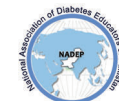


NEWSLETTER

Monthly **Diabetes Educator**

A forum for diabetes educators, dietitians and other health care professionals with interest in diabetes.

Aims:

To provide, facilitate and promote education for prevention and management of diabetes and its complications.

Office Bearers**President**

Dr. Zahid Miyan

Vice-President

Prof. Bilal Bin Yonus

General Secretary

Dr. Saiful Haq

Treasurer

Dr. Zafar Iqbal Abbasi

Joint Secretary

Miss. Erum Ghafoor

Editor

Meena Iqbal Farooqi

Editorial Board

Prof. Shahid Ahsan

Miss. Erum Ghafoor

Contents

- Smarter research & development to tackle global health priorities.
- Glycemic Index, Glycemic Load and Glycemic Response.
- Does the Soda Tax Work
- Diabetic amputations a 'shameful metric' of inadequate care

Patient Corner

- Story of Zain with Type 2 Diabetes

**Smarter research & development to tackle global health priorities**

15 May 2019 | WHO News release

Today, WHO's new Science Division launched an online resource to guide the development of new health products for which there are limited markets or incentives for research and development. An essential tool for realizing universal health coverage, the Health Product Profile Directory aims to promote research and development for products to combat neglected diseases and threats to global health, including antimicrobial resistance and diseases with pandemic potential.

The Health Product Profile Directory is a free-to-use online resource created and developed by TDR, the Special Programme for Research and Training in Tropical Diseases, on behalf of WHO as a global public good. It provides a searchable database of profiles for health products needed to tackle pressing health issues in global health including those prioritized by WHO. The summary of the published profiles outlines 8-10 key characteristics (such as target population, measures of efficacy and dosage) for the development of health products, including medicines, vaccines and diagnostics. Building in these characteristics at an early stage of the development process is essential to ensure that the final products will be accessible to the populations that need them.

The Ebola outbreak of 2014-15 and other recent pandemics have highlighted the urgent need for

centralized information to guide and improve coordination of efforts to develop new health products for neglected diseases and populations. Until now, less than 10% of new products that have been submitted for regulatory review have referenced product profiles in the R&D process. This absence of a standard way to describe the health products that are priorities for global health has contributed to uncoordinated and ineffective research and development in these areas.

WHO Chief Scientist invites global health R&D community to contribute to the Directory

"As the first global public good launched by WHO's new Science Division, the Health Product Profile Directory exemplifies our effort to shape the global health research agenda to achieve health for all," said WHO Chief Scientist Dr Soumya Swaminathan. "While the Directory is launched with a focus on infectious diseases, we will update and grow the content, so I invite submissions of product profiles on other priority areas such as non-communicable diseases and antimicrobial resistance."

Currently, the Directory contains 196 product profiles developed by 24 agencies, of which 191 describe a product with an infectious disease as the target. The top four diseases with product profiles are tuberculosis, malaria, HIV and Chagas. The Directory contains only 5 product profiles for conditions other than infectious diseases (one vaccine for breast cancer and four contraception technologies).

"DNDi welcomes the release of this new resource that will help to better understand the priorities of

the global health product R&D landscape,” said Graeme Bilbe, Research & Development Director, Drugs for Neglected Diseases initiative (DNDi). “At DNDi, we recognize the importance of product profiles as an essential tool to guide our



research strategy and ensure that the products we develop are able to be used by the vulnerable populations we are developing them for. We are pleased to have contributed some of the product profiles used in this valuable new directory and we look forward to using it.”

“In an R&D landscape which is increasingly complicated to navigate, Medicines for Malaria Venture welcomes this new Directory, which will help us ensure that new malaria products that are developed are able to be accessed and used by the populations that need them,” said David Reddy, Chief Executive Officer of Medicines for Malaria Venture.

The Directory includes profiles developed by WHO and other agencies and can also be accessed through the key phrase “WHO Global Observatory on health R&D”, where other key resources to analyze R&D can be found.

Profiles for products prioritized for global action by WHO are clearly marked as authored by WHO. Other product profiles authored by Product Development Partnerships, commercial companies and other organizations that meet the inclusion criteria are also included. For non-WHO authored profiles, inclusion in the directory does not imply endorsement by WHO but may help inform research prioritization decisions. Organizations outside WHO stand to benefit from submitting profiles to the Directory by gaining an understanding of the landscape of related profiles and seeing where gaps lie.

Health Product Profiles are already making an impact

As an example of the impact product profiles can make, profiles published by WHO in response to the Ebola outbreak have been used by the Coalition for Epidemic Preparedness and Innovation (CEPI) to inform its R&D funding strategy.

This covers diseases identified by WHO as having the potential to cause global outbreaks. To date, CEPI has distributed more than \$350 million to develop new vaccines to combat these diseases.

This story has not been edited by NADEP staff; source: WHO news release.

Glycemic Index, Glycemic Load and Glycemic Response...

By Meena Iqbal Farooqi

Glycemic Index Vs. Glycemic Load



Reference ranges for Glycemic Index and Glycemic Load

In my experience I have repeatedly seen that the people included many health care professionals are unaware of the difference between and importance of glycemic index and glycemic load. So, I thought of writing this article so that it would benefit many in diluting the confusion. I believe understanding both would benefit our patients and other people in making informed and responsible food choices.

Who may be interested in the glycemic index?

- People with diabetes can use GI as an added tool to manage blood glucose.
- GI values can also be used when treating reactive hypoglycemia.
- Studies have shown that when eating low GI foods, people tend to snack less, which may be helpful in weight control as well as blood sugar control.

What is Glycemic Index?

The glycemic index (GI) gives a numeric score to a food based on how rapidly it rises the blood glucose level after being consumed. The ranking scale goes from 0 to 100, with pure glucose (sugar) given a value of 100. Foods with lower glycemic index tend to give slower rise to blood glucose after consumption. Generally, the more the food is cooked or processed, the higher its GI, and the more fiber or fat in a food, the lower its GI as they delay the digestion. (for reference ranges see picture)

Limitations of using glycemic index?

- The determination of GI was done in

studies where volunteers ate portions containing 50 grams of carbohydrate of each test food. However, 50 grams of carbs isn't always a usual portion size. For example, 50 grams of carbohydrate from popcorn is ten cups of popped popcorn, while 50 grams of carbohydrate from white rice is about one cup cooked.

- There is a considerable dissimilarity in values assigned to the same food. One source may say a russet potato has a GI of 56 and another source may say the GI is 111.

- GI values can vary depending on the ripeness of the food, the amount of processing, and the processing method.

- Glycemic index values measured the effect of foods tested when they were eaten alone. Most of the meals provide a variety of nutrients. Therefore, the result of a food changes once it's combined with different foods. For example, fat delays digestion.

- The impact that food has on blood glucose may vary from person to person. Blood sugar levels are also affected by activity, exercise, hormones, and medications.

- A lower GI value does not essentially say that food is a good choice. For example, a bar of chocolate and a cup of brown rice may have the same GI (55), but the overall nutrient content is different.

Glycemic index tells just part of the story. What it doesn't tell is how high your blood sugar could go when you actually eat the food. To understand a food's complete effect on blood sugar, you need to know both how quickly it makes glucose enter the bloodstream and how much glucose per serving it can deliver. A separate measure called the **glycemic load** does both — which gives you a more accurate picture of a food's real-life impact on your blood sugar. Watermelon, for instance, has a high glycemic index (80). But a serving of watermelon has so little carbohydrate that its glycemic load is only 5.



Glycemic Load = $\text{GI} \times \text{Available carbohydrate (g) content per portion} \div 100$.

For example, a single apple has a GI of 38 and contains 13 grams of carbohydrates.

$$GL = 38 \times 13/100 = 5$$

By definition, the GI compares equal quantities of available carbohydrate in foods and provides a measure of carbohydrate quality. Available carbohydrates are often calculated by summing the number of obtainable sugars, starch, oligosaccharides, and maltodextrins. The GL is the product of a food's GI and its total available carbohydrate content: $\text{glycemic load} = [\text{GI} \times \text{carbohydrate (g)}]/100$.

Therefore, the GL provides a summary measure of the relative glycemic impact of a "typical" serving of the food. Foods with a $GL \leq 10$ are classified as low GL, and those with a value ≥ 20 as high GL.

Some nutrition experts believe that people with diabetes should pay attention to both the glycemic index and glycemic load to avoid sudden spikes in blood sugar but American Diabetes Association, on the contrary, says that the total amount of carbohydrate in a food, rather than its glycemic index or load, is a stronger predictor of what will happen to blood sugar. And some dietitians conjointly feel that focusing on the glycemic index and load adds an unneeded layer of complexity to selecting what to eat.

What is glycemic response?

After eating a meal, the digestible or available carbohydrates are absorbed into the blood stream, producing an increase in blood glucose concentration. In time and in response to its tissue disposal, facilitated by the insulin, the blood glucose concentration falls back to or below fasting levels. The magnitude of the rise and fall of blood glucose and the duration over which it occurs has been termed the glycemic response. More slowly digestible carbohydrates or minimally processed starchy foods produce a different response. Compared with rapidly digestible carbohydrates they show a slower and more prolonged increase in blood glucose, rising to a lower peak. Other factors embody what quantity of food you eat, level of food processing and even how the food is cooked. For example, pasta that is cooked al dente has a slower glycemic response than pasta that is overcooked.

The bottom line is, low-glycemic-index eating is likely to be beneficial for people with diabetes. But reaching and staying at an optimum weight and healthy waist line is more important for your blood glucose and your overall health. Selecting low GI food can be used as one of the tools in achieving these goals.

Does the Soda Tax Work?

By Toby Amidor, Contributor | US News & World Report



SODA CONSUMPTION IS blamed as being a cause of heart disease, obesity, Type 2 diabetes and some types of cancer in adults, and it's easy to see why. Government guidelines encourage Americans to limit their sugar consumption to no more than 10 percent of their total daily calories, and it's tough to do that while drinking soda. In fact, beverages account for 47 percent of all the added sugar consumed in the U.S., with soda being the largest source of added sugar, according to the 2015 to 2020 Dietary Guidelines for Americans. Even though soda consumption in America is at a 30-year low (down 15 percent from 422 calories per day in 1999), most of us are still consuming too much.

In an effort to curb sugar consumption, then, many state governments have put a tax on soda. Is it working?

According to "food futurist" Jack Bobo, new data out of Philadelphia show that soda sales decreased six months after the city implemented a soda tax. But, he adds, sales "increased to nearly the same extent just outside of the city limit." Bobo also says that data from Berkeley, California, reveal that self-reported sugar-sweetened beverage intake did not change significantly after one year of a tax.

In general, says Taylor Wallace, principal and CEO of the Think Healthy Group and an adjunct professor in the department of nutrition and food studies at George Mason University, there's not much scientific support for taxing food or drink choices in an effort to change behavior. "Large authoritative systematic reviews of the peer-reviewed scientific literature have failed to illustrate any compelling evidence that economic interventions are effective in promoting any type of dietary behavior change," he says. Research also shows that people who consume the most soda are the least responsive to price changes, Wallace adds. In some cases, taxes actually seem to have a negative effect: In beer-drinking households, for instance, the taxes are linked with an increased purchase of beer.

If soda taxes don't seem to work, what might? The answer is multifaceted, Wallace says. "It all starts with children and school

nutrition policy," he says. "Research shows that if we educate and instill healthy behaviors early in life, then those children are more likely to grow up to be healthier adults. Cravings and preferences are certainly instilled early in life." Wallace reminds us that Former First Lady Michelle Obama has shown how national food policies can have long-lasting effects in children.

However, school nutrition policies are governed by the recommendations set forth by the Dietary Guidelines for Americans, which also needs to be reexamined when it comes to beverage recommendations. Right now, it only recommends water, low and nonfat milk, fortified soy beverages and 100-percent fruit or vegetable juice. But most Americans can consume other low- and no-calorie beverages like unsweetened tea and coffee, which have health-promoting properties, Wallace says.

Government policy is one way to help combat the obesity epidemic and help create a barrier to purchasing soda, however, we should all also do our parts at home. Education of children just as important at home as it is in school. Keeping soda out of the house is a good rule of thumb. Parents can also create low- or no-calorie beverages for kids to enjoy such as a 100-percent fruit juice spritzer with a mix of 100-percent cranberry or orange juice and seltzer, or even purchase lower-calorie flavored sparkling waters.

Adults too, can limit or eliminate their soda intake by:

- Choosing water;
- Flavoring water at home by adding cucumber, mint, muddled berries or citrus fruit; and
- Drinking unsweetened tea and coffee, or minimizing the amount of added sugar used in those drinks.

This story has not been edited by NADEP staff; source: US News and World Reports.



Patient Corner

Story of Zain with type1 Diabetes (Part 5)

By Erum Ghafoor

Previous Summary: Zain is 12 years old young man who is a football player. He was feeling so weird and sick for many days which is affecting his overall life. One day he collapsed, and the doctor has diagnosed him with type1 diabetes. He was in shocked, and now it's time that he should learn how to take insulin injection by himself and other aspect of managing diabetes.

Part5: I was stunned and relieved because many weird feelings were in my mind, including pain and dependency on my doctor and parents. It was a piece of cake, and I can do it myself. My diabetes educator has explained that I need to learn one more thing which is checking my blood glucose levels because insulin dose may need adjustments with time, food intake, activity level and change in daily routine. She had put a small box-like device in front of me

and told me that it is a glucometer, which can be easily used by myself, and I can check my current blood glucose levels. She explained that I need to put a test strip in the glucometer which not touching the white side of it as it is the area which will take my blood and give me my blood glucose levels. She also showed me a pen-like device which had a small needle inside. I need to pierce the side of my finger with a picker which produces a small drop of blood, and I need to put it on the white area of the strip, and that's it. The glucometer will show my blood glucose levels within 10 seconds. My parents and I were so facilitated. She asked me to do it once by myself. I was a bit scared again with the thought that pricking will cause me great pain. She was observing me, and then she smiled and put my hesitation in words. She said, Zain if you will prick the side of your finger then it will not cause pain more than mosquito bite because the side of our fingers has less pain receptors, so we don't feel much pain if we

prick there. After seeing my hesitation, my mom said she would do it for me, but my father interrupted because he wants me to do it myself. He said, Zain may need to check his blood glucose levels at school or maybe when we both are not around, so it better than Zain must learn it by himself. My diabetes educator has encouraged me to give it a try, and after a few silent moments, I have decided to experience it myself. *Continue in June issue.....*

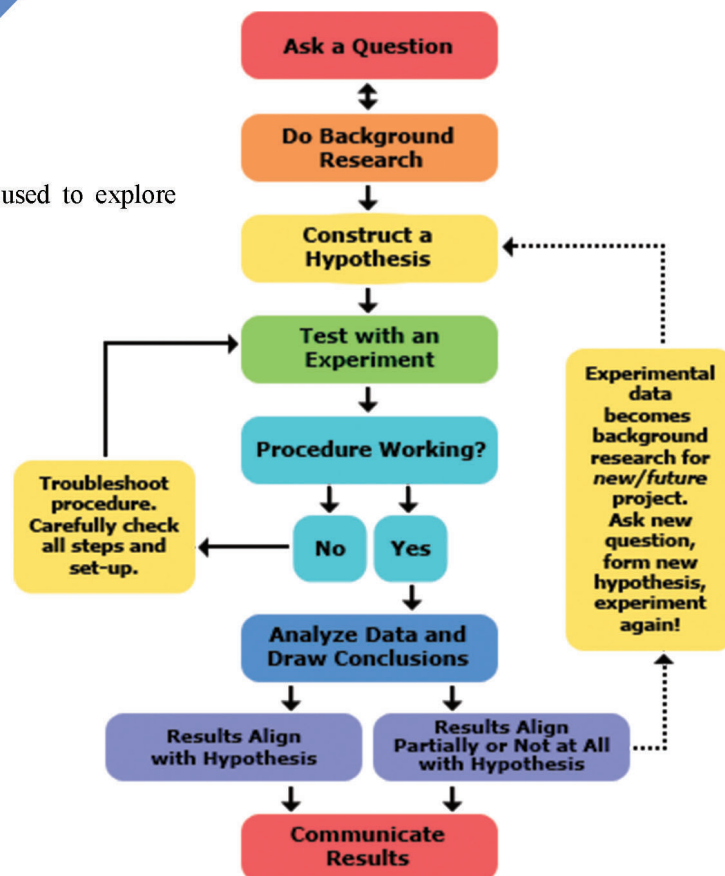
Moral of the part: It is essential to check blood glucose levels continuously because it will save us from low blood glucose levels and also help us to know the effect of our food intake, activity, and change in routine. The best bet is to check blood glucose levels and remain in contact with the diabetes care team to understand the numbers and make changes as per advice by them.

Information Corner

Steps of scientific method

What is the Scientific Method?

The scientific method is a process for experimentation that is used to explore observations and answer questions.



In the Next Issue

- Latest updates of NADEP activities
- Diabetic amputations a 'shameful metric' of inadequate care
- Update on pre - Ramadhan activities
- and more...

