

LIVE WELL WITH DIABETES

Sweet Life



(AN INITIATIVE OF MV HOSPITAL FOR DIABETES (PVT) LTD., ROYAPURAM, CHENNAI, INDIA)



CARBS & DIABETES

"Can I reverse my diabetes if I cut out all carbs from my diet?"

COPING WITH FLU AND DIABETES

Flu and other viral infections can lead to higher blood sugar levels and increase the risk of serious short term complications.

Get the best from the fruits you eat.

Fruits are nature's medicine however there are right and wrong combinations to eat them



Sleep

Your Best Friend!



What's the **NEW** Research published from
Prof M Viswanathan Diabetes Research Centre, Royapuram



Gait changes in persons with diabetes: Early risk marker for diabetic ulcer.

Gnanasundaram S, Rmalingam P, Bhebrananath Das and Vijay V. Foot and Ankle surgery 2019: Jan

There is an increasing prevalence of diabetic foot ulcer (DFU) and subsequent foot amputation in people with Type 2 diabetes with diabetic neuropathy. The aim of the study was to identify the initial risk marker for DFU.

The study concluded that gait variations and restrictions in subtalar and first metatarsophalangeal joint are found in persons with diabetic neuropathy even before the onset of foot deformity.

Insights on Medical Nutrition Therapy for Type 2 Diabetes Mellitus: An Indian Perspective'.

Vijay V, Dharini K, Sanjay Kalra, Rajeev Chawla, Magesh Tiwakar, Banshi Saboo, Manash Baruah, Subhankar Chowdhury, Makkar BM, Shalini Jaggi. Adv Ther 2019 PMID: 30729455

MNT includes counselling and recommending dietary intake and setting nutritional goals by a Registered Dietitian (RD) or nutrition expert and regular monitoring by RD and Diabetologist.

The study concluded that MNT is an effective and affordable therapeutic approach that is very necessary for prevention and management of Type 2 diabetes. Its success relies on providing accurate, acceptable and appropriate dietary choices for continued adherence. A combined effort is required from diabetologists, endocrinologists, internists, and registered dietitians to prioritize and implement MNT in diabetes practice in India.



Making a POiNT of preventing Type 1 diabetes

Scientists at the University of Oxford are part of a novel global world-first study to find out if giving insulin to high risk babies could prevent them from developing Type 1 diabetes. Type 1 diabetes starts when the immune system mistakenly attacks cells in the pancreas and the insulin they produce. Although it might be diagnosed later in life, changes in the immune system that put them

at risk of type 1 diabetes can start as early as 9 months. Scientist believe that this presents a time to take action and prevent the attack by feeding high risk children small doses of insulin powder orally on the premise that their immune systems will become familiar with insulin and will be less likely to attack the pancreas.

Ref: Balance - Winter 2018



Hello!

Greetings for the New Year!

I would like to share a great piece of news with all my readers. Prof. MVDRC has yet again been recognized as a SIRO (Scientific and Industrial Research Organization) Institute by the Department of Science and Technology,

Government of India till 2022.

MVH is also a CDiC Centre that caters to a mixed age group of children with Type 1 diabetes. The CDiC (Changing Diabetes in Children) programme works to improve provision of care to children with Type 1 Diabetes mellitus and their families, especially among those with limited resources. This programme was launched in India in 2011 and supported by the Novo Nordisk Education Fund. It works continuously to improve diabetes awareness, to motivate children to reach their goals and to receive all-inclusive treatment.

What is the effect of a carb free diet or a low carb diet on diabetes management – This is a question that is frequently asked by people with diabetes and much research has been conducted on this. Read more about it in this issue.

There are many other informative articles for you in this issue which I hope will be useful to you.

With regards

Dr. Vijay Viswanathan

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Sleep ^{zzzz} Your Best Friend!

Good sleep is very essential for everyone but more so for people with diabetes.

Dr Mitalee Barman

Consultant Diabetologist, MVH, Royapuram

BUSY LIFESTYLES, EXACTING WORK SCHEDULES, ACCESS TO 24- HOUR TECHNOLOGY AND ENTERTAINMENT, WORKING IN SHIFTS... these are among the many reasons that people do not get sufficient sleep. The internal body clock is often ignored and we have learnt to sleep whenever we have the time.

The body and mind need sleep for a few hours each night. During sleep, the nervous system becomes inactive, eyes close, heartbeat and breathing slow down, body temperature drops, muscles relax and consciousness is almost suspended. . The person wakes up feeling refreshed and ready to face another day.

Sleep patterns change as people grow older but it also depends on individual requirements. Babies need 16-18 hours of sleep to help growth and brain development. School going children and teenagers need 9 ½ hours. Most adults need 7 -9 hours of sleep but after the age of 60, sleep tends to be shorter, lighter and interrupted.

There are two basic types of sleep – Rapid Eye Movement (REM) sleep and non – REM sleep which has 3 stages. We pass through all stages of non- REM sleep several times during a typical night with increasingly longer deeper REM periods towards morning.

Research shows that interrupted sleep causes hormonal changes that can result in hunger and weight gain, and affect food choices and insulin sensitivity. Having less than 6 hours of sleep each night can increase the risk of cardiovascular disease and type 2 diabetes and other NCDs in later life. People who work in shifts have to keep adjusting their internal body clock which also has a negative effect on their health in the long run. Good sleep is very essential for everyone but more so for

people with diabetes. There are a whole lot of factors that can affect the good sleep of people with diabetes. Night time hypos can disrupt sleep. High glucose levels can make one hot, restless and thirsty resulting in drinking a lot of water which makes them need to pass urine many times during the night. If the person has neuropathy, it is hard to sleep with the pain and the pins and needles. If overweight, sleep apnea can



disturb sleep.

Lack of sleep puts added demands on the individual with diabetes. Prolonged disturbed sleep makes a person tired. This can affect the way the individual copes with diabetes management and also the mood of the person. This is especially dangerous because people with diabetes are at higher risk of mental health problems such as depression. Sleep deprivation increases the stress hormone cortisol, which prompts the body to store more fat, increases the appetite, craving for sugary and fatty foods resulting in spikes in blood glucose and weight gain. Studies also show a link between lack of sleep and an increased insulin resistance which affects blood glucose levels.

Sleep Secrets

The cure for sleep difficulties can often be found in the daily routine.

Unhealthy daytime habits and lifestyle choices can result in disturbed sleep and have a negative effect on a person's mood,

brain and heart health, immune system, creativity, energy and weight. Try out the following tips for good sleep to get better sleep at night, improve mental and physical health, and to be alert and comfortable during the day.

Tip1. Understand your body's natural sleep-wake cycle, or circadian rhythm. *Have you ever noticed that you can do a lot more work at around the same time everyday? You must have heard of people describing themselves as 'a morning person' or a 'mid- day person'. This is because there are certain times when people feel the energy to do a lot more. The same goes for the feeling that it's time to wind down. This is because of the circadian rhythm. A circadian rhythm is a natural, internal process that regulates the sleep-wake cycle and repeats roughly every 24 hours. It is one of the most important strategies for sleeping better. The trick is to try to go to sleep and get up at the same time every day. This helps to set your body's internal clock and to improve the quality of your sleep. You will feel more refreshed and energized if you sleep a particular number of hours at the same time regularly than if you sleep for the same number of hours but at irregular times.*

A good sleep means waking up naturally without an alarm



If you toss and turn in your bed, it means that you are not sufficiently drowsy to get sleep. Choose a bed time when you normally feel tired, so that you don't toss and turn. On the other hand, do you need an alarm clock to wake you up? Then you may not be getting enough sleep and you may need to sleep at an earlier time.

Try to avoid sleeping late to make up for lost sleep time. —even on weekends.

Do you try to catch up on lost sleep at the weekends? If you need to make up for a late night, take a short nap during

the day. This allows you to catch up on lost sleep without disturbing your natural sleep-wake rhythm.

Be smart about napping.

While napping is a good way to make up for lost sleep, if you have trouble falling asleep or staying asleep at night, napping can make things worse. A short nap of 15 to 20 minutes in the early afternoon is ideal.

Fight 'after-dinner' drowsiness.

Most people feel sleepy after a meal. Resist the urge to lie down just after a meal. Take a leisurely walk. Do something such as washing the dishes, calling a friend, or getting clothes ready for the next day. If you sleep early, you may wake up later in the night and have trouble getting back to sleep.

Tip 2: Control your exposure to light

Melatonin, a hormone that helps regulate the sleep-wake cycle, is controlled by exposure to light. The brain secretes more melatonin when it is dark. This makes one feel sleepy. It secretes less in light which makes one more alert.

Get more exposure to light during the day

After you wake up in the morning, expose yourself to sunlight. Take a morning walk, have coffee or breakfast by a sunny window. This will help wake you up.

Spend more time outside during daylight.



Let as much natural light into your home or workspace as possible. Keep curtains and shades open during the day, and try to move your desk closer to the window.

Get less exposure to light during the night

Avoid placing the TV or computer in the bedroom. Avoid looking at bright screens 1-2 hours before bedtime. The blue light emitted by phone, tablet, computer, or TV disturbs sleep. Avoid late-night television shows. Not only does the light from



a TV suppress melatonin, but many programs might be stimulating rather than relaxing. Try listening to music or audio books or read

printed books instead.

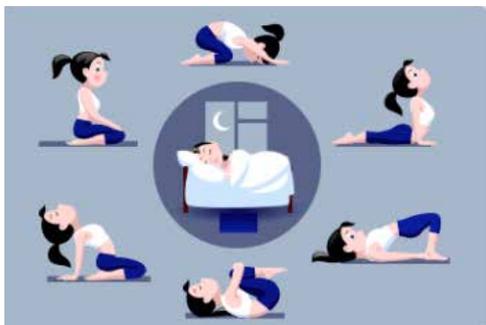
When it is time to sleep, make sure the room is dark. Street lights and light from electronic devices disturb sleep. Use heavy curtains or shades to block light from windows,

Keep a nightlight on in the hall or bathroom instead of switching on the lights in the middle of the night. This will make it easier to fall back to sleep.

Tip 3: Exercise during the day

Regular exercise promotes better sleep at night and greater alertness during the day. Even light exercise—such as walking for just 10 minutes a day—improves sleep quality. As the strength of exercise increases, the better sleep one gets. Try to build up a regular exercise habit.

Time your exercise right



Exercise increases the metabolism, raises body temperature, and stimulates hormones. The best time for workouts and exercise is in the

morning or afternoon or at least three to four hours before bedtime. Yoga or gentle stretching in the evening can also help to relax and help promote sleep.

Tip 4: Be smart about what you eat and drink

What is eaten during the daytime and before bedtime plays a role in how well one sleeps.

Avoid big meals at night. Try to have dinner earlier in the evening, and avoid heavy, rich foods two hours before bedtime. Spicy or acidic foods can cause stomach trouble and heartburn. Caffeine and nicotine are stimulants that can disturb sleep.

Avoid alcohol before going to sleep. It might help to relax but it will interfere with sleep.

Avoid drinking too many liquids in the evening.

Drinking lots of fluid may result in frequent bathroom trips throughout the night.

Reduce sugar and refined carbs.

Eating lots of sugar and refined carbs such as white bread, white rice, and pasta during the day can interfere with sleep time at night.

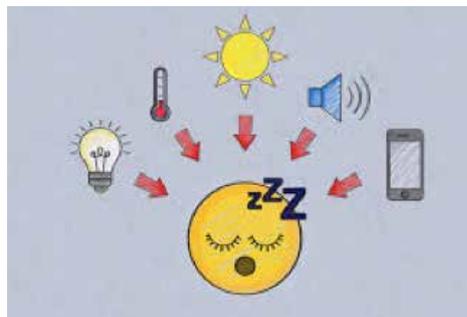
Some people get better sleep after a light snack such as a small bowl of whole-grain, low-sugar cereal, milk or yogurt, or a banana before bed.

Tip 5: Wind down and clear your head

Stress, worry, or anger from day time activities can make it very difficult to sleep well.

Relaxation techniques for better sleep

Carrying out relaxation techniques before going to bed helps to calm the mind and prepare for sleep.



Deep breathing - Close your eyes and take deep, slow breaths, making each breath even deeper than the last.

Progressive muscle relaxation

- Starting with your toes, tense all the muscles as tightly as you can, then completely relax. Work your way up to the top of your head.

Reading a book or magazine, a warm bath, soft music, easy stretches, listening to audio books, getting things ready for the next day, dim lights are some bedtime rituals that promote relaxation.

Tip 6: Improve your sleep environment

Sometimes even small changes to your environment can make a big difference to your quality of sleep.

Keep the room dark, cool, and quiet. Keep noise down. Keep your room cool - not too warm or too cold - with good ventilation. Make sure the bed is comfortable. If you often wake up with a sore back or an aching neck, check out how firm the mattress is, and how much support the pillows provide.

Carbohydrates & Diabetes

“Can I reverse my diabetes if I cut out all carbs from my diet?”

“Aren't fruits full of carbs?”

“What foods should I eat before and after exercise?”

These are some common questions asked by people with diabetes.

Unfortunately the answer to the first question is ‘No’.

But you can control diabetes by keeping an eye on the amount of carbs you include in your diet. Cutting out all carbohydrate from the diet or even trying to eat very little of it is not an easy task as humans crave for carb rich foods! It is also not a healthy practice, because carbs provide some essential nutrients to the body. It is also a source of energy, helps enhance sleep, helps to prevent diseases, helps keep memory sharp, uplifts mood, and is a source of fibre which improves the digestive system.

Although the amount of carbs eaten has a direct effect on blood glucose level after eating, studies comparing relatively high carb diets and low carb diets have shown no significant difference in long term HbA1C.

It is not how much of carbs you consume but the quality of carbs that is more important for long term diabetes management and general health.

Therefore whole grains, brown rice, vegetables, pulses, unsalted nuts, unsweetened yoghurt, low fat milk are better than sugary drinks and highly processed carbs from which all bran, fibre, and important nutrients have been removed. These include white bread, pizza dough, pastries, biscuits, white flour, polished white rice, and many breakfast cereals.

The source of protein and fats that replaces the carbs is equally important in a low carb diet. Therefore pulses, unsalted nuts,

avocados, oily fish, olive oil are better than red meats, processed meat, butter and ghee and lard.

Are you tempted to avoid fruits to lower carbs? Although the calories in fruit are mainly carbs and a little protein, for overall health it is important to eat fruit and vegetable daily. Choose fruit with relatively lower amount of carb such as apple, berries, water melon, cantaloupe, avocado and so on. Choose less starchy vegetables such as cucumber, spinach, cabbage, cauliflower, broccoli, celery lettuce and mushroom.

The secret is to consume small portions.

There is no strong published evidence to say that a low carb diet is effective for people with Type 1 diabetes. However, some people with Type 1 diabetes are able to reduce insulin requirements and improve their blood glucose control by lowering carb.

Choosing lower GI foods can help manage long term blood glucose levels especially in Type 2 diabetes and is better for general health. However not all low GI foods are healthy. For example, chocolate has low GI because of the fat that slows absorption of carbs. Frying, baking, and boiling can change the GI levels of foods.

There is some evidence to show that reducing carbs in the diet of children has unfavourable effects such as poor growth, greater risk of CVD and psychological problems. Children require many different nutrients for growth, so restricting food groups increases their risk for deficiencies. There is also not enough information to predict how restricting insulin, a growth hormone, impacts on children's development.



Coping with Flu and Diabetes

Flu and other viral infections can lead to higher blood sugar levels and increase the risk of serious short term complications.

Influenza is a viral infection that is easily spread through air when people cough or sneeze without taking the necessary hygienic precautions to cover their mouths with hand or handkerchief especially in public spaces. It does not spare anyone, however, older people, children and people with diabetes are at greater risk of getting infected and developing the dangerous complication, Pneumonia.

How does influenza affect blood glucose levels?

It usually increases the blood glucose level. So if a person with diabetes has caught the infection, it is important to check blood glucose levels more often than normal to prevent hypo- or hyper glycaemia.

Everyone with diabetes should be regularly vaccinated against influenza. Flu can be prevented either through injection or a nasal spray. The injection can be used from 6 months upwards on healthy people as well as people with chronic conditions and during pregnancy. The nasal spray flu vaccine is made from live weakened flu virus and is approved for healthy people 2-49 years old but not for pregnant women.

If any family member or acquaintance is infected, stay away from them. Wear a mask in public places and wash hands frequently especially during the flu season. Consult your doctor about medication.

People with diabetes should strictly follow their regular food habits and other diabetes management routine.

Get the best from the fruits you eat.



Fruits are nature's medicine however there are right and wrong combinations to eat them.

Fruits contain a lot of important minerals, vitamins and anti - oxidants . However, the way you eat them can affect their digestion, absorption and assimilation in the body . Ayurveda and holistic nutrition experts give a lot of importance to the combinations of fruit and other foods as It is believed that some combinations are good while others have a negative effect on the body.

Here are a few ways to get the best results from eating fruits

1. Try to keep fruits and coffee and tea separate. Tannins and caffeine in tea and coffee interfere with the absorption of nutrients and anti-oxidants in fruits and vegetables resulting in low immunity. So to get the best from the food you eat, don't consume them at the same time. Space them out.
2. Fruits are quick and easy to digest while cooked food takes time to digest. If eaten at the same time, fruits can stay for a longer time in the stomach thus causing sugar to ferment and cause bloating, burping and flatulence. Also, the simple carbs from fruit require different enzymes compared to those required for cooked foods. So leave a gap of 45 minutes between cooked food and fruits.
3. Dried fruits like dates, dried apricots and prunes are great foods but they have concentrated sugar. So, when eaten in combination with fresh fruit , they are not so good because it can contribute to an overload of fruit sugar for the liver to process. Try eating them alone when you need a burst of energy.
4. Fruits are super foods and so are wheatgrass and moringa. Eating them in combination can interfere with their absorption. So eat one super food at a time.
5. The protein in milk and the acid in fruits can cause digestive discomfort and can also affect absorption. So if you love a fruit shake, try and use the ripest of fruits and add spices such as nutmeg, cardamom, and fennel to enhance the digestive process.



Recipe

Bean and Corn Quesadillas

Ingredients

| | |
|------------------------------------|---------------|
| 8 inch Tortillas or Wheat chapatis | 2 |
| Freshly cooked corn | 3 tablespoons |
| Diced tomato | 3 tablespoons |
| Fresh cooked rajma | 3 tablespoons |
| Large chilly (jalapeno) diced | ½ |
| Jeera powder | ¼ teaspoon |
| Chilli powder | ½ teaspoon |
| Red capsicum, diced | ¼ |
| Coriander leaves, finely chopped | 1 teaspoon |
| Grated low fat paneer | ¼ cup – ½ cup |
| Hung curd or Greek yogurt | 2 tablespoons |
| Oil | 2 teaspoons |

Method

Mix together the corn, tomatoes, rajma, coriander leaves, chilli powder, large chilli and capsicum in a bowl.

Place one tortilla or chapatti on a plate and spread the mixture on it. Sprinkle grated paneer over the mixture. Cover with the other chapatti or tortilla and press together gently.

Lightly grease a pan. Place the quesadilla in the pan and cook to a crisp for about 3 minutes on medium flame . Turn gently and repeat the process.

When done, place on a plate , cut into quarters and garnish with hung yogurt or Greek yogurt and some coriander leaves. Serve immediately.

M.V.Hospital for Diabetes, Royapuram has been treating people with Diabetes mellitus and conducting research in diabetes for over 60 years. It is also a teaching institute. It has branches at

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