INDIVIDUALIZED MEDICINE & NUTRITION IN THE DIGITAL ERA

Featuring :: Asif Ali, MD

TRANSCRIPT

Maura: Hello, and welcome to the Abbott Nutrition Health Institute podcast. I’m your host, Maura Bowen, and I’m here with Dr Asif Ali, Clinical Assistant Professor at University of Texas Health Science Center. Dr Ali has authored many academic journals and presents in national and international meetings as a faculty speaker. He has authored cardiology consults published by McGraw Hill; has been featured nationally on the Dr Oz Show, Channel 8 Bill of Health, and Discovery Channel; and works as a physician partner with the Houston Rockets organization. Dr Ali has served as Chief Medical Officer, Chief of Cardiology, and Chief of Education for various Houston hospitals, and is president of Harris County Medical Society western branch. He’s also the alternative delegate for Texas Medical Association.

Maura: Specific to today, Dr Ali is here at Abbott to talk about the role individualized medicine and nutrition can play in the digital space. He was kind enough to agree to sit down with me to summarize his presentation for our podcast listeners.

Maura: Dr Ali, thank you so much for speaking with me. Are you ready to get started?

Dr. Ali: Thank you, Maura, I am. And thank you and Abbott Nutrition Health Institute for having me for this podcast.

Maura: Great, thank you so much. If you don't mind, can you start by telling us a little bit about yourself and your current role?

Dr Ali: Sure. So I’m a practicing cardiologist and partner with Houston Cardiology Consultants, and hold an academic position with UT Health, in the Texas Medical Center. My focus is on prevention of cardiovascular disease. I’m a patient advocate, and my social mission is to increase education awareness and access to healthcare for a better-informed healthcare consumer.

Maura: Great. Now, how did cardiovascular health become a point to focus for your career?

Dr Ali: My father is a cardiologist and he's been a huge influence on me. Through him, I had the privilege to meet pioneers in the heart transplant world. Dr Denton Cooley and Dr. (Michael) DeBakey, who I met as a kid, and grew up in their shadows.

Dr Ali: In fact, in 8th grade, I knew I was going to become a cardiologist. I actually presented a science fair project on Doppler echocardiography and its implications on hard imaging, and the teacher that point said, “You don't have to take the final. You get an A in the class. Good luck on becoming a doctor and pursuing your career.”

Maura: So where along the line did you become interested in individualized medicine and nutrition?

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Dr Ali: So that need was really born out of my patients seeking to help reverse their heart disease and have alternatives to what I call the sick care pathway of medicine, to one of the well care or wellness pathways of medicine. And as I began to read more, I realize that the package inserts of the very medications that I was prescribing, like lipid lowering medications or diabetes medications, for example, the first line actually says in fine print, “lifestyle changes and modifications first.” And as I began to talk and ask my patients, they seemed to always opt for changes in their lifestyle rather than having a quick fix and then coming back again and again and again for that fix.

Dr Ali: And then finally, in 2016, the American College of Cardiology started a prevention track and I was pleased and shocked that it was standing room only. It meant that my colleagues were very interested in this idea of prescribing lifestyle as medicine rather than medications and interventions. So it's not just my interest, it's my mantra, and I prescribe it to patients every day. In fact, I've created a prescription pad with diet and exercise as a prescription, not just as a recommendation.

Maura: You presented at the 118th Abbott Nutrition Research Conference, focusing on individualized medicine and nutrition. And in the presentation, you spent some time talking about the prevalence of conditions like heart disease, cancer, stroke and so forth. Do you mind rearticulating some of the statistics you shared, this time for our podcast listeners?

Dr Ali: Absolutely. So, we know that heart disease is still the number one killer in America whether you're male or female. Cancer and vascular disease also top the list of mortality in America. So when we're talking about healthcare dollars, we really need to tackle the top killers—[addressing] not only morbidity and mortality, but quality of life. And when we do look at morbidity and mortality, we really need to focus on the cause and not just effect. And what I mean by that is that the causes of the diseases that we touched upon—heart attacks, vascular disease, stroke, cancer—are very influenced by our lifestyle choices and epigenetics and how those choices influence our gene makeup.

Dr Ali: Fogarty and McGuinness from the National Institute of Health published data back in 1990 2000 and 2010. These were ten-year population health statistics on the causes of disease and death—it’s heart attacks, it's cancer, it’s strokes—but they went back to say that's the actual effect. It’s not the cause; the cause is tobacco use, not getting enough exercise, not eating enough fruits and vegetables, and not fulfilling the preventative screenings, like colonoscopy and mammograms at age-appropriate times. These are the true causes of which we promote the effects and we try to treat it with medications. The take-home message is we can prescribe lifestyle choices rather than medications to prevent the diseases that are actually killing us.

Maura: You also talked a bit about how medical school residency and fellowships tend to focus on sick care rather than on wellness and disease prevention. Why do you think this is, and can you speak to what it would take to help transition practitioners toward a focus on well care?

Dr Ali: So, it’s true that in medical school residency fellowship, wellness and prevention are not taught or emphasized. As physicians, diagnosis and treatment are typically followed up with a prescription or an invasive procedure, like a surgery. And the sad reality is the healthcare system capitalizes on keeping you as a consumer in the sick care model. That's how money is made. The wellness model is not as reimbursed as the sick care model, we know that. So we need to change the paradigm.

Maura: Now, you noted in your presentation here at Abbott that some of the leading causes of death in the US have shifted a bit over the years. Where are some of those more obvious shifts taking place and why?

Dr Ali: So, there have definitely been some shifts over the years, in particular in cardiovascular health as well as cancer, and we've seen actually cancer rising over the years and cardiovascular death decreasing, though that has leveled off. And there's actually, in the latest data, a slight increase, actually. And I think that we've had some really
pivotal trials, like the FOREST trial that looked at Simvastatin or the (inaudible) trial that looked at Ramipril—these are all studies done in the *New England Journal of Medicine*. The decreased cardiovascular death over the years by really diagnosing hyperlipidemia, diabetes, hypertension, obesity, and modifiable risk factors like smoking. So as a country we've addressed a number of the causes that actually translate to vascular disease. But the problem is we also haven't really focused on diet and exercise. We focus more on medications. And there's definitely times we need to use medications. However, we need to do that in parallel with behavioral changes like diet and exercise. I think one area where we've done well as a country is the smoking epidemic that we had. And we've seen impacts in decreasing smoking. It's become sort of unpopular—very hard to smoke. They've made it inconvenient; there are taxes on smoking. We haven't really done that as well on fast foods or on sugary diets. And so in those areas where we've done a great job in population health, for example like smoking, we've seen decreases in mortalities, whether that's for your lungs or for your heart.

*Maura:* Let's talk a bit more about lifestyle medicine, because I know that was a main point of your presentation. You gave us a few keywords to keep in mind as you discussed the concept, and those keywords were “forks,” “fingers,” “feet,” “stress,” “sleep,” “love.” And I thought that was just such a clever and memorable way to help make sure we're mindful about the decisions we make and how they can affect our overall health and well-being. So, I was hoping you can tell us what each of the six words represent, and why are they important, and also how can they help us stay healthy?

*Dr Ali:* Sure. And I give credit to True Health Initiative for these keywords. I’m part of their Director of Council.

- **Let's start with “forks.”** It’s quite simple and complex at the same time because it's what we eat. It’s really understanding individuals and what moves them and drives them. Are they stress eaters? Are they individuals who just don’t have good access to healthy foods? Is there lack of awareness or education about what you should eat? So “forks” is quite simply just what you're consuming.
- **And we talked about “fingers.”** “Fingers” is how much you consume alcohol and also no to smoking. Alcohol should be no more than one glass of wine for women [per day] per the guidelines, and two glasses for males.
- **“Feet.”** So I tell people this all the time, that you can’t outrun the fork. So “forks” is how many calories are taking, and “feet” is how many steps you're taking. Many people have trackers nowadays and there's this magic number of 10,000 [steps]. The data actually showed that mortality benefits actually retained right at 7,500 steps. If you think about the individual American, you sleep hopefully about seven hours of sleep, to get into your car with an average commute time about an hour, to get to work, to sit down in front of a computer for eight hours, to do what—to get back in your car in rush hour for an hour, to do what—to go sit on your couch so you can destress and eat your dinner and watch TV and then go to sleep. So this inactivity is really creating an increase in death and morbidities. So “feet” is just really making sure that you’re standing up and you're walking around. We need America to move.
- **“Sleep.”** The National Academy of Sleep says at a minimum we should be getting about seven hours of sleep. I have a teenage daughter, and if you look at sleep as a whole, it’s not the same for everyone. It's actually very age dependent. So teenagers should getting much more than seven hours — closer to 9 to 10 hours, which doesn’t happen quite often. Lack of sleep increases cortisol. We know that obstructive sleep apnea is directly linked to heart disease. So, sleep is one of those things that we do at least 1/3 to 1/4 of our lifetime and it's very important not just to have enough sleep, but the quality of sleep as well.
- **“Stress.”** So, stress is one of those things that is very hard to modify. We talk about work life balance and how to mitigate that. Sometimes stress comes up in many different forms, but I can address with stress is it’s definitely correlated with not just quality of life but how we live our lives and how stress influences our health. [It] can definitely increase your susceptibility to diseases like the common cold or flu. And there’s many ways to mitigate it. Just doing deep breathing, exercising, meditation, yoga—adding that to your day.
- **“Love.”** Love is really bringing you’re A-game. It encompasses your interpersonal relationships, it
• encompasses your attitude to your job. There’s a really wonderful TEDTalk [“What makes a good life? Lessons from the longest study on happiness” by Robert Waldinger] on longest study on happiness, and the summary—and there’s more to it than this—is that as we get older, having a social network, having people that we can talk to...loneliness kills. The elderly are more lonely than any time in the history of America, and it's part of the reason we’re all stressed and we’re working so hard. We don’t spend so much time with the elderly. And so, having those interpersonal connections, and having a social network, and having a purpose in life, are extremely important for happiness and longevity.

• So really we need to encompass these six aspects in our day-to-day activities in both mental and physical health.

Maura: Now, you mentioned your Apple Watch a minute ago so let's talk about the role digital tools and platforms are playing in providing better access than ever before to health and nutrition resources. What does this shift mean for patients and their healthcare professionals, since suddenly patients have access to all this information?

Dr Ali: Let me be clear about these digital tools. These have been actually driven by the consumer, not by the healthcare industry. And so now we’re kind of at this conundrum where consumers are consuming wearables and collecting data, and it's incumbent on us as the healthcare community to aggregate that data and create action items. So we have individuals actually collecting data and sometimes they know what to do with it sometimes it they don’t.

Dr Ali: It’s very interesting. There hasn’t been a day that has gone by in my practice of medicine where a patient hasn’t come to your office with some digital healthcare data—whether that’s a fast heart rate or a slow heart rate or something in between—where that individual is bringing healthcare data to us. I applaud the wearable companies who have taken action to start creating the academic studies to validate to the healthcare community that the data selected is something that is accurate. As we continue down the spectrum of digital diagnostics that we as the healthcare industry need to answer the consumers reflecting the data with action items.

Maura: You mentioned also in your presentation that it can be a double edge sword; how patients have access to information that could really be misinformation. So what should healthcare professionals and patients look for to boost their confidence in the credibility of the tools and resources they're finding online and through the App Store?

Dr Ali: So I think, to answer your question, too much information can be deleterious. There is a lot of information misinformation out there. We need to prescribe wearables for the right patient at the right time. Collecting data ad hoc can sometimes cause confusion and actually costs the healthcare industry more, because if you’re collecting data that’s not accurate, it confuses the consumer and also the MD at the same time. And then we need to do further testing on these individuals to make sure that the data they’ve collected is actually credible. And then number two what you’re asking is, there’s many, many, many tools out there that in theory sound great, but no studies have been done behind them to validate them. And that can cause issues, too, because of the accuracy of what we’re collecting. We need to be able to take data, make sure that it’s accurate.

Maura: Let’s talk about the role of technology and prevention. What are some of the more successful tools and programs you've seen?

Dr Ali: So as a disclosure, I am the Chief Medical Officer of a digital diabetes prevention tool called Fruit Street Health. I’ll answer your question with a story. I had a patient of mine [his name was Arthur] who showed up to my office. He's 32 years old and he weighed 716 pounds. He presented to my office for the first time. He actually clinically died in my waiting room. I had to go out and do CPR on him and ended up saving his life. And the problem is now you have this gentleman who is 716 pounds and he needs to lose weight, but there’s no bariatric surgeon who’s going to touch him. And fortunately the heart lab will only be able to take a 500 pound patient. So he was stuck. And when this patient came through and came back for his follow up with me after hospitalization, he said, “Dr. Ali, now what?” So lifestyle as medicine was the answer. And how are we going to do it, right?
Dr Ali: What happened with this gentleman who’s 716 pounds encompasses what I think is the problem with medicine: that his access to medicine, to the doctor, education and awareness, and then being able to communicate with the patient what they need to do to be successful in their lifestyle as medicine choices. We tracked Arthur’s steps, and through our Fruit Street app he was able to take pictures of his food that went to a nutritionist. They could start educating him as he took pictures of it. I call it taking a selfie with your food because you're literally taking a picture of your food, and you're creating a mind relationship with your food through taking these pictures, and actually capturing what you’re consuming. And so over time what were pictures of fast food started translating and evolving into healthier lifestyle choices, like salads and colorful foods rather than monotone foods. Through his journey, he lost as of two weeks ago 440 pounds.

Maura: That’s amazing. Congratulations to him and to you.

Dr Ali: I think this really encompasses what your question is which is how do we create solutions to people’s problems, like this gentleman who weighed 716 pounds. And I think that's where technology is the bridge.

Maura: So, similar question to that. What it monitoring and treatment tools have caught your attention in the digital space?

Dr Ali: I’ve been in the digital space for quite a while. I think that the tools coming out are very interesting. Apple Watch is opening up to industry and academic settings to actually do trials on the watch, and look at things like atrial fibrillation, for example and validating that. Because when we look at the healthcare industry, it is very expensive, and it’s very hard to get approvals from the FDA. It takes many years. We're finding that patients buying wearables has been a way to accelerate research and accelerate the validation and therefore FDA approvals of these devices. I think that's really what it's going to take in the healthcare industry, is for the consumers to drive it. And have the FDA and academic settings do the studies so that we as physicians feel comfortable with the data that you’re collecting.

Maura: You mentioned your patient Arthur, and I wanted to ask if you have other examples of how technology has helped to drastically improve the wellness of your patients.

Dr Ali: I have an executive who would check his blood pressure 50 times a day, and his blood pressures were running high. We actually treated him through wellness. And just by exercise and increasing his nitric oxide naturally, we were able to bring his blood pressures down. We’re able to use a blood pressure [machine] that connected to his phone, that came to me through a program called Chronic Care Management, and we were able to take care of his blood pressure to the point, I’m very happy to say, that he only checks his blood pressure twice a day. This is an individual who would sit in front of an emergency room, checking his blood pressure, to make sure it wasn’t over the limit. Now, he knows he can put that data into an app and we can take a look at it and address his needs. I think that’s a much better utilization and value in the healthcare system when we’re really looking at value-based medicine, this ability to collect data and have action items even after hours.

Maura: You have been so kind with your time today. I can’t tell you how much we appreciate it. Do you have any parting words for us as we are wrapping up this discussion—any take-home messages?

Dr Ali: Thank you for having me. This is a really exciting time. Really, the future of wearables is here now. We need to focus again where the consumer is effortlessly providing data and connecting the interoperability of the data to the physician’s office. I look at the future of wearables of nutrition, of wellness, as this: In the future I believe that medicine is actually between the office visit with your doctor. That the physician, the healthcare provider, will be auditing the data you’re collecting between the office visits and helping you tweak that. I think that the gamification of medical data collected, and the treatment, are key for behavioral changes. There are many instances of how our behavior modification can be changed through gamification, and I find that the digital world is going to be the driver
of that. And lastly the incentivization to lower health care premiums and create reimbursements for the clinician and healthcare industry is key for rapid adoption of digital diagnostic center.

Dr Ali: Thank you so much for having me today.

Maura: Thank you so much. It's been a special treat and we're so grateful. We hope you'll come back again.