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e-mail: starhealth@thedailystar.net

Diabetes and exercise: When to monitor blood sugar

DR TAREQ SALAHUDDIN

If you have diabetes and you want to exercise, that is great. Exercise can help you improve your overall fitness and help you manage your condition. But do not forget to track (monitor and record) your blood sugar before, during and after exercise. It can help you and your healthcare team see how your body responds to exercise. And it can help prevent dangerous episodes of low blood sugar (hypo-glycemia), high blood sugar (hyperglycemia) and high urine ketone levels (ketoacidosis).

Find out when it is safe for you to start exercising, when to check your blood sugar and what to do if you experience symptoms of low blood sugar. If you have been inactive or have a medical condition, talk to a physician before you begin your exercise programme.

Before you exercise: Check your blood sugar twice

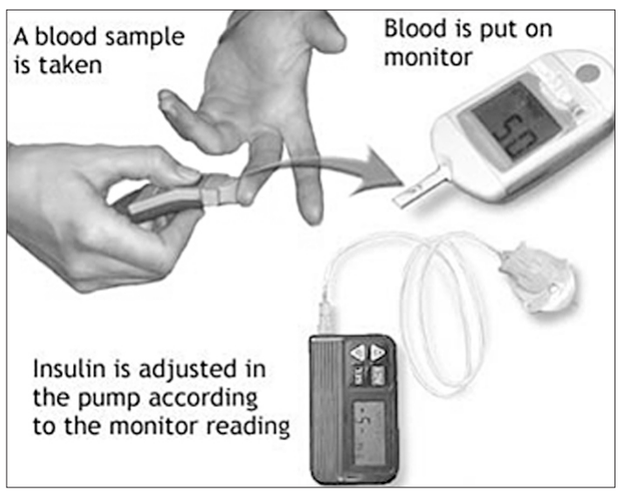
Your goal is to make sure that your blood sugar is not too low before you begin exercising and that it does not drop too low during and after your workout.

To avoid swings in your blood sugar, test it 30 minutes before you start and then once again immediately before exercising. This can help you determine if your blood sugar level is stable, rising or falling before you start to exercise. Avoid problems by following these guidelines:

•**Less than 100 milligrams per deciliter (mg/dL)?** No matter what type of diabetes you have, if your blood sugar is less than 100 mg/dL, eat a small carbohydrate-containing snack such as fruit or crackers before exercising.

•**100 to 250 mg/dL?** For most people, this is a safe pre-exercise blood sugar range.

•**250 mg/dL or higher?** Before exercising, test your urine for ketones. If the results show a moderate or high ketone level, don't exercise. Wait until your ketones test indicates a low level. The excess ketones indicate that your body does not have enough insulin to control your blood sugar and can lead to ketoacidosis.



•**300 mg/dL or higher?** No matter what type of diabetes you have, do not exercise. You need to bring your blood sugar down before you can safely exercise because you risk an even greater increase in your blood sugar, which can lead to ketoacidosis.

During exercise: Check your blood sugar every 30 minutes

It is especially important to check your blood sugar during exercise if you are starting aerobic exercise for the first time, trying a new activity or sport, or increasing the intensity or duration of your workout. If you exercise for more than an hour, especially if you have type 1 diabetes, stop and test your blood sugar every 30 minutes.

If it is 70 mg/dL or lower, or if it is not that low but you have symptoms of low blood sugar — feeling shaky, weak, anxious, sweaty, or confused — eat a snack that serves as a fast-acting source of sugar. Examples include:

•Two or three glucose tablets

•1/2 cup of fruit juice

•1/2 cup of regular (not diet) soft drink

•Five or six pieces of hard candy Recheck your blood sugar 15 minutes after this snack. If it is still too low, have another serving and test again 15 minutes later, until your blood sugar reaches 70 mg/dL or higher.

After exercise: Check your blood sugar at least twice

When you have finished exercising, check your blood sugar again. The more strenuous the workout, the longer your blood sugar is affected. Check your blood sugar a couple of times after exercising to make sure you are not developing hypo-glycemia, which can occur even hours after you have stopped. Exercise draws on reserve sugar stored in your muscles and liver. As your body rebuilds those stores, it takes sugar from your blood, lowering your blood sugar level.

Be encouraged

You may think that testing your blood sugar before, during and after you exercise requires a lot of effort. Keep in mind that once you and your healthcare team know how your body responds to aerobic exercise, you can probably cut back on testing.

Health Tips

Coffee may cut risk of gout

If men ever needed a reason to justify that extra cup of coffee, here it is: four or more cups of coffee a day appear to reduce the risk of gout, Canadian researchers said.

Gout is a painful joint disorder caused by a buildup of uric acid in the blood.

In the past, patients at risk for gout were advised to avoid coffee, but Dr. Hyon Choi of the University of British Columbia in Vancouver, Canada, and colleagues at Harvard Medical School in Boston wanted to see just what effect coffee might have on the condition.

Over the 12 years of the study, during which 757 men developed gout, the risk was lower for those who drank more coffee

"We found that when they are drinking four to five cups of coffee, there was a 40-percent reduction. Drinking six or more cups resulted in a 50- to 60-percent reduction (in the risk for gout)," Choi said.

Men who drank decaffeinated coffee also benefited, Choi said, but tea appeared to have no effect.

The researchers found significantly lower levels of uric acid in the blood of those who consumed large quantities of coffee. Uric acid is the compound that causes gout.

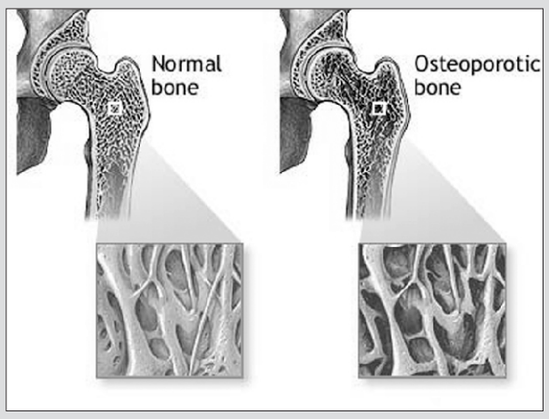
Choi said the findings appear to suggest that something in the coffee other than caffeine — such as a strong antioxidant — may be helping to reduce uric acid levels.

Coffee is one of the most widely consumed beverages in the world.

Choi said people should not rush out to the corner coffee shop to treat their gout.

But "if you are drinking coffee already and have gout or are at higher risk of developing gout ... there is no need to reduce or stop coffee consumption," he said.

Source: Journal Arthritis & Rheumatism



Once-a-year treatment prevents osteoporosis

REUTERS, *Boston*

The Novartis osteoporosis drug Reclast, given once a year, reduces the risk of broken bones for three years but may spark an abnormal heart rhythm in some patients, researchers said.

"For people who either don't want to take, or can't take, oral drugs, this is a really good alternative that's really effective," said Dr. Dennis Black of the University of California San Francisco, who led the study.

"For the first time, women could have the option of being treated once a year for osteoporosis, instead of having to remember to take a weekly pill."

Reclast, sold outside the United States as Aclasta, is already approved in more than 50 countries to treat the abnormal bone growth of Paget's disease. It is under review in the United States for osteoporosis.

Earlier Reclast studies in women with osteoporosis showed that one 15-minute infusion increased bone density for a year.

In the three-year study, also sponsored by the Swiss drugmaker, one infusion of the drug cut the risk of spine fractures by 70 percent and the chance of hip fractures by 41 percent. Conventional oral drugs typically produce a 40 to 50 percent reduction in spine bone breakage.

The results are "impressive," Dr. Juliet Compston of Britain's University of Cambridge wrote in a commentary in the New England Journal of Medicine, where the study appears.

However, serious atrial fibrillation — an abnormal heart rhythm that can increase the risk of stroke — was nearly three times more common among the 3,889 volunteers getting the Novartis drug than among the 3,876 given placebo infusions. One in 77 Reclast patients developed the problem.

"Everyone is trying to figure out if this is a true effect of the drug, or just a random event," said Black, who has received grants from Novartis.

Doctors are not sure if it is a side-effect because most cases of atrial fibrillation surfaced more than 30 days after treatment, Black.

A letter in the same issue of the Journal reports that a new analysis of a study of Merck's Fosamax, another bisphosphonate, found that 1 percent of the placebo patients experienced serious atrial fibrillation compared to 1.5 percent for the women getting the pill, known generically as alendronate.

"Thus, it is a potential concern, and a causal relationship must be given serious consideration," Compston said.

The new study found that the annual infusions of Reclast, known generically as zolendronic acid, produced other side-effects.

Overall, 31.6 percent of the Reclast recipients had fever, joint and muscle pain, headache, or flu-like symptoms after their injections, compared to 6.2 percent who got placebo injections.

But the chance of having any of those symptoms dropped to 6.6 percent with the second yearly injection, and 2.8 percent with the third.

Doctors would prefer a once-a-year treatment for osteoporosis because patients do not always take other medication regularly.

Bisphosphonate pills are supposed to be taken on an empty stomach with a full glass of water, and the patients must be upright for at least 30 minutes. As a result, most patients skip at least 20 percent of their pills.

Osteoporosis affects millions of women worldwide.

Health News

World's first lung transplant on HIV patient performed

REUTERS, *Milan*

Doctors in Italy have performed the world's first lung transplant on an HIV patient, a medical institute in the southern city of Palermo said.

The man, whose age was not disclosed, had terminal respiratory problems and the transplant was his only chance of survival, doctors said. The patient was said to be in good condition after the operation.

"This is an important event in the progress of transplants," Alessandro Nanni Costa, director of Italy's National Transplant Centre, said in a statement.

Previously far only kidney, liver and pancreas transplants have been performed on HIV patients, according to the Mediterranean Transplant Institute, which is based in Sicily.

Doctors said it was thanks to better drugs to treat HIV that such operations could be performed.

"In the last ten years, we have seen a definite improvement in the long-term survival (of HIV patients), which has allowed for some to be considered for organ transplants," medical expert Paolo Grossi said.

Art of Living members donated blood

Art of Living, Bangladesh members donated blood for Thalassemia patients on May 13, 2007 to celebrate the 50th anniversary of "Sri Sri Ravi Shankar", the spiritual leader and founder of the organisation.

The programme was arranged in collaboration with the Safe Blood Transfusion Programme (SBTP), Ministry of Health, Bangladesh. The SBTP got involved in such activity for the first time and expressed their will to support the thalassemia patient with safe blood component from their state of art National Reference Laboratory.

Rafi Hossin, the instructor of the Art of Living, who himself donated blood in the programme expressed to arrange such programmes on a regular basis.

INTEGRATED MANAGEMENT OF CHILDHOOD ILLNESS

An important strategy to provide effective healthcare to under five children of the country

DR M KARIM KHAN

Integrated management of childhood illness (IMCI) is one of the most important component of under five health management programme. To achieve MDG by 2015, we have to further reduce the infant mortality rate and under five mortality rate.

Since 2001, IMCI has started its journey in Bangladesh. Now it has got a definitive shape and momentum. Doctors and paramedics of 174 Upozilla health complexes has already been trained in IMCI. By 2010 all upazilla health complex will be brought under the umbrella of IMCI training programme. These training programmes are arranged and funded by DGHS, WHO, UNICEF, ICDDR,B. This is an eleven days extensive training programme conducted in different medical colleges , Institute of Child and Mother Health, Shishu Hospital and ICDDR,B.

Each year more than 10 million children in low-and middle-income countries die before they reach their fifth birthday. Seven in ten of these deaths are due to just five preventable and treatable conditions: pneumonia, diarrhoea, malaria, measles, and malnutrition. Often these occur in simultaneously.

Every day, millions of parents seek healthcare for their sick children, taking them to hospitals, health centres, pharmacists, doctors and traditional healers.

Surveys reveal that many sick children are not properly assessed and treated by these healthcare providers, and that their parents are poorly advised.

At first-level health facilities in low-income countries, diagnostic supports such as radiology and laboratory services are minimal or non-existent, and drugs and equipment are often scarce. Limited supplies and equipment, combined with an irregular flow of patients, leave doctors at this level with few opportunities to practice complicated clinical procedures. Instead, they often rely on history and signs and symptoms to determine a course of management that makes the best use of the available resources.

These factors make quality care to sick children a serious challenge. WHO and UNICEF have addressed this challenge by developing a strategy called Integrated Management of Childhood Illness (IMCI).

What is IMCI?

IMCI is an integrated approach to child health that focuses on the well-being of the whole child. IMCI aims to reduce death, illness and disability, and to promote improved growth and development among children under 5 years of age. IMCI includes both preventive and curative elements that are implemented by families and communities as well as by health facilities.

What does IMCI strive to do?

In health facilities, the IMCI strategy promotes the accurate identification of childhood illnesses in outpatient settings, ensures appropriate combined treatment of all major illnesses, strengthens the counselling of caretakers, and speeds up the referral of severely ill children. In the home setting, it promotes appropriate care seeking behaviours, improved nutrition and preventative care, and the correct implementation of prescribed care.

Why IMCI better then single condition approach ?

Children brought for medical treatment in the developing world are often suffering from more than one condition, making a single diagnosis impossible. IMCI is an integrated strategy, which takes into account the variety of factors that put children at serious risk. It ensures the combined treatment of the major childhood illnesses, emphasising prevention of disease through immunisation and improved nutrition.

How does IMCI accomplish these goals?

Introducing and implementing the IMCI strategy in a country is a phased process that requires a great deal of coordination among existing health programs and services.

The main steps involve:

·Adopting an integrated approach to child health and development in the national health policy.

·Adapting the standard IMCI clinical guidelines to the country's needs, available drugs, policies, and to the local foods and language used by the population.

·Upgrading care in local clinics by training health workers in new methods to examine and treat children, and to effectively counsel parents.

·Making upgraded care possible by ensuring that enough of the right low-cost medicines and simple equipment are available.

·Strengthening care in hospitals for those children too sick to be treated in an outpatient clinic.

·Developing support mechanisms within communities for preventing disease, for helping families to care for sick children, and for getting children to clinics or hospitals when needed.

The writer is an Associate Professor of Department of Pediatrics at Community Based Medical College, Mymensingh. [E mail: mkarim_khan@yahoo.com]

FACTS ON DIABETES

There is an emerging global epidemic of diabetes that can be traced back to rapid increases in overweight, obesity and physical inactivity. Total deaths from diabetes are projected to rise by more than 50 percent in the next 10 years. Most notably, they are projected to increase by over 80 percent in upper-middle income countries. Type 1 diabetes is characterized by a lack of insulin production and type 2 diabetes results from the body's ineffective use of insulin. Type 2 diabetes is much more common than type 1 diabetes, and accounts for around 90 percent of all diabetes worldwide. Reports of type 2 diabetes in children - previously rare - have increased worldwide. In some countries, it accounts for almost half of newly diagnosed cases in children and adolescents. A third type of diabetes is gestational diabetes. This type is characterised by hyperglycaemia (raised blood sugar level), which is first recognised during pregnancy. In 2005, 1.1 million people died from diabetes. The full impact is much larger, because although people may live for years with diabetes, their cause of death is often recorded as heart diseases or kidney failure. 80 percent of diabetes deaths are now occurring in low- and middle-income countries. Lack of awareness about diabetes, combined with insufficient access to health services, can lead to complications such as blindness, amputation and kidney failure. Diabetes can be prevented. Thirty minutes of moderate-intensity physical activity on most days and a healthy diet can drastically reduce the risk of developing type 2 diabetes.