

CRUSADE Against Diabetes

A bulletin of the Prof.M.Viswanathan Diabetes Research Centre
and M.V.Hospital for Diabetes (P) Ltd.

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Prof.M.Viswanathan & DRC Gold Medal Orations 2010 and the presentation of the Lifetime Achievement Award

The M.V.Hospital for Diabetes hosted its annual orations on Sunday, 13 March, 2011 at the Taj Connemara. The function was inaugurated by Shri Surjit Singh Barnala, the Honourable Governor of Tamil Nadu. Dr. S.S. Badrinath, Chairman Emeritus, Sankara Netharalaya, Chennai, received the **Life Time Achievement Award**.

Dr. Shanthi Mendis, Coordinator of the Cardiovascular Program & Global Program for Prevention and Management of Non-communicable Diseases, World Health Organization, Geneva delivered the **Prof. M. Viswanathan Gold Medal Oration 2010**.

Prof. Shiv Kumar Sarin, Chairman, Board of Governors, Medical Council of India & Director, Professor & Head, Institute of Liver and Biliary Sciences, New Delhi delivered the **DRC Gold Medal Oration 2010**.

A CME on the latest Update of Diabetes was also organized for the doctors where experts took classes, practical demonstrations and made case presentations.



Dr. S.S. Badrinath receiving the Lifetime Achievement award from the Governor of Tamil Nadu



Dr. Shanthi Mendis receiving the Prof. M. Viswanathan Oration award from the Governor of Tamil Nadu



Prof. Shiv Kumar Sarin receiving the DRC Oration Award from Shri Surjit Singh Barnala, Governor of Tamil Nadu

From the Editor's Desk



Dr. Vijay Viswanathan

Dear Reader,

Greetings from M.V.Hospital for Diabetes & Prof.M.Viswanathan Diabetes Research Centre

It is my pleasure to present the first issue of the CRUSADE for 2011.

I am happy to inform you that we had a good year in the research front in 2010. We have published many papers on different aspects of diabetes in various prestigious journals and we hope to continue in the coming years too.

Prof. M. Viswanathan and DRC Gold medal Orations 2010 were organized and also a historic MOU was signed with the University of Southampton in improving diabetes care and research. You can find the details in this issue.

This issue of the CRUSADE features an article on diet and handling stress. We have answers to many questions you might have had about your diet.

You can mail your valuable comments and suggestions to drvijay@mvd diabetes.com

Dr. Vijay Viswanathan,
MD, PhD, FRCP (London) FRCP (Glasgow)

Managing Director
M.V.Hospital for Diabetes (P) Ltd

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Do you know???

Diabetes can cause changes in the skin of your foot. At times your foot may become very dry. The skin may peel and crack. The problem is that the nerves that control the oil and moisture in your foot no longer work.

After bathing, dry your feet and seal in the remaining moisture with a thin coat of plain petroleum jelly, an unscented hand cream, or other such products.

Do not put oils or creams between your toes. The extra moisture can lead to infection. Also, don't soak your feet — that can dry your skin.



Source ADA

Diabetes in the Elderly

Dr. Mitalee. H. Barman

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Diabetes, the most common disabling metabolic disorder, inflicts considerable economic, social and health burdens especially on the elderly who have to depend on their pensions or small savings for a living. The cost of treatment is high and long-drawn-out and hospitalization imposes a bigger burden. In addition, the effect of ageing on metabolism and renal function makes diabetic management even more complicated and costly. The prevalence of diabetes rises steadily from early adulthood, reaching a plateau in those aged 60 or more. It affects 10-25% of the elderly population (>65 years) world-wide, with a particularly high occurrence among Pima Indians, Mexican-Americans and South Asians.

Glucose tolerance worsens with age mainly due to the impairment of insulin stimulated glucose uptake and glycogen synthesis in the skeletal muscle. Age restricts physical activity and heightens dependence on family members.

Acute and chronic complications of diabetes are very common among the elderly. The most frequent acute complication is hypoglycemia, which is due to either an over-dosage of drugs or a poor intake of food. This

is mainly because their counter-regulatory responses are impaired. Hyperosmolar hyperglycemic syndrome (previously known as HONK – Hyperosmolar Non-Ketotic coma) is another common acute complication. The factors precipitating this condition include infections, myocardial infarctions, stroke, and drugs such as Thiazides and Glucocorticoids.

Neuropathy, retinopathy and nephropathy are some of the common complications in long-standing diabetes. Treating these is an added burden to the cost of the illness. High levels of disabilities that are frequent in elderly diabetics result in over-usage of healthcare resources and in premature mortality.

In addition to the physical disabilities mentioned above, mental or psychosocial problems are tremendous in this group. As a result, good care is very essential from family members as well as from society.

Effective delivery of diabetes care depends on a close co-operation between hospital and community, the involvement of medical and paramedical staff (governmental or non-governmental organizations) and family. It is imperative to attend to all causes of disability and ill-health.

Enhance Your Diet

Dietary Carbohydrate Counting



Diabetes is a deficiency disorder that changes the

way your body uses glucose for energy. The largest contribution of glucose to the body comes from the major dietary source - the CARBOHYDRATES.

Carbs are the body's main source of fuel and are found in grains, fruits, vegetables and milk. They provide energy, fiber, vitamins and minerals.

They are broken down into glucose and enter the bloodstream.

However, carbohydrates raise your blood sugars more than any other nutrients do.



If carbohydrates raise blood glucose, does it mean that as a diabetic, one should stay away from them? NO! The most important factor

in controlling blood sugar is the amount of carbohydrates you eat in a meal, and not the type. Again, that does not mean that a diabetic can eat whatever he/she wants, but that an occasional treat may be okay as long as one makes adjustments in the total amount of carbohydrate eaten in that meal.

Some legitimate questions arise when one considers dietary carbohydrate counting or the number of carbohydrate servings in a particular meal. For this, we need to be clear about what carbohydrate counting is.

Sasibalika.G, Asst. HoD SEPH Dept,
M.V Centre for Diabetes, Mylapore



Carbohydrate counting is not a diet; it is a way of planning your

carbohydrate intake to manage your blood sugar levels. It places importance on keeping the carbohydrate content of your meals and snacks consistent, day after day.

Carbohydrate counting ensures that you can have variety and flexibility in your diet and, most importantly, can follow your traditional diet.

The first step in carb counting is to know the foods that contain carbohydrate. Carbohydrate is found in all foods except meat and fats. Foods that are a good source of carbohydrates are breads, grain, cereals, pasta, starchy vegetables and fruits. Dairy products like milk and yogurt (not cheese and cream) contain carbohydrate in addition to protein. Foods high in carbohydrate are sweets, and combination foods like pizza and casseroles.

Carbohydrate choices are broken down by 15 grams each. In other words, one carbohydrate choice equals 15 grams, 2 carbohydrate choices equal 30 grams, 3 equal 45 and so on.

Most often we may need about 4-5 carbs (60-75gms) or 3-4 carbs (45-60gms) at each meal. 1-2 carbs (15-30gms) for snacks is quite adequate.

Counting carbohydrates requires individuals to become familiar with common serving sizes. One

NEW CENTRE

M.V.Hospital for Diabetes has opened a new centre, the M.V.Centre for Diabetes at Perungudi. This centre situated on the IT Express way of Chennai, is for the convenience of the IT Professionals and the general Public

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servings of a starchy food includes one slice of bread, half a hamburger or half a hot dog bun, 1/3 cup cooked rice and pasta, 1/2 cup of oatmeal and 1/4 of a baked potato. One small piece of fruit, 8 oz. of milk, two small cookies and a 2-inch square of brownie are all one serving of carbohydrates. Each



of these servings contains 15 g of carbohydrates

The nutrition-facts labels on packaged foods list the amount of carbohydrate in ‘grams per serving’. You can use these labels to determine how many carbs you usually consume. For example, if you have 1 cup of cereal for breakfast and the nutrition label says ‘1/2 cup cereal contains 17 carb grams’, your bowl of cereal has 34 grams of carbohydrate. In the carbohydrate “exchange” or “choice” system, one carb choice is equivalent to 15 grams of carbohydrate.

Each cup of raw or each half cup of cooked non-starchy vegetables is counted as 5 grams of carbohydrate. Examples of non-starchy vegetables are asparagus, broccoli, cabbage and green leafy

vegetables. Unless you are eating more than two portions, the carbs in these vegetables don’t need to be counted.

A small reference table, such as the one shown below, is very useful for recording the carbohydrate count of foods you usually include in your diet.

CARB COUNT (gms)1	No. OF SERVINGS
0-5	FREE FOODS
6-10	½
11-20	1
21-25	1½
26-35	2
45	3
60	4

A word of caution!

Carbohydrate counting does not count the calories. It only takes the carbohydrate content of foods into consideration. It is important to limit the intake of carbohydrates with little nutritional value, and also to reduce the intake of total fat (especially saturated and trans-fat), to decrease the risk of weight gain and heart disease.

Diabetes-Related Distress

(Method of coping effectively)



Stress can be physical or mental.

It can complicate your diabetes by distracting you from proper care or affecting blood glucose levels directly.

Learning to relax and making lifestyle changes can help reduce mental stress.

Stress results when something causes your body to behave as if it were under attack. Sources of stress can be physical, or they can be mental.

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When stress occurs, the body prepares to take action. This preparation is called the fight-or-flight response. In the fight-or-flight response, levels of many hormones shoot up. The net effect is to make a lot of stored energy — glucose and fat — available to cells. These cells are then primed to help the body get away from danger.

In people who have diabetes, the fight-or-flight response does not work well. Insulin is not always able to let the extra energy into the cells, so glucose piles up in the blood.

How Stress Affects Diabetes

Many sources of stress are long-term threats. For example, it can take many months to recover from surgery. Stress hormones that are designed to deal with short-term danger stay turned on for a long time. As a result, long-term stress can cause long-term high blood glucose levels.

Many long-term sources of stress are mental. Your mind sometimes reacts to a harmless event as if it were a real threat. Like physical stress, mental stress can be short term: from taking a test to getting stuck in a traffic jam. It can also be long term: from working for a demanding boss to taking care of an ageing parent. With mental stress, the body pumps out hormones to no avail. Neither fighting nor fleeing is any help when the “enemy” is your own mind.



blood glucose levels. Physical stress, such as illness or injury, causes higher blood glucose levels in people with either type of diabetes.

Do a Cognitive Home work

It's easy to find out whether mental stress affects your glucose control. Before checking your glucose levels, write down a number rating your mental stress level on a scale of 1 to 10. Then write down your glucose level next to it. After a week or two, look for a pattern. Drawing a graph may help

you see trends better. Do high stress levels often occur with high glucose levels, and low stress levels with low glucose levels? If so, stress may affect your glucose control.

Reducing Mental Stress :

Making changes

You may be able to get rid of some cause of stress. If traffic upsets you, for example, maybe you can find a new route to work or leave home early enough to miss the traffic jams. If your job drives you crazy, apply for a transfer if you can, or possibly discuss with your boss how to improve things. As a last resort, you can look for another job. If you are at odds with a friend or relative, you can make the first move to patch things up. For such problems, stress may be a sign that something needs to change.

There are other ways to fight stress as well:

- Start an exercise program or join a sports team.
- Take dance lessons or join a dancing club.
- Start a new hobby or learn a new craft.

Coping Style

Something else that affects people's responses to



In people with diabetes, stress can alter blood glucose levels in two ways:

- People under stress may not take good care of themselves. They may drink more alcohol or exercise less. They may forget, or not have time to check their glucose levels or plan good meals.
- Stress hormones may also alter blood glucose levels directly.

Scientists have studied the effects of stress on glucose levels in animals and people. Diabetic mice under physical or mental stress have elevated glucose levels. The effects on people with Type 1 diabetes are more mixed. While most people's glucose levels go up with mental stress, others' glucose levels can go down. In people with Type 2 diabetes, mental stress often raises

stress is coping style. Coping style is how a person deals with stress. For example, some people have a problem-solving attitude. They say to themselves, "What can I do about this problem?" They try to change their situation to get rid of the stress.

Other people talk themselves into accepting the problem as being okay. They say to themselves, "This problem really isn't so bad after all."

These two methods of coping are usually helpful. People who use them tend to have less blood glucose elevation in response to mental stress.



Learning to Relax

For some people with diabetes, controlling stress with relaxation therapy seems to help, though it is more likely to help people with Type 2 diabetes than people with Type 1 diabetes. This difference makes sense. Stress blocks the release of insulin in people with Type 2 diabetes, so cutting stress may be more helpful for these people. People with Type 1 diabetes don't make insulin, so stress reduction doesn't have this effect. Some people with Type 2 diabetes may also be more sensitive to some of the stress hormones. Relaxing can help by blunting this sensitivity.

There are many ways to help you relax:



- Breathing exercises

Sit or lie down and uncross your legs and arms. Take a deep breath. Then push out as much air as you can. Breathe in and out again, this time relaxing your muscles on purpose while breathing out. Keep breathing and relaxing for 5 to 20 minutes at a time.

Do the breathing exercises at least once a day.

- Progressive relaxation therapy In this technique, which you can learn in a clinic or from an audio tape, you tense muscles, then relax them.
- Exercise



Another way to relax your body is by moving it through a wide range of motion. Three ways to loosen up through movement are circling, stretching, and shaking parts of your body. To make this exercise more fun, move with music.

- Replace bad thoughts with good ones

Each time you notice a bad thought, think of something that makes you happy or proud. Memorize a poem, prayer, or quote and use it to replace a bad thought.

Laughter is the best medicine

Q: How can I calculate my body/fat ratio?

A: Well, if you have a body and you have fat, your ratio is one to one. If you have two bodies, your ratio is two to one, etc.

Q: Is swimming good for your figure?

A: If swimming is good for your figure, explain whales to me.

Q: Is getting in-shape important for my lifestyle?

A: Hey! 'Round' is a shape!

Source: internet





Just as it takes weeks or months of practice to learn a new sport, it takes practice to learn relaxation.

Dealing with Diabetes-

Related Stress

Some sources of stress are never going to go away, no matter what you do. Having diabetes is one of those. Still, there are ways to reduce the stresses of living with diabetes. Support groups can help. Knowing other people in the same situation helps you feel less alone. You can also learn other people's hints for coping with problems. Making friends in a support group can lighten the burden of diabetes-related stresses.

Dealing directly with diabetes care issues can also help. Think about the aspects of life with diabetes

that are the most stressful for you. It might be taking your medication, or checking your blood glucose levels regularly, or exercising, or eating as you should.



If you need help with any of these issues, ask a member of your diabetes team for a referral. Sometimes stress can be so severe that you feel overwhelmed. Then, counseling or psychotherapy might help. Talking with a Counselling Psychologist may help you come to grips with your problems. You may learn new ways of coping or new ways of changing your behavior.

Reference:

1. American Diabetes Association

FAQ's on Diet in Diabetes

Since diet plays an important part in the control of diabetes, people often have many doubts about whether they are eating the right food. They are often concerned about many other facets of their nutritional regime. The Department of Dietetics and Nutrition has compiled some frequently asked questions for your benefit.

Do I need to eat a special diet now that I have diabetes?

No. The diet for diabetes is a balanced, healthy diet; the same kind that is recommended for the rest of the population — low in saturated fat, refined sugar and salt, with fruit and vegetables and meals based on cereals like rice, wheat, ragi, etc. If you are overweight, it is recommended that you reduce your food intake sufficiently to lose around ½ kg a week in weight.

Mrs. Sheela Paul
Senior Dietitian

Ms. S.Vimala, Dietitian
MVH, Royapuram

Can I control Diabetes with Diet only?

Diet is a very important aspect in the treatment of Diabetes... particularly its timing. In the beginning, you may be successful in controlling Diabetes with only your diet, but unfortunately, a time will come when diet alone won't be enough, you will require medicine. This time is different for different people. For some it can be a few months while for others it may be a few years. It is very important to try to control diabetes with diet first; this will help you understand the principles of diet, and will convince you of the necessity for tablet/Insulin for good control of Diabetes.

What are the principles of a diabetic diet?

Healthy eating is the key to success for which you

need to know what to eat, how much to eat and what not to eat.

To eat or not to eat is not the question, how to make the right decision about eating is the question

We recommend three meals (breakfast, lunch and dinner) and three snacks. You can space the snacks in between your meals according to your profession and life-style. There are six components in the diet: Carbohydrate, fat, protein, mineral, vitamin and water. Restriction and distribution of carbohydrate throughout the day is important.

Why should diabetics observe a diet?

Diet is very important for diabetics because dietary management helps control blood sugar and cholesterol, maintains ideal body weight, reduces medications and insulin, and prevents complications. You can lead a healthy life with a healthy diet. A Diabetic diet should be the key part of any therapy in diabetes and should be maintained indefinitely.

Should I buy special “diabetic foods”?

Special “diabetic foods” usually refer to foods that have no added sugar, for example diabetic jam, biscuits and so on. Special “diabetic foods” do not have special positive effects on diabetes but may be considered as a convenient preparation of food that would otherwise contain lots of sugar and sucrose. They are usually more expensive and are not really necessary.

Can diabetics undertake fasting?

Fasting alters metabolism of the body and will adversely affect the diabetic state. A diabetic should preferably avoid total fasting. Religious fasts are often partial, wherein, certain foods are permitted, partial fasts may be undertaken only if absolutely necessary. It is important that you follow your doctor’s and dietitian’s advice on the type and amount of permissible foods

to eat during partial fasts.

Can I drink alcohol?

Yes, in moderation. Moderation is defined as two drinks (60-90 ml) a day for men and one drink a day for women. Make sure that your medications don’t require you to avoid alcohol, and get your doctor’s opinion.



Can a healthy diet help us avoid disease?

Absolutely. The Harvard studies indicate that correct dietary choices - moderate consumption of vegetables and fruits, good (unsaturated) fats and good (unrefined) carbs - in conjunction with regular exercise (and of course avoiding smoking) would prevent about 82 percent of heart attacks, about 70 percent of strokes, over 90 percent of type 2 diabetes, and over 70 percent of colon cancer.

Will my blood sugars be normal if I do not eat?

No, it won’t. This is essential to realize that not eating is the worst possible thing to do when your sugar is not well controlled. Remember, whatever your level of blood sugar is, your body needs a balanced diet; otherwise you will become malnourished and weak.

What if I skip meal?

Not a good idea at all! When you skip meals, your blood sugar fluctuates and that is not good for control. Remember **when** you eat is as important as **what** you eat.

My job does not allow me to eat at fixed times. What should I do?

At most times this is an excuse for not planning. You need to know how to organize your day. Life is more stressful today, than it was in the days of our forefathers. Competition is increasing day by day, but

we need to look after ourselves so that we are in the best physical and mental state.

Do I need to stop eating out?

Certainly not, as long as you are not planning to eat out everyday! You need to know what the right food is and the correct amount. Remember ... alcohol has empty calories and with a drink, we also tend to eat more.

What do I eat when I am sick?

Infection can raise the levels of your blood sugar. When you're sick and are unable to take your normal food, never stop your medication. It is very important to have a nourishing and well-balanced diet for a speedy recovery. If you're a diabetic then it is essential to check your blood sugar levels frequently.

Can I have ice cream?

Yes, but occasionally. However, do not make a habit of eating ice cream regularly. There are certain ice creams available now with no added sugar, but do not forget that they have calories.

Can I take artificial sweetener?

Yes, certainly Artificial sweeteners are safe, but only if taken in moderation.

The M.V.Centre for Diabetes, Koramangala, Bengaluru organized a "Meet the Medical Expert" programme on 13.02.2011 at the Hotel Capitol, Bengaluru to create awareness and educate the public on Diabetes and its complications. Experts from the field of Cardiology, Ophthalmology, Gynaecology, Dentistry, Urology, Nephrology, Neurology and Nutrition took part in this meeting. Dr.Kamini Rao, Expert in Obstetrics Gynaecology, Dr.Kamini Rao Hospital inaugurated this panel discussion. The Diabetes Self Care kit was launched during the function.

Can I eat fruit?

Yes, you can eat fruit regularly. You should know what fruit you can eat and how much. One portion of food is 1 medium apple or 1 guava or 1 pear or 1 orange or 1 small banana or 12-15 grapes or 1 slice of pineapple or 1 small bowl of papaya; you can choose what you like. It is better to avoid dry fruits as they have very high calorific value.

What are the food items I should avoid?

Foods to avoid are direct sugars, such as jam, honey, and chocolate as they contain refined carbohydrate and cause the level of blood sugar to rise very quickly. Also it is better to avoid food with high saturated fat such as cheese, butter, ghee, solid cooking oils and hard margarine.

Do I need to take vitamin for Diabetes?

If you eat a balanced diet, there is no need for extra vitamin. Some people take vitamin for mental satisfaction. Vitamin does not treat uncontrolled Diabetes neither will it help to control your Diabetes. If for some reason or the other you are not able to take regular meals, i.e., you have had an operation or you are unwell, you may take some vitamin for a short while.



Improving Wound Care: An International Perspective



Exchange of MoU between University of Southampton, UK and M.V.Hospital for Diabetes. Seen here are, from left: Prof. Finn Gottrup, Prof. Vijay Viswanathan, Mr. Mike Nithavrianakis, Prof. Raj Mani and Dr.J.Nagarathanam

A two-day meeting was organized by the M.V.Hospital for Diabetes & Prof.M.Viswanathan Diabetes Research Centre in association with the Wound Healing Group, School of Medicine University of Southampton. This meeting was held on 22 and 23rd January, 2011 at the GRT Convention Centre, Chennai. Mr. Mike Nithavrianakis, Deputy High Commissioner, British High Commission inaugurated this seminar. An MoU was inked between the University of Southampton and the M.V.Hospital for Diabetes on the exchange of scientific, academic, and technical information to improve wound management. Two international experts, Dr.Raj Mani, Faculty of Medicine and Health and Life Sciences, School of Medicine, University of Southampton, U.K and Prof.Finn Gottrup, Professor of Surgery, University Centre of Wound Healing, University of Southern Denmark, and experts from other parts of India participated in this meeting. The importance of wound management in diabetes was the focal point of discussion later there was a practical demonstration on the latest techniques and equipment for the management of wound healing.



Experts who participated in the meeting From L to R: Dr.J.Nagarathanam, Dr.R.Venkatagopala Krishnan, Prof.Finn Gottrup, Prof.Raj Mani, Prof.S.K.Singh, Prof.Vijay Viswanathan, Prof.Raj Kumar, Dr.Mary Babu, Dr.Sunil V Kari, Dr.Rajesh Kesavan, Prof.Bipin Nair



Dr. Nata Menabde (4th from left), WHO representative to India and Dr. J.S. Thakur, SEARO, New Delhi with the research team during their visit to our hospital.



The II Phase of the Chennai Slim & Fit programme was launched on 25.02.2011 by Mr. Chandrasekhar, CGM, Chennai Circle of SBI. SBI has donated RS 5 lakhs for this programme among 25 CBSE schools in Chennai



Dr. Stuart Baird and Dr. Christine Skinner from the Glasgow Caledonian University, U.K. held a two-day programme for doctors on Diabetic Foot Management, Also seen are Dr. Gojka Roglic, WHO Responsible Officer for Diabetes, Geneva and Dr. Vijay Viswanathan

List of New Life Members

L No	Name	Place
2221	Mr Vikaram Bangur	Bangalore
2222	Mr. Prakash CH Saraff	West Bengal
2223	Mr. Dwarakanath	Chennai
2224	Dr Srinath R	Chennai
2225	Ms Archana Nemani	Muzaffarpur
2226	Mr Soven Charterjee	Jharkhand
2227	Mr Ajit Kothari	Ranchi
2228	Mr Krishnan Lal Dugar	Bihar
2229	Mrs Reena Musarika	Kolkatta
2230	Mr Jadullah Jameel	Maldives
2231	Mr K L K Mohan	Chennai
2232	Mr Dinesh Prasad Sinha	Lacknow
2233	Mr Sunil C Choudhary	Mumbai
2234	Mr Anand Agarwal	Kolkatta
2235	Mrs Swetha Agarwal	Kolkatta