

Understanding prediabetes

Prediabetes should not be taken lightly

TAREQ SALAHUDDIN

Prediabetes is a condition in which blood sugar level is higher than normal, but not high enough to be classified as type 2 diabetes. Prediabetes should not be taken lightly. It means that you are at risk of developing type 2 diabetes, heart disease and stroke. The condition is not a concern only for adults.

Prediabetes does not have to become type 2 diabetes. With healthy lifestyle changes, you can bring your blood sugar back to normal levels.

Signs and symptoms

Often, prediabetes has no signs or symptoms. But it is important to watch for the classic red flags of type 2 diabetes – excessive thirst and frequent urination.

Other signs and symptoms of type 2 diabetes may include:

- Constant hunger
- Unexplained weight loss
- Weight gain
- Flu-like symptoms, including weakness and fatigue
- Blurred vision
- Slow healing of cuts or bruises
- Tingling or loss of feeling in hands or feet
- Recurring gum or skin infections
- Recurring vaginal or bladder infections

Causes

To understand prediabetes, first you have to understand how sugar (glucose) is normally processed in your body.

Glucose is vital to your health because it is a main source of energy for the cells that make up your muscles and tissues. Glucose comes from two major sources: the food you eat and your liver. During digestion, glucose is absorbed into your bloodstream. Normally, glucose then enters your body's cells with the help of insulin.

The hormone insulin comes from your pancreas. When you eat, your pancreas secretes insulin into your bloodstream. As insulin circulates, it acts like a key, unlocking microscopic doors that allow glucose to enter your cells. Insulin lowers the amount of sugar in your bloodstream and prevents it from reaching high levels. As your blood sugar level drops, so does the secretion of insulin from your pancreas.

Your liver acts as a glucose storage and manufacturing center. When your insulin levels are low when you haven't eaten in a while, for example your liver releases the stored glucose into your bloodstream to keep your glucose level within a normal range.

If you have prediabetes, this process is beginning to work improperly. Instead of being transported into your cells, a small

amount of glucose builds up in your bloodstream. This occurs when your cells become resistant to the action of insulin. Exactly why the cells become resistant to insulin's effects is uncertain, although excess weight and fatty tissue seem to be important factors. Most people with prediabetes are overweight or obese and get little, if any exercise.

Risk factors

The same factors that increase the risk of developing type 2 diabetes increase the risk of developing prediabetes, including:

Weight: Being overweight or obese is one of the most common risk factors for prediabetes. The more fatty tissue you have, the

more resistant your muscle and tissue cells become to your own insulin. This is especially true if your excess weight is concentrated around your abdomen and your body is an apple shape rather than a pear shape, where the weight is mostly on the hips and thighs.

Inactivity: The less active you are, the greater your risk of prediabetes. Physical activity helps control your weight, uses up glucose as energy, and makes your cells more sensitive to insulin. Exercise also helps build muscle mass. That is important because most of the glucose in your blood is absorbed by your muscles and burns as energy.

Family history: Your chance

of developing prediabetes increases if you have a parent or sibling with type 2 diabetes.

Age: The risk of prediabetes increases as you grow older, especially after age 45. Part of the reason is that as people grow older, they tend to become less physically active, lose muscle mass and gain weight. But diabetes is also increasing dramatically among children, adolescents and younger adults.

Race: Although it is unclear why, people of certain races are more likely to develop diabetes than others.

Gestational diabetes: If you developed gestational diabetes when you were pregnant, your risk of type 2 diabetes is greater. If you gave birth to a baby weighing more than 9 pounds, you are also at risk of type 2 diabetes.

Depression: Depression seems to increase the risk of type 2 diabetes, possibly because people with depression often gain weight and are inactive.

Screening and diagnosis

Many people find out they have prediabetes through blood tests done for another condition or as part of a routine exam. The American Diabetes Association recommends blood glucose screening for everyone at age 45. If you are overweight with one or more additional risk factors for type 2 diabetes, ask a physician about

earlier testing.

Prevention

Healthy lifestyle choices can help you prevent prediabetes and its progression to type 2 diabetes. Even if diabetes runs in your family, diet and exercise can help you prevent the disease.

Eat healthy foods: Choose foods low in fat and calories. Focus on fruits, vegetables and whole grains. Strive for variety to help you achieve your goals without compromising taste or nutrition.

Get more physical activity: Aim for 30 minutes of moderate physical activity a day. Take a brisk daily walk. Ride your bike. Swim laps. If you can't fit in a long workout, break it up into smaller sessions spread throughout the day.

Lose excess pounds: If you are overweight, losing just 5 percent of your body weight can improve blood sugar control and reduce the risk of cardiovascular disease. To keep your weight in a healthy range, focus on permanent changes to your eating and exercise habits. Motivate yourself by remembering the benefits of losing weight, such as a healthier heart, more energy and improved self-esteem.

IS YOUR DEODORANT SAFE ENOUGH?

Aluminum salts may increase breast cancer risk



A new report raises the possibility that the aluminum salts contained in many underarm deodorants could increase a woman's breast cancer risk. Metals including aluminum salts and cadmium have recently been shown to exert estrogen-like effects, while some also promote the growth of breast cancer cells in the laboratory, Dr Philippa D Darby of the University of Reading in the UK noted. The research has shown that aluminum salts increase estrogen-related gene expression in human breast cancer cells grown in the laboratory.

Given the wide variety of other substances that can mimic estrogen, including certain pesticides, cosmetics and detergents, it is possible that aluminum salts and other inorganic estrogen-related compounds called "metalloestrogens" can further disrupt normal hormonal signaling within the breast, Darby says. "There is no doubt that the human breast is now subject to a wide range of environmental estrogenic insults," she

informed. What is particularly concerning about aluminum is the fact that it is applied to the underarm, close to the breast, and left on the skin. Deodorants also are frequently used after shaving, making it easier for aluminum salts to enter the blood stream. Studies also have demonstrated that aluminum salts can penetrate human underarm skin even if it is unbroken.

Until recently, Darby notes, only organic chemicals were thought to be capable of exerting estrogen-like effects in the body, or otherwise disrupting the hormone's normal functioning. "The answer for aluminum is to cut down or cut out on application of antiperspirant under the arms and around the breasts," she points out. "I stopped using underarm cosmetics 10 years ago when I first starting thinking about it all. I wash with soap and water twice a day and no one has yet complained."

Source: Journal of Applied Toxicology

Health Tips

Insect stings and bites

The two greatest risks from most insect stings and bites are allergic reaction (which may occasionally be fatal) and infection (more likely and less serious).

What to do?

Bee, wasp, hornet, and yellow jacket stings: A bee will leave behind a stinger attached to a venom sac. Try to remove it as quickly as possible. One way is to gently scrape it out with a blunt-edged object, such as a credit card or a dull knife.

Wash the area carefully with soap and water. Do this two to three times a day until the skin is healed.

Apply a cold pack, an ice pack wrapped in a cloth, or a cold, wet washcloth for a few minutes.

For pain and itching, give an over-the-counter oral antihistamine, if doctor says it's OK; follow dosage instructions. You could also apply a corticosteroid cream or calamine lotion to the sting area.

A sting anywhere in the mouth warrants immediate medical attention. That is because stings in the mucous membranes of the mouth can quickly cause severe swelling that may block airways. You should seek medical care if you note a large skin rash, a large area of swelling around the sting site, or if swelling or pain persists for more than 72 hours. You should seek immediate medical care if you notice any of the signs, which may indicate a serious or even potentially life-threatening allergic reaction like wheezing or difficulty breathing, tightness in throat or chest, swelling of the lips, dizziness or fainting, nausea or vomiting.

Spider bites

Most spiders are harmless, with the exception of the black widow and the brown recluse (or violin) spider.

Wash the area carefully with soap and water. Do this two to three times a day until skin is healed.

Apply cool compresses. Give an over-the-counter pain-killer for pain.

To protect against infection, apply an antibiotic ointment and keep the child's hands washed.

If you have any reason to suspect your child has been bitten by a black widow or brown recluse spider, apply ice to the bite site and head for the emergency room. Symptoms include:

- a deep blue or purple area around the bite, surrounded by a whitish ring and a large outer red ring
- body rash
- muscle spasms, tightness, and stiffness
- abdominal pain
- headache or fever
- general feeling of sickness
- lack of appetite
- joint pain
- nausea or vomiting

Tick bites

Check your children and pets for ticks carefully after you have been in or around a wooded area. Common types of ticks include dog ticks and deer ticks.

If you find a tick on your child consult a paediatrician.

Use tweezers to grasp the tick firmly at its head or mouth, next to your child's skin.

Pull firmly and steadily on the tick until it lets go, then swab the bite site with alcohol.

Don't use petroleum jelly or a lit match to kill and remove a tick.

WOMEN WITH BLEEDING DISORDER

Don't suffer in silence

DR DIPIKA MOHANTY

Women's health all over the world is a matter of great concern. Wofefully inadequate knowledge regarding bleeding disorders is blocking better case management by obstetricians and gynecologists disclosed Gillian Oliver, a Canadian gynecologist.

Menstrual disorders constitute a major clinical problem that affects a large number of women during their reproductive life. Although menorrhagia (heavy bleeding during menstruation) may have several causes such as local pathology, systemic disorders such as inherited clotting deficiency, thrombo-cytopenia (less number of platelets), chronic liver failure or endocrine dysfunction, anticoagulant therapy with warfarin. The specific cause is identified in only 50 percent of affected women, while the rest are labeled under a broad rubric of dysfunctional uterine bleeding (DUB).

In a study conducted at Bombay in India where 120 consecutive women presenting with menorrhagia were screened for

an underlying coagulation (clotting) disorder. The study groups were women between 18 to 35 years. The study reported an incidence of 10.8 percent of von Willebrand's disease (hereditary bleeding disorder where the mucous membrane starts to bleed without any apparent reason), 4.16 percent of platelet function defects and other rarer factor deficiency making the total to 17.5 percent of inherited bleeding disorders responsible for menorrhagia in these women. There is paucity of data from Bangladesh as regards this.

I would like to suggest an important thing that before labeling a patient with menorrhagia as dysfunctional uterine bleeding (DUB), a coagulation work up is mandatory and could be life saving in certain circumstances.

Deviation from normal menstruation is a related problem. So, it is woman's perception of a problem that initiates investigations. Unfortunately, speaking openly about menstruation makes many parents and children uncomfortable, but this is a crucial conversation that will help you

and your daughter feel independent and confident. It may help to let your daughter know what is considered normal menstrual bleeding, for example, how many days a period lasts; how much blood flow to expect and so on.

Usually 80 ml of blood flow in 4 to 5 days period is considered as normal. Considering my personal experience I would like to stress the issues of perception and tolerance of symptoms. These are important in a consultation between patient and gynaecologists which warrants evaluation. The history should be taken meticulously in cases of menorrhagia.

von Willebrand's disease von Willebrand's disease is a hereditary blood disease (occurring in both sexes) where the mucous membrane starts to bleed without any apparent reason (involving a deficiency of a clotting factor in the blood, called 'von Willebrand's factor').

VWF serves as a carrier for clotting factor VIII, a fact that helps explain why some severely affected patients with VWD develop symptoms similar to

hemophilia. Symptoms of VWD include: easy bruising, frequent or prolonged nosebleed, heavy or prolonged menstrual bleeding, prolonged bleeding following surgery, dental extraction, childbirth, injury.

A battery of tests has been devised that can diagnose the disorder with increasing accuracy. Seemingly, subtle distinctions that can have a profound impact on treatment strategies. There are pharmaceutical and plasma derived products that have been developed to treat bleeding symptoms and to prevent abnormal bleeding, such as during surgery.

Message for you

Do you have heavy or prolonged menstrual periods? Do they last 10 days or more? It does not have to be that way or if you may feel symptoms of VWD immediately consult with a gynaecologist.

The writer is a Senior Consultant Haematologist and In-charge, Lab Service, Apollo Hospitals Dhaka. E-mail: mohantydiplika@yahoo.com

Calcium may help women keep weight in check

Getting plenty of calcium might help fight middle-aged spread, a new study shows. Women in their 50s who took in more than 500 milligrams of calcium daily in supplements gained 4 pounds less over 10 years than women who did not use supplements, Dr Alejandro J Gonzalez of the Fred Hutchinson Cancer Research Center in Seattle found.

Studies showing that low calcium intake boosts the amount of calcium contained within cells, which in turn switches on genes involved in fat formation while inhibiting fat breakdown. To further investigate the relationship, Gonzalez and his team looked at weight gain and calcium intake over an 8- to 12-year period in 10,591 men and women aged 53 to 57.

While calcium intake had no relationship with weight gain in

men, the women who consumed more than 500 milligrams of calcium in the form of supplements gained 5.1 kilograms, or 11.2 pounds, over 10 years, compared to 6.9 kilograms or 15.2 pounds for those who didn't take calcium supplements.

"Although more evidence from randomised clinical trials is needed before calcium supplements can be recommended specifically for weight loss, this study suggests that calcium supplements taken for other reasons (e.g., prevention of osteoporosis) may have a small beneficial influence on reducing weight gain, particularly among women approaching midlife," Gonzalez and his colleagues pointed out.

Source: Journal of the American Dietetic Association

Jet lag, how to reduce it?

STAR HEALTH DESK

Jet lag affects individuals in different ways and to different degrees. Flying across three or more time zones often disrupts your normal sleep-wake cycle. As a result, your internal body clock wakes you during the night and makes you sleepy during the day. Other symptoms of jet lag include irritability, decreased concentration, dizziness, headaches, muscle soreness, and constipation or diarrhea. These symptoms can be aggravated by stress, lack of sleep, dry air, dehydration and a bumpy airplane ride.

Keep in mind that it generally takes one day at your destination to fully adjust for a one-hour time zone change. Also, the symptoms of jet lag are often worse when traveling eastward rather than westward.

There is no single, proven method for preventing or "curing" jet lag. But there are some things you might try:

Before your trip, reset your internal clock. Several days before your trip, gradually adjust your sleep schedule to more closely match the time at your destination. For example, if you are traveling

eastward, start going to bed an hour earlier every day and getting up an hour earlier.

Choose a daytime flight when possible to avoid sleep loss and fatigue. Make sure you are well rested and not sleep-deprived before your trip. Also, wear loose, comfortable clothing on your flight so that you can relax and rest more easily.

During the flight, drink plenty of fluids to stay hydrated and limit alcohol and caffeine. Avoid taking sleeping pills during the flight. If you have trouble sleeping after a few days at your destination, consider taking a mild sleeping pill – unless your doctor advises otherwise.

When you arrive at your destination, reset your watch to local time. If possible, allow yourself a day or two to acclimate to the time change.

Some research suggests melatonin, an over-the-counter supplement, may help decrease jet lag. You may try taking 1 to 3 milligrams of melatonin at bedtime for several days once you arrive at your destination. However, the benefits of melatonin are often exaggerated. More research is needed to determine its potential benefits and risks.

Exercise may have benefits in colon cancer

Vigorous physical activity following a diagnosis of colorectal cancer substantially reduces the risk of death due to cancer or other causes, two studies indicate. Neither stage of disease nor surgery appears to significantly alter these outcomes. In one study, Dr Jeffrey A Meyerhardt, from Dana Farber Cancer Institute in Boston, and his team identified 573 women diagnosed with stage I, II, or III colorectal cancer. During a median follow-up of 9 years and six months, 132 women died; 80 of these deaths were due to the cancer.

The investigators documented the level of physical activity the participants reported following their diagnosis, and translated that to "metabolic equivalent tasks" (MET-hours per week). For example, walking at a rate of 2.9 mph was assigned a score of 3 MET-hours, aerobic exercise was given a 6, and running faster than 10 min/mile was counted as 12 MET-hours.

After adjusting for multiple confounders, the authors observed that compared with patients who reported less than 3 total MET-hours per week of activity, those reporting 18 or more MET-hours per week were significantly less likely to die of their cancer or

of any cause. In another study, Meyerhardt's team studied 832 patients with advanced colon cancer who underwent surgery and chemotherapy with "curative intent." The subjects reported their recreational physical activities approximately 6 months after their treatment had ended.

During median follow-up of 2 years and seven months, 159 patients had cancer recurrence and 84 died.

Compared with patients exercising less than 3 MET-hours, those who exercised 18 to 26.9 MET-hours per week were less likely to die in adjusted analyses, similar to the other study.

But before advice physicians can be absolutely sure that exercise prevents progression or recurrence of cancer, randomised, controlled trials will be required doctor points out. Furthermore, important questions remain unanswered, she added, such as the safety of exercise for patients who have been given therapy toxic to the heart, what exercises are most beneficial, and which patients are most likely to be benefited.

Source: Journal of Clinical Oncology



Your Doctor

Send your health related queries to Your Doctor, Star Health, The Daily Star, 19, Karwan Bazar, Dhaka 1215 or e-mail your problem to starhealth@thedailystar.net

