

Kelly Brownell:

Hello everyone and welcome to Policy360. I'm Kelly Brownell, the Dean of the Sanford School of Public Policy at Duke University. One of those interesting people in the field of food health policy and economics is Barry Popkin. Barry is joining us today. He's a professor at the University of North Carolina at Chapel Hill, where he directs the Nutrition Transition Research Program. He's written extensively in the field and also is the author of a very provocatively titled book called 'The World Is Fat'. Welcome Barry, very glad to have you here.

Barry Popkin:

Thank you very much.

Kelly Brownell:

So I'd like to talk about a concept called nutrition transition, the concept that you pioneered and then helped establish the very impressive body of research around. Tell us what nutrition transition means.

Barry Popkin:

What we're talking about is the stages of changes in the way the world eats, drinks and moves and how that's affected body composition over time. And we've gone from periods when we were hunter gatherers and we were tall and lean and very robust. Those who lived without disease, lived a long time and we were much taller. Then as we moved into the agriculture period, we started moving toward monoculture and dense communities. We got shorter seriously shorter in the sense, if you think of India and you think that people from [inaudible 00:01:30] on the early hunter-gatherer societies were over two meters tall. Some of the skeletons, they went down a foot essentially over time. So depending on the society, we all shrunk. We started moving toward monoculture, the diets changed, we still drank water, we were still very active, but our diets started shifting.

Kelly Brownell:

So by monoculture, you mean production of one crop.

Barry Popkin:

One or two crops or one or two major food stuffs so that we didn't have the diverse, very diet berries, animal food, plant foods of a wide range that people that hunter gatherer foragers had before that. Some live by the ocean, some lived in the forest or desert to wherever, but they all ate a very diverse diet. Then we moved toward a period when we became much more dense and started the beginning of industrialization. Much more famine occurred then, we had a lot more seasonality in the sense and weening diseases like no breastfeeding, women working instead of breastfeeding, infants being fed very thin liquids and starchy staple [inaudible 00:02:42]. And we got all the maternal undernutrition and problems that we saw around the world. Then from the 1850s until the present and we're now disappearing. And from there we moved in and that was still drinking water, physical activity went down, but our food supply started to change very gradually, but still was pretty diverse and real food.

The next phase, which we think of as non-communicable disease phase is when manufactured food really took place. We started having very highly processed food. We started drinking sugary beverages and other caloric beverages, juices and other things which have a roughly the same kind of effect as a soft drink. And our activity really declined vastly. From activity in transportation, activity in work, activity in the home production and activity in leisure. You can think of all of them being

transformed by a vast technological revolution. It all happened at different paces in different places in the world. Even within the US, vast changes from urban to rural, from region to region and that's true around the world. And so what we're trying to do now is shift back toward drinking more water and less alcoholic and less caloric beverages, moving our activity forward and finding ways to get our food supply so we eat more healthy food, we eat more plant food. We not only affect the food supply in a healthy way, so that we eat a healthier diet, but we also are concerned with the climate issues related to diet.

Kelly Brownell:

One might assume that these things have happened only in developed countries. Is that true?

Barry Popkin:

No, well they did first. So if you think between 1850, we began to see little bits of obesity emerging in the US and the Europe and the higher income more developed countries in Australasia and Japan, but very minimal. It was really between [inaudible 00:04:48] emerged, a little bit further and a little faster and we have documentation on that. But it's after World War 2 that high-income countries started really modernizing work in a very major way, started modernize, changing leisure, transportation and we shifted how we moved. We shifted how we drank. We shifted how we age those major shifts really happen from the mid 70s to 2000s in the high-income world. When our food supplied became terribly shifted toward very highly processed food from really very simply processed food that you get in a grocery store.

But in the low and middle income, these changes in technology started depending on the region in Latin America, in movement and activity. It started depending on the country between 1960 and 1980, it started there earlier. And in some of those countries were quite modern even earlier, like Argentina was in the top six countries in wealth in 1900, but in general, the changes happened in Latin America, starting in the seventies and eighties when they started to become overweight as their diet shifted. They started in Asia and Africa around 2000 and they've really accelerated. They actually started a little bit earlier, but the acceleration has happened so that you now find as many countries with high levels of obesity in the low and middle income world as you do in the high income or more.

Kelly Brownell:

Explain the concept of The Dual Burden of Hunger and Obesity. People might think that these are the flip sides of one another. Another place might have either one problem or the other, right?

Barry Popkin:

Initially, it was that way. Initially, you were in India, you were in salmon situations. You were in the US, you were in a situation where we got rid of undernutrition in the fifties to seventies. And we really were facing obesity only as a major problem and the same in Europe. But what happened is, as the retail sector began to move into these countries in low and middle income worlds and as activity changed modern technology came, partly because of service trade through the World Trade Organization and gap to their trade agreements, opening up the markets. So new technology could enter low-income countries, so the countries could get retail sector things, modern advertisement entered all the kinds of things that changed the way we moved, ate and drank. These other countries created over nutrition, but at the same time they had under nutrition.

What's happened in the last 15 years is a remarkable intersect between the two. Which is that as the modern retail sector has moved into rural areas throughout the world, the areas where kids used

to wean on infant formula or simple milks or starchy staple [inaudible 00:07:46]. They now drink Cokes and eat junk food so that the modern sector in rural areas has changed it so that the hunger people and the obesity people face the common enemy.

And so, whereas 10 to 30 years ago, they fought, they didn't want money going to obesity. Today, they realize to change, we have to change the food supply to help both sides of the coin. So we still have hunger, particularly in South Asia and Sub-Saharan Africa, but we have obesity and diabetes in these countries. And we have more obesity in adults in Sub-Saharan Africa than we do under nutrition. And in India, we're reaching a 100 to 150 million diabetics and yet we have a half a billion under nourished people. So the world is really coming together and the problems on the nutrition are now caused more by the modern food supply than they are like they were in the past by kind of traditional feeding techniques.

Kelly Brownell:

So do the public health and government officials in these countries, see what's coming. I mean, do they realize that there are these profound changes happening on the food supply and what sort of cascade of diseases will follow from this? And are they, are they poised to take action

Barry Popkin:

In Latin America, absolutely! In Central America, every country is trying to do something on the modern food supply. A few are very successful in doing very comprehensive things. Others are starting to talk and trying to do things. When it comes to Africa and North Africa and the Middle East, the only country starting to do something is South Africa. All the other region talks about it, but it's doing nothing. When it comes to Asia, we have four or five countries led by Thailand, Singapore, now Malaysia, now China talking more about it, starting to do something a little bit in India, too, but really it's other than Latin America and South Africa, we don't have countries doing major regulatory and other efforts to try to improve the food supply yet. We're just beginning in Asia and we've got five or six countries that I think within a year and a half, we'll be at the point where Latin America is today.

Kelly Brownell:

So you mentioned in Latin America, there are some countries that are doing especially well with this. Could you give us an example?

Barry Popkin:

I'll give you the best example, not the one everybody would think of, which is Mexico because the soft green tech and the junk food tax, but Chile. Chile is unique. First. They cut the cost of all the non-caloric beverages, water and other things. They create an 8% differential in soft drinks. Then they added a very comprehensive policy that will do two things, curb all marketing to children in any venue of any kind of food that call non-essential, which is really 60% centered to the food supply, essentially of beverages and food that's very highly processed and very high in either sodium, saturated fat, added sugar or very caloric dense.

But a year later from that we're working with, and now they're going to create an implementation of the marketing ban that shall go from 6:00 AM to 10:00 PM, for all the same foods everywhere. And they're putting a logo for every time the food is high in salt, high in the unhealthy saturated fats, high in added sugar or too energy dense saying stop don't buy this on every package in a big way. And then we're working with them to create a mega tax. A tax that may be on sugar. It may be

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on salt, on junk food and soft drinks of 30, 40% level. So they truly will probably be the first country to turn around obesity and...

Kelly Brownell:

Lets talk more on the concept of tax and our second podcast. But what's interesting to me about the way you're characterizing their approach, and Sheila said that, "It's not about educating consumers one at a time around issues of better nutrition, but it's all about making structural changes."

Barry Popkin:

[crosstalk 00:11:48] And in the process of creating the structural changes, particularly around marketing control, it allows space for the government to begin to talk about healthy eating. But without that space, they couldn't get heard because of the billions of dollars spent in this higher income Latin American country on marketing.

Kelly Brownell:

Well, thank you. It's good to end on that positive note. I very much appreciate you joining us today. Thank you.

Barry Popkin:

My pleasure.

Kelly Brownell:

Our guest today is Barry Popkin. Barry directs the nutrition transition research program at the University of North Carolina at Chapel Hill, where he is a distinguished professor in nutrition in the School of Public Health there. And he's published a book called 'The World Is Fat'. Until next time, I'm Kelly Brownell.