



# RSSDI News

The Official Bulletin of  
Research Society for the Study of Diabetes in India (RSSDI)

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## Message from the RSSDI President

Dear Colleagues,

I hope the new year has been going well for all of you. Now that the dog days of summer are over in most parts of the country, autumn with its quaint charm of falling leaves and pleasant weather will soon be here.

I wish to use this opportunity to give you some quick updates. I am happy to inform you that after I took over as President of RSSDI on 1<sup>st</sup> January 2012, I have been trying to visit as many state chapters of RSSDI as possible.



Dr V Mohan  
President, RSSDI

- 1a. The Karnataka Chapter of RSSDI had organized a massive diabetes update called KIDS UPDATE 2012 along with the Karnataka Institute of Diabetology (KID). This was a unique event with a very high scientific content and very large turn out. My congratulations to Dr Narasimha Setty and his colleagues for organizing this update.
- 1b. The RSSDI West Bengal Chapter organized their first state conference on 17<sup>th</sup> and 18<sup>th</sup> March 2012 and I had the pleasure to participate in the event. I was very impressed to see the high standard of the original research work which was presented at this meeting. My congratulations to Dr Shubankar Chowdhury, Dr PS Chattopadhyay, and other colleagues for organizing this conference.
- 1c. RSSDI UPICON 2012 was organized at Ghaziabad on 21<sup>st</sup> and 22<sup>nd</sup> April by Dr NK Soni and colleagues. This meeting was also very well attended and the focus this time was on Diabetes in the Young which was discussed in great detail with many splendid talks by erudite speakers. I was very glad to review the activities of these 3 state chapters all of which are doing great work. Heartiest congratulations to all of them.
2. As you may be aware, there are still no state chapters of RSSDI in several states in India. This includes all the states in the North East of India and many other important states like Bihar, Chhattisgarh, Jharkhand, etc. A state chapter will soon be launched in Madhya Pradesh, Assam, and Bihar. I request these states to complete the formalities soon and become full fledged state chapters. I also request senior diabetologists among our RSSDI members in the states where there are no chapters, to take the initiative to start chapters soon. Strictly speaking, we need 50 life members from a state to start a chapter. However, at our last executive committee (EC) meeting, the EC members agreed that in smaller states where it might be difficult to start with 50 members, we may permit starting of chapters with smaller numbers of members. This brings me to point No. 3.
3. There is an urgent need for increasing the numbers of RSSDI members in every state in India. I would consider myself a failure as President, if I have not been able to increase the membership of the RSSDI substantially during my tenure as President. I, therefore, request all of you to join us in our membership campaign. Even your own colleagues working with you can be enrolled as members to start with. Please see how many of the diabetologists/physicians in your area you can motivate to become members of



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## Message from the RSSDI Secretary

Dear Friends,

Greetings from RSSDI secretariat.

I am sure you all are participating actively in different activities of RSSDI particularly the CMEs and workshops being conducted by RSSDI and its various state chapters. With the formation of more and more state chapters, most of you will be able to benefit from chapter activities also. These will include awareness programmes about diabetes for patients and general public in addition to other scientific symposia. If you are a life member of RSSDI, I would encourage you to contact the office bearers of your respective chapter for chapter membership and participation in all local activities.

To further facilitate interactions with us, we shall be launching the upgraded version of our website very shortly. This will be an entirely new experience with several new user friendly features that would make most of the interactions convenient through the website. Also enjoy recent updates in diabetes through the "DIABETES Despatch" section of our newsletter as before.

Any suggestions from members to make the newsletter even more interesting are welcome.

With best wishes,



**Dr SV Madhu**  
Secretary, RSSDI

Dr SV Madhu  
Secretary, RSSDI

## 40<sup>th</sup> RSSDI Annual Conference, 2012 Chennai, Tamil Nadu, India

### 40th Annual Conference

Research Society for the Study of Diabetes in India

@ Chennai Trade Centre

October 26, 27 & 28, 2012



Welcome to RSSDI 2012,

We have great pleasure in informing you that the 40<sup>th</sup> RSSDI Annual meeting is to be held in Chennai from 26<sup>th</sup> to 28<sup>th</sup> October, 2012. The proposed venue is Chennai Trade Centre, Nandambakkam, Chennai. The venue is a prime location in Chennai with a state-of-the-art exhibition complex. The facility here matches international standards and is close to the international airport and easily accessible from most parts of Chennai.

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RSSDI. We need your active cooperation to increase the membership of RSSDI. Membership forms are available at the RSSDI website [www.rssdi.org](http://www.rssdi.org).

4. All the arrangements for the next RSSDI annual national conference at Chennai are going on in full swing. We request all of you to register as early as possible to make this congress a grand success.
5. Kindly submit as many abstracts as possible to the national congress. Let us make the Chennai conference a highly scientific one with good quality research. Online abstracts submission is now open at our website [www.rssdi2012.com](http://www.rssdi2012.com).
6. Please apply for RSSDI research grants. The details of these grants are available in the website [www.rssdi.in](http://www.rssdi.in). You can also write to our secretary, Dr SV Madhu, who would be happy to provide you further details.
7. Kindly encourage your juniors, including postgraduates also to apply for these awards.
8. We are happy to inform you that we are taking several steps to promote research on diabetes. One of these would be the institution of "Novartis Award for Young Scientists". The details of this award will be announced at the Chennai congress.

I also take this opportunity to wish you and your family all the very best in the future.

Dr V Mohan  
MD, FRCP (London, Edinburgh, Glasgow, Ireland),  
PhD, DSc (Hon Causa), FNASc, FASc, FNA  
President, Research Society for Study of Diabetes in India (RSSDI)  
Chairman & Chief Diabetologist, Dr Mohan's Diabetes Specialities Centre  
Director & Chief of Diabetes Research, Madras Diabetes Research Foundation

## Research Grant Announcement

For providing research grants, RSSDI is inviting proposals from Indian scientists, who are interested in conducting original research in the field of diabetes mellitus. Furthermore, limited grants are also available for the students of medical colleges for smaller projects.

There is no deadline for submission of the proposals, and can be sent throughout the year.

Starting this year, RSSDI funding for minor projects has been increased up to Rs. 1.5 lakh and for major (multicentric) projects up to Rs. 10 lakh.

For more details please visit our website [www.rssdi.in](http://www.rssdi.in).

## Election of the RSSDI President for the year 2013

The tenure of the President shall be one RSSDI year (2.5.2 item i), and (2.5.3) to get elected as the President, a candidate should have held an elected position in the EC for three years (3.1). Nominations are invited from among the eligible members for the post of the President duly proposed by a valid member and seconded by a valid member accompanied by candidate's consent and biodata to reach the Honorary Secretary on or before 31<sup>st</sup> July, 2012 at the address of the conference secretariat.

Dr SV Madhu  
Secretary RSSDI  
New Delhi

# DIABETES Despatch

News from the JOURNALS

## Greater whole-grain intake is associated with lower risk of type 2 diabetes, cardiovascular disease, and weight gain

We are all aware of the benefits of whole-grain and high-fiber based diets and their intake are routinely recommended for prevention of obesity and cardiovascular diseases.

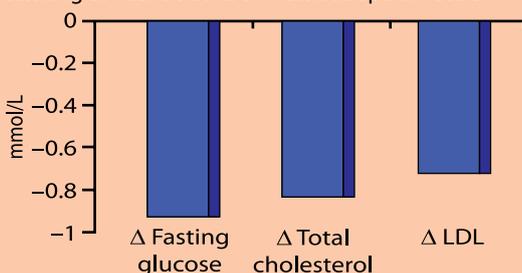
Ye et al., performed a meta-analysis of available literature that has provided evidence to support the beneficial effects of whole-grain intake on vascular disease prevention.

The study aimed to examine longitudinal trials which investigated whole-grain and fiber intake in relation to risk of type 2 diabetes, cardiovascular disease (CVD), weight gain, and metabolic risk factors. The researchers identified 45 prospective cohort studies and 21 randomized-controlled trials between 1966 and February 2012 by searching the Cumulative Index to Nursing and Allied Health Literature, Cochrane, Elsevier Medical Database, and PubMed. Study characteristics, whole-grain and dietary fiber intakes, and risk estimates were extracted using a standardized protocol.

It was observed that those who consumed 48–80 gm whole grain/day (3–5 serving/day) had a 26% lower risk of type 2 diabetes, 21% lower risk of CVD, and consistently less weight gain during 8–13 years (1.27 vs. 1.64 kg). The weighted mean differences in post-intervention circulating concentrations of fasting glucose, total cholesterol and low-density lipoprotein comparing whole-grain intervention groups with controls indicated significantly lower concentrations after whole-grain interventions (Figure 1).

Findings from this meta-analysis provide evidence to support beneficial effects of whole-grain intake on vascular disease prevention. Potential mechanisms responsible for whole grains' effects on metabolic intermediates require further investigation in large intervention trials.

**Figure 1.** Weighted mean differences in post-intervention circulating concentrations of metabolic parameters



SOURCE: Ye EQ, et al. *J Nutr.* 2012 May 30.

## Dipeptidyl peptidase-4 inhibitors found safe in patients with type 2 diabetes mellitus in a meta-analysis

A new study published in the journal *Diabetes Obesity and Metabolism* has found in a systemic review that there is enough data in support of the long-term safety of dipeptidyl peptidase-4 (DPP-4) inhibitors. The study also refutes an increased risk of infections but points out towards the need to clarify a possible link to asthenia and cardiac and vascular events. It also warns the physicians to be careful when deciding on the use of DPP-4 inhibitors in combination with insulin or insulin secretagogues in order to limit the risk of hypoglycemic events.

DPP-4 inhibitors are a new class of oral antidiabetic agents that hold the potential of slowing the progress of type 2 diabetes mellitus. The researchers searched data sources, and eligible trials with  $\geq 18$  weeks duration in patients with type 2 diabetes reporting safety outcomes were included. A total of 67 randomized, controlled trials were included in this review (4 alogliptin, 8 linagliptin, 8 saxagliptin, 20 sitagliptin, and 27 vildagliptin trials).

It was observed that the level of adverse events with gliptin was similar to placebo with a relative risk of 1.02 and there was no increased in the risk of infections with gliptin treatment (relative risk 0.98 compared to placebo and 1.02 compared to other drugs used in the treatment of diabetes). It is important to note that although there was no major difference in the overall risk of adverse events, asthenia (relative risk 1.57) as well as cardiac (relative risk 1.37) and vascular disorders (relative risk 1.74), especially for linagliptin, emerged as adverse events associated with DPP-4 inhibitor treatment.

Another important finding with clinical implication was the risk of hypoglycemia which was low with DPP-4 inhibitor treatment with a relative risk of 0.92 in comparison to placebo, and this risk was even lower in comparison to sulfonylureas (relative risk 0.20) in the absence of combination therapy with sulfonylurea or insulin but significantly elevated for combination therapy of sulfonylurea or insulin with sitagliptin or linagliptin.

Data from this meta-analysis sheds more light on the safety of this promising class of drugs and gives useful insights for appropriate drug as well as patient selection.

SOURCE: GooBen K, et al. *Diabetes Obes Metab.* 2012 Apr 20.

## New findings suggest increased risk of obesity in children born to mothers who undergo cesarean section

A trend has been seen emerging where pregnant women have started opting for cesarean section to avoid the pains of labor. These women might want to consider their decision in the light of new research, which has found that babies born by cesarean section may be more likely to grow up in to become obese than those delivered vaginally. This is in light of the previously reported findings that cesarean section delivery may increase the risk of subsequent childhood asthma and allergic rhinitis.

Research published in the *British Medical Journal Archives of Disease in Childhood* has reported these findings. The study used data from 1,255 mother and child pairs who attended eight outpatient maternity services in Eastern Massachusetts, USA between 1999 and 2002. The expectant mothers joined the study around 22 weeks of pregnancy and their babies were measured and weighed at birth and at 6 months, with a follow-up at the age of 3 years. The child's skinfold thickness, measure of body fat, was recorded at the last check-up. Around one in four (284) babies were delivered by cesarean section, and the remainder (971) were vaginal deliveries.

It was found that babies delivered by cesarean section were about twice as likely to be obese at the age of 3 years as those delivered vaginally. Amongst those babies who were delivered by cesarean section, 15.7% were obese compared to 7.5% of those delivered vaginally. The kids delivered by cesarean section were heavier overall and had more body fat too. The findings held up even after accounting for potential confounders such as the mother's weight, the babies' size, and the length of time for which babies were breastfed. Mothers who underwent a cesarean section were generally heavier than the others, and their babies were bigger for their gestational age than the vaginally delivered infants. Another interesting finding was the fact that these mothers did not breastfeed their babies as long as mothers of babies delivered normally.

The researchers proposed that cesarean section might alter the way babies are exposed to and acquire colonies of key digestive bacterial flora from their mothers during birth. This might be a potential reason for the differences in the way the food is digested in these babies, and could contribute to obesity in them.

While pregnancy is considered the only time when a woman would happily go to a health care facility and women have been giving birth normally quite successfully for centuries; any interference, if it is avoidable with a natural process, is to be discouraged. It is the responsibility of the physician to bring these things to the knowledge of an expectant mother and family and discourage cesarean deliveries, if not absolutely indicated by the condition of the mother or the baby.

## Good old turmeric could help fight against diabetes and obesity

Turmeric has got another star in the list of its benefits. While it has been known for its anti-inflammatory properties since ages, new research has reported that turmeric has been found useful in getting rid of those extra kilos and also help in controlling diabetes and cholesterol levels.

Curcumin, an ingredient derived from turmeric, when used in combination with extracts from black pepper and onion skin has been found to be effective in producing changes in biochemical and metabolic parameters, such as blood glucose, body weight, cholesterol, triglycerides, and LDL levels under laboratory conditions.

Apart from curcumin, the other active ingredients are piperine from black pepper and quercetin from onion which is also present in some fruit skins. Although curcumin has been under investigation for its various medicinal properties, its antidiabetic, antioxidant, and lipid-lowering potential are yet to be fully explored.

The problem that the researchers faced was the limited bioavailability of curcumin. To be effective as a medicine, several spoonfuls of turmeric would have to be consumed to produce the desired effect. It was to override this limitation that the researchers used piperine and quercetin as add-ons in order to ensure greater availability of curcumin. Black pepper is a bioavailability agent of drugs and quercetin prevents metabolic conversion of curcumin.

Future research will define whether these beneficial properties from these commonly available kitchen items will translate into drugs against obesity and diabetes.



# American Diabetes Association Conference

June 8–12, 2012, Pennsylvania Convention Center, Philadelphia, USA

## Linagliptin efficacious and safe in elderly type 2 diabetic subjects

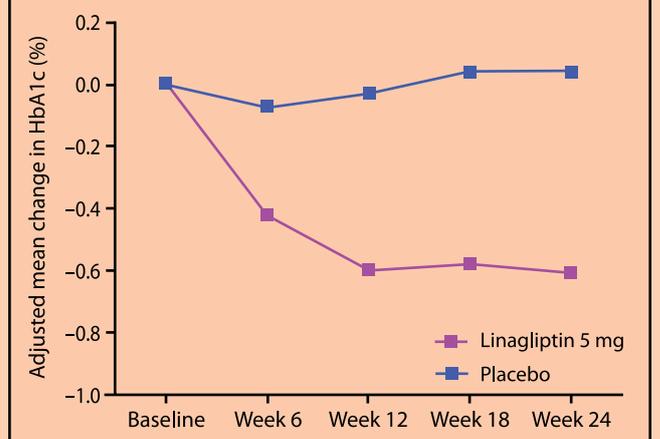
Barnett AH, Huisman H, Jones R, et al.

A study presented at the recently held American Diabetes Association conference found that linagliptin is a safe and effective drug choice for elderly type 2 diabetic patients. The management of diabetes in the elderly population is frequently complicated by comorbidities, use of multiple drugs for different indications, and vulnerability to adverse effects of drugs.

This phase 3 placebo-controlled study evaluated linagliptin for 24-week duration in patients with type 2 diabetes, aged  $\geq 70$  years, inadequately controlled despite metformin and/or sulfonylurea and/or insulin therapy. A total of 241 patients were randomized to receive linagliptin 5 mg once a day or placebo in addition to other drugs. Metformin, sulfonylurea, or insulin were taken by 84.9, 57.6, and 21.0% of all patients, respectively.

The researchers reported that after 24 weeks, placebo-adjusted mean change in glycosylated hemoglobin (HbA1c) with linagliptin was  $-0.64\%$  (Figure 1). Drug-related adverse events were experienced by 21.0 and 13.9% of linagliptin and placebo patients, respectively. Hypoglycemia occurred in similar percentage of subjects (24.1 and 16.5% of patients with linagliptin and placebo, respectively). On further analysis, it was found that adverse events predominantly occurred when insulin and/or a sulfonylurea were used as background therapy. This trial provides further data for the safety and efficacy of gliptins for type 2 diabetic subjects.

**Figure 1.** Adjusted mean change in glycosylated hemoglobin overtime



## Blood pressure control inadequate among type 2 diabetics, especially in those with comorbid chronic kidney disease

Stellhorn R, Neslusan C, Mehra M, et al.

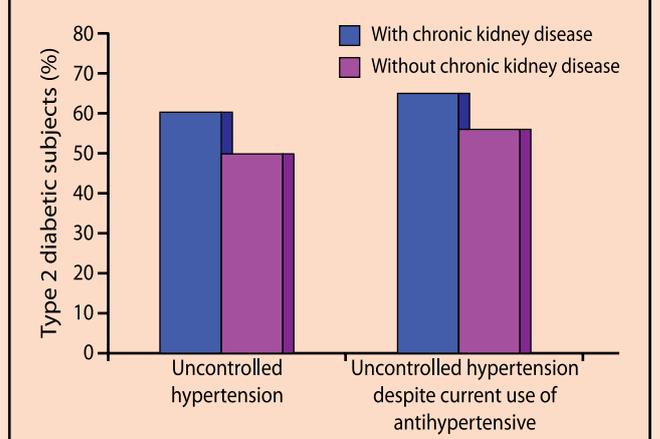
Data from the NHANES for the years 1999-2008 for control of hypertension in type 2 diabetic subjects with chronic kidney disease (CKD) demonstrates that there was a need for strategies to improve blood pressure control among these patients. These findings were presented at the American Diabetes Association conference and the analysis was based on patients with type 2 diabetes who were diagnosed with the condition at or after the age of 25 years.

Patients with a valid serum creatinine test result were included in the study and the stage of CKD was based on the classification system used by the National Kidney Foundation. Uncontrolled hypertension was defined as having either a systolic or diastolic blood pressure reading above 130/80, respectively. A total of 2,181 patients with type 2 diabetes were included with a mean age of 63 years and the mean duration of diabetes was 10.1 years.

It was reported that almost half (45.2%) of the patients had some form of CKD. The proportion of patients with uncontrolled hypertension was higher among patients with CKD compared to those without CKD. Despite the fact that the current use of antihypertensive medication was higher in type 2 diabetic subjects with CKD vs. those without CKD, a significantly larger proportion of these patients had uncontrolled hypertension (Figure 2).

The results highlighted the need for strategies to improve blood pressure control among patients with type 2 diabetes especially when associated with CKD.

**Figure 2.** Inadequate blood pressure control in type 2 diabetics with or without chronic kidney disease



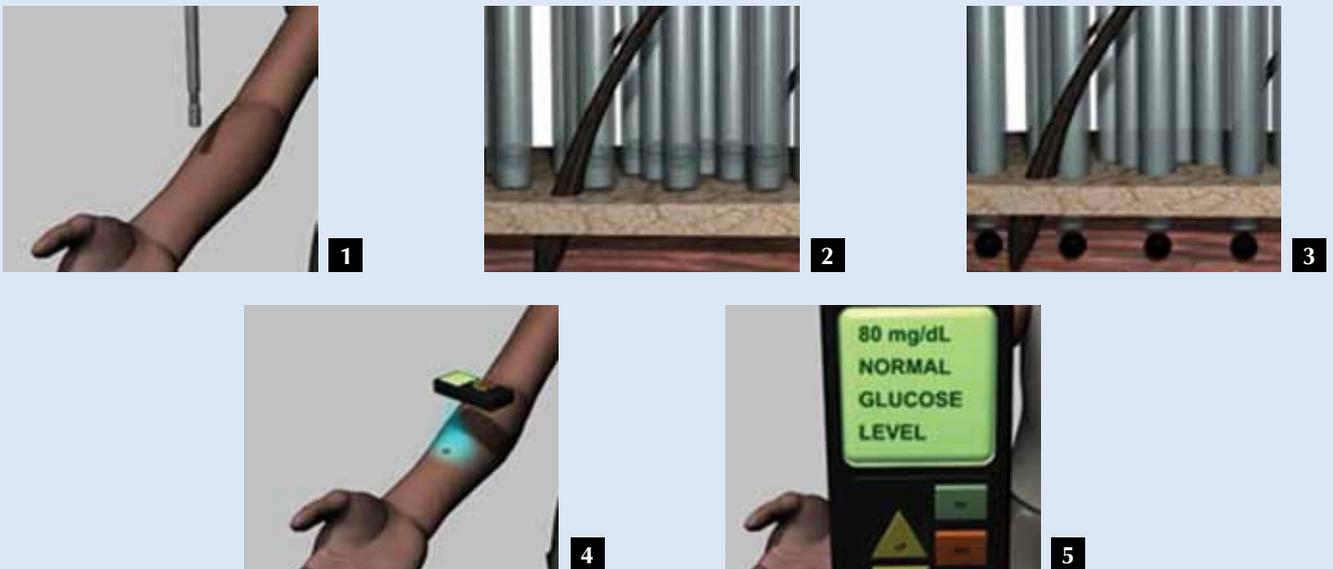
## A tattoo that all your diabetic patients will love—Age no bar!

Continuing in the sequence of medical advances, this is a glimpse in to technology of the future where physician would be prescribing tattoos to their diabetic patients. As a patient would always tell and you would also understand as a caring physician, needle jabs for repeated blood glucose testing is a huge problem and burden for the patients and comes with its inherent risks and pitfalls. This is more so in the case of a young type 1 diabetics in the pediatric age-group.

We would probably see an era where nanotechnology enabled sensors would be embedded as tattoos to monitor blood glucose levels. The nanosensor could be injected into the skin, much like a tattoo dye, to monitor an individual's blood-sugar level. As the glucose level increases, the "tattoo" would fluoresce under an infrared light, which can be detected by shining near-infrared light on them. Measuring the amount of fluorescence would reveal the concentration of glucose. It is envisioned that an "ink" of these nanoparticles suspended in a saline solution would be created and injected under the skin like a tattoo. The "tattoo" would last for durations up to six months, before needing to be refreshed.

Though the still years away from human trial and success initial success has been reported and research is going on to find other applications, such as sodium sensing tattoos that would also be based on the same principles and would be able to judge the level of dehydration. Till that time, we hope that technology can do something to reduce if not make the pain disappear from the lives of diabetic subjects.

### Steps in the detection of blood glucose levels using a nonotech-based tattoo



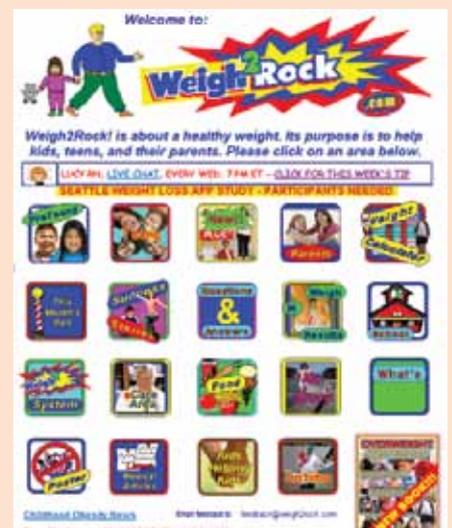
## Online social networking website helps tech savvy youth to fight obesity and related problems

Support groups are important in addiction medicine, and offer anonymity to the user and protect. A new website uses a somewhat similar approach to fight against the menace of obesity in children and youth. The website has got interesting results and these were presented at the 19<sup>th</sup> European Congress on Obesity.

The site, <http://weigh2rock.com/> provides information to many and most aspects related to food and overeating. A questions and answers section, weight calculator, information on foods, medical articles, polls, and success stories are some of them. Another interesting aspect is that every member is paired up with a "weight-loss buddy" for support and acceptance to overcome the social isolation and for motivation, accountability, mutual problem solving, and resisting cravings.

A 19-week pilot study with 12 participants, between the age group of 10–23 years, and in the 96<sup>th</sup> body mass index (BMI) percentile has also been reported. The participants in this study had a weight loss averaging 4.8 kg and reductions in BMI to the tune of 1.6 kg/m<sup>2</sup>.

The website offers the advantage of anonymity, is free, and widely available and its popularity and acceptability can be judged from the fact that 1,40,000 messages have been posted by the users so far. This is a unique and innovative beginning that can be of tremendous use for the kid facing overweight and obesity-related problems and stigma and also for the physician who can now refer their young patients to obtain help in a friendly and comfortable manner.



## Chapter News

State chapters of RSSDI have conducted several activities in this year so far, both academic as well as those related to functioning of the society. The details are given below:

### Delhi Chapter

RSSDI Delhi chapter has been conducting regular bimonthly scientific meetings as always. In the last quarter, we conducted two bimonthly meetings, in the months of April and June, 2012. The April meeting had a presentation on "Cardiometabolic Effects of Regular Physical Exercise" presented by Dr Atul Luthra, and a clinical data presentation on "Cardiac Autonomic Neuropathy in New Detected Type 2 Diabetes Patients." The meeting was held at India Habitat Centre and was well attended. The second meeting was held on 3<sup>rd</sup> June 2012 at India Habitat Centre and had one presentation on "Statins Revisited—Where Do We Stand?" by Professor SV Madhu, and data presentation on "Clinical and Immunological Profile of Newly Diagnosed Youth Onset DM" by Professor Dinesh Dhanwal. The meeting was attended by a large gathering of physicians and witnessed good interaction.

RSSDI Delhi Chapter is going to organize its 8<sup>th</sup> annual conference on Sunday, 23<sup>rd</sup> September 2012 at Hotel Le Meridien, New Delhi. The conference is going to be a full day scientific activity and is likely to witness active participation of physicians from all over Delhi and the national capital region.



## Conference Calender

<b>Practical Ways to Achieve Targets in Diabetes Care: Children's Diabetes Foundation</b> July 12–15, 2012 Keystone, Colorado	<b>3<sup>rd</sup> World Congress on Diabetes and Metabolism</b> September 24–26, 2012 Hyderabad, India
<b>American Association of Diabetes Educators Annual Meeting and Exhibition</b> August 1–4, 2012 Indianapolis, Indiana	<b>2012 Mid-Atlantic Diabetes Research Symposium</b> September 28, 2012 Bethesda, Maryland

**Please note** that the International Journal of Diabetes in Developing Countries (IJDDC) now has a new weblink.  
<http://www.springer.com>

### RSSDI Secretariat

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