis for all preschool children and should be offered only to children with vitamin A deficiency'. Another review of 9 randomised controlled trials enrolling 33,179 children with lower respiratory tract infections, concluded that vitamin A supplementation was not helpful for preventing pneumonia, at least in normally nourished children, and might rather worsen the situation. (10).

Who benefits

The annual cost per child dosed is $US 1.14. This is made up of programme-specific costs of $US 0.42, personnel costs of $US 0.55, and capital costs of $US 0.17. The number of children under 5 in India is about 160 million (15% of 1200 million). Thus a vast cost of around $US 350 million is incurred every year, of which most is for supplementation to non-deficient children. The programme also consumes human and material resources that are needed for primary health care services (11).

There is a powerful partnership between pharmaceutical corporations and the international organisations that continue aggressively to promote massive-dose vitamin A supplementation. The UN Children's Fund (UNICEF) and the Micronutrient Initiative administer and distribute >95% of the global supply of vitamin A capsules. Presently a donor-driven agenda and policy is being followed. Selective evidence is disseminated, with commercial support and pressure.

In 2002 the XX International Vitamin A Consultative Group meeting wrongly concluded that vegetarians cannot meet vitamin A requirement from diet alone. The meeting also claimed that young children in low-income countries cannot achieve normal vitamin A status from plant-based diets, and that therefore vitamin A fortification, supplementation, or some other means of increasing vitamin A intake are needed to correct widespread deficiency. This is also wrong. These irrational and mistaken conclusions in effect advocate supplementation of synthetic vitamin A to all vegan and vegetarian children in the world (12).

At present, international donors give funds to UNICEF for distribution of vitamin A supplements. UNICEF should not accept the directives of the international donors. This would stop the programme. But UNICEF continues to undertake donor-driven massive-dose vitamin A supplementation programmes throughout the world.

What is to be done

Universal supplementation with massive doses of vitamin A is a classic example of commercial exploitation of malnutrition in less resourced countries by powerful agencies in wealthy countries. India, with the second largest population in the world, is the second largest market for sale of nutritional supplements.

The main causes of child mortality in India are diarrhoea, respiratory infections and low birth weight (13). These contribute to more than 80 per cent of child mortality beyond the first month of life. Evidence suggests that vitamin A supplementation does not have any impact on reduction of morbidity and mortality due to diarrhoea, respiratory infections and low birth weight (9)

All populations have different epidemiological characteristics. What is true in Indonesia may not be true for Nigeria and similarly for India. This is also reflected in varying results of randomised control trials for evaluating the impact of massive-dose vitamin A supplementation on under 5 mortality, conducted in different countries. Investigations carried out in India by the National Institute of Nutrition have not substantiated the mortality reduction claims made elsewhere. A meta-analysis of trials conducted in India concluded that their findings are not consistent and that there is no scientific evidence in favour or against substantive benefit of universal supplementation. The Indian authorities are ignoring evidence generated by Indian scientists in India, and accepting evidence generated in other parts of the world (14).

Where symptomatic vitamin A deficiency is endemic, vitamin A prophylaxis and treatment should be undertaken. But what all impoverished children need is more food, not pills, tablets or sprays. Overall, diets should provide basic energy needs, and be varied. Food supplies should include plenty of green leaves, and yellow, orange and red vegetables, roots, tubers and fruits such as the mangoes so abundant in India, that are good or rich sources of carotenoids. Very many leafy plants such as amaranth, beet leaf, *palak*, *bassela*, fenugreek, coriander, drumstick leaves, curry leaves, mint, and radish leaves are good sources of carotenoids.

Child deaths can be substantially decreased in any community by implementation of adequately resourced primary health care. Infants and children in economically poor communities die of common diseases whose detection, cure and even prevention can be achieved with non-expensive appropriate technology supervised by a primary health care worker.

As has been wisely said, we should look to our farms, not to pharmacies, to overcome undernutrition and deficiencies including of vitamin A.

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Status

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How to respond

Feedback is convened by Maria Alvim. Please address letters for publication to wn.letters@gmail.com. Letters usually respond to or comment on contributions to *World Nutrition*. Usual length for main text of letters is between 350 and 1,000 words but they can be shorter or longer. Letters are edited for length and style, may be shortened or developed, and once edited are sent to the author for approval.