



# RSSDI News

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

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## Message from the RSSDI Secretariat

Dear Colleagues,

We would like to take this opportunity to wish all our members a very happy New Year.

Let us all unite and come out stronger in 2011 in our Fight against Diabetes.

Besides the regular activities, we are planning to have several new initiatives in 2011 which we will inform you all from time to time.

Several members have inquired about RSSDI Text Book at Kochi. We would like to inform you all that a reprint of the second edition of RSSDI text Book is being reprinted to meet this demand and will become available shortly. Work on the next edition will also start soon thereafter.

The Current edition of newsletter also carries an announcement of RSSDI Annual Conference 2011 at Mumbai and we appeal to all members to collect data on the 2 Research Themes for presentation in the Theme Symposia of the Conference.

We once again appeal to all members to create an email ID for better communication and for receiving e newsletters regularly.

The New Team of RSSDI executive members has taken charge and on behalf of all Office bearers and Members of the Executive Committee, We once again wish you a very happy New Year and look forward to your continued cooperation over the next 3 years.

With best wishes

Prof. Shashank R Joshi  
President, RSSDI

Prof. S.V. Madhu  
Secretary, RSSDI

## 39<sup>th</sup> Annual Meeting of Research Society for the Study of Diabetes in India

04 - 06, November 2011



Conference Secretariat

**RSSDI 2011 - MUMBAI**

Joshi Clinic, 12 Golden Palace,

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### TEAM MUMBAI

Prof. H.B. Chandalia  
Patron

Prof. Vijay Panikar  
Organising Chairman

Prof. Vijay G Negalur  
Scientific Chairperson

Prof. Shashank R. Joshi  
Organising Secretary

Dr. S. M. Bandoorkwala  
Treasurer

You are requested to collect data on the following two themes:

**MMS Ahuja Symposium - Depression in Diabetes**

**Nutrition Symposium - Iron Status and Diabetes**



## RSSDI 2010 Annual Conference

RSSDI is the largest organization of diabetes health care professionals and researchers in Asia. The 38<sup>th</sup> RSSDI Annual Conference of RSSDI in 2010 was organized in Kerala at Kochi from 18th to 20th November. With over 1800 delegates, comprising of diabetes expert, scientists, healthcare managers, and nutritionists, the event hosted a rich programme of scientific and planning sessions, new research data and workshops. The attendees also shared ideas and opportunities for new research, in addition to renew their networks. The bustling city of Kochi, with its rich cultural and historical heritage, also provided visitors with a variety of entertainment options and tourist attractions.

### Research Committee

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### Newsletter

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New Delhi  
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New Delhi  
**Dr. Rajeev Chawla**  
New Delhi



## Call for applications for RSSDI Orations 2011

Applications are invited for the three RSSDI orations to be given at the 39<sup>th</sup> annual scientific meeting of Research society for the study of diabetes in India to be held from November 4–6, 2011.

1. **Dr M. Vishwanathan Oration**
2. **RSSDI Oration**
3. **Dr SAM G.P. MOSES Oration**

**The applications should be accompanied by:-**

1. Summary of the academic achievements along with the details of original research
2. Complete CV with list of research publications

**All candidates should be nominated by 2 RSSDI ACAD life members**

*One hard copy of the application should be mailed to:*

**Dr BK Sahay, 6-3-852/A, Ameerpet, Hyderabad-500 016 (INDIA)**

And one soft copy of the application should be sent by email to <sahaybk@rediffmail.com>

**Last date for receipt of applications is 28th February 2011.**

**Please Note:**

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

# DIABETES Despatch

News from the JOURNALS

## All NAFLD patients should be screened with OGTT

A new study from Australia concludes that all NAFLD patients have postprandial hyperinsulinemia, and their OGTT reveals a high frequency of previously unsuspected IGT or T2D. Investigators at the Department of Endocrinology and Diabetes, the Australian National University Medical School, further suggested that identification of such patients will help in early prevention of diabetes and progression to cirrhosis.

The study enrolled 111 consecutive NAFLD patients, of which 35 had established T2D; 70 of the remaining 76 were administered 75 g OGTT with fasting, 60 and 120 min. insulin. Hepatic fibrotic severity was estimated by NAFLD Fibrosis score and evidence of cirrhosis. Twenty-four (33%) of these subjects were found to have abnormal glucose tolerance with 7 of type 2 diabetes, and 17 of impaired glucose tolerance (IGT). NAFLD patients with newly diagnosed T2D or IGT were (mean) 9 years older and more likely female (54% vs. 30%). All non-diabetic NAFLD subjects tested positive for presence of postprandial hyperinsulinemia at 120 min. Patients with established diabetes were more likely to have cirrhosis (40%) than those with IGT (12%) or normal glucose tolerance (4%). NAFLD and type 2 diabetes have a strong association, and the policy of applying OGTT may help identify the population at risk of developing diabetes for early intervention.

**Source:** Manchanayake J, Chitturi S, Nolan C, Farrell Gc. Post Prandial Hyperinsulinemia Is Universal In Non-Diabetic Patients With Nonalcoholic Fatty Liver Disease. *J Gastroenterol Hepatol.* 2010 Oct 18. Doi: 10.1111/J.1440-1746.2010.06528.

## Obese children develop a host of diseases in childhood itself

Investigators from Children's Hospital of Philadelphia have mapped the metabolic consequences of obesity in children that can manifest as various diseases. According to this review, obese children present with diseases that were till recently thought to affect only the adult population. Notably, presence of type 2 diabetes and early beta-cell failure with rapid progression to an insulin requirement has been a major new development that is being documented. Additionally, high prevalence of fatty liver disease and complications such as steatohepatitis and even cirrhosis also develop during childhood. Children with central obesity are also at a risk of developing metabolic syndrome with insulin resistance, hypertension, and dyslipidemia. Hyperandrogenism, sleep disturbances, and many types of orthopedic complications can also develop in young children.

**Source:** Abrams P, Levitt Katz LE. Metabolic effects of obesity causing disease in childhood. *Curr Opin Endocrinol Diabetes Obes.* 2010 Dec 13.

## Physicians need to address gaps in care in patients with diabetes who are on insulin

Results of a new survey carried amongst family physicians of Canada suggest that they fall short in their efforts to help their patients who are on insulin to meet with recommended HbA1c goals. This questionnaire-based survey analyzed data from 109 physicians and 379 of their T2DM patients who were on insulin with or without oral agents, recording data points on daily insulin dose, HbA1c level, and use of OHAs over three visits.

Mean time of 9.2 years was noted from time of diagnosis of type 2 diabetes before insulin was started. Mean HbA(1c) values were 9.5% before insulin initiation, 8.1% at visit 2 (median 1.2 years later), and 7.9% at visit 3 (median 3.9 years after initiation). Mean insulin dose was 24 units at initiation, 48 units at visit 2, and 65 units at visit 3. At visit 3, 20% of patients were found to maintain very poor glycemic control (HbA(1c) > 9.0%). The concomitant use of oral agents, with the exception of a decrease in sulfonylurea use, was also found to remain same during the period. The study results indicated that family physicians have to address the challenge of starting insulin early as well as intensify its use during treatment.

**Source:** Harris SB, et al. Clinical inertia in patients with T2DM requiring insulin in family practice. *Can Fam Physician.* 2010 Dec;56(12):e418-24.

## Childhood obesity is on rise globally!

A new paper released in December 2010, provides summation of recently published data on prevalence of pediatric obesity within US population while comparing it with international trends. According to this paper, the National Health and Nutrition Examination Survey and Pediatric Nutrition Surveillance System indicate a three times rise in the prevalence of BMI at least 95% (obesity) among US school-age children and adolescents over the past three decades. Moreover, the international data, particularly coming from regions that are witnessing economic growth and a shift to Western lifestyles, suggest a similar rising trend in pediatric BMI. This report also provides insight into infants and toddler obesity and explores the impact of ethnicity, socioeconomic status, school setting and geographic variations. Researchers have suggested that reversing this disturbing global trend needs analysis of obesity prevalence and exploration of potential causal associations to apply and evaluate the effectiveness of interventions and policies.

**Source:** Orsi CM, Hale DE, Lynch JL. Pediatric obesity epidemiology. *Curr Opin Endocrinol Diabetes Obes.* 2010 Dec 13.

## New research endorses what grandma always said about health benefits of almonds

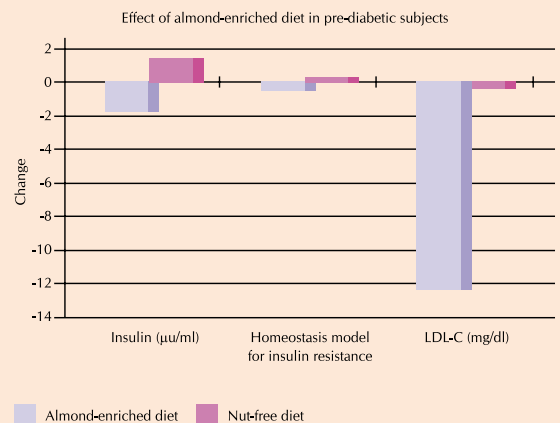
New research published in the Journal of American College of Nutrition endorses what we were always told by the family elders. In this 16-week study, the researchers observed that almonds were effective in improving markers of insulin sensitivity and led to clinically significant improvements in LDL-C in adults with prediabetes.

The authors tested the hypothesis that in adults with prediabetes, an almond-enriched American Diabetes Association (ADA) diet improves measures of insulin sensitivity and other cardiovascular risk factors compared with an ADA nut-free diet.

Sixty-five adult participants with prediabetes received 16 weeks of dietary modification with an ADA diet containing 20% of energy from almonds (approximately 2 oz per day). The subjects then underwent testing for fasting glucose, insulin, total cholesterol (TC), low-density lipoprotein cholesterol (LDL-C), high-density lipoprotein cholesterol (HDL-C), triglycerides, TC:HDL-C, and HbA1c. Body weight, body mass index (BMI), waist circumference, blood pressure, and nutrient intake were also measured.

It was observed that those who received an almond-enriched diet had greater reductions in insulin, homeostasis model analysis for insulin resistance, and homeostasis model analysis for beta-cell function, when compared to subjects in the nut-free group. Also seen were significant declines in LDL-C in the almond-enriched intervention group.

The intervention had no effect on BMI, systolic blood pressure, or for the other measured cardiovascular risk factors.



## Life-style interventions including diet can help overweight diabetics improve their high-sensitivity C-reactive protein levels

According to new research presented at American Heart Association Meeting and posted in the ADA news, lifestyle behaviors aimed at weight loss and better glycemic control help in improving high-sensitivity C-reactive protein (hs-CRP) levels in type 2 diabetics. Diabetics, who have high levels of hs-CRP in their blood, have an increased risk of cardiovascular disease. Researchers examined the hs-CRP levels in 1,759 diabetics who were enrolled in the Look AHEAD (Action for Health in Diabetes) study. Subjects were randomly assigned to receive either lifestyle intervention or usual care. Lifestyle intervention included frequent counseling to increase moderate-intensity exercise and decrease the caloric intake.

It was observed that:

Lifestyle intervention reduced average hs-CRP by 43.6 percent, compared with a 16.7 percent in the usual care group

There was a significant reduction in hs-CRP levels with lifestyle intervention, irrespective of statin use; both statin and in non-statin users demonstrated the benefits of these measures.

This study highlights the facts that:

hs-CRP levels may be increased both in statin users as well as non-users

Lifestyle intervention for weight loss decreases hs-CRP levels in type 2 diabetics even if they are already on statin therapy.

## Enzyme that increases risk of type 2 diabetes could be the target of new therapeutic treatments

"Findings from a new study conducted at the University of California may help researchers to targeted therapies that may prevent the development of type 2 diabetes and other obesity-related disorders in humans." This is based on the findings of a team of researchers from the University of California who have found an enzyme that plays a major role in processing fat.

According to Tapan Chatterjee, researchers in the division of cardiovascular diseases, the actions of the enzyme histone deacetylase 9 (HDAC9) can lead to obesity-induced fat dysfunction. During times of overeating, the enzyme blocks the conversion of adipose fat tissue into "functional" fats which are capable of storing excess calories efficiently for future use. This increases the risk of developing diabetes.

While caloric intake promotes HDAC9 down-regulation to allow the conversion of precursor fat cells to "functional" fat cells, capable of efficiently storing excess calories for future use and also maintaining lipid and glucose stability. During chronic over-feeding there is an up-regulation of HDAC9 which blocks the conversion producing adipose tissue dysfunction and leads to the onset of diseases such as diabetes, liver disease, high blood pressure, and heart disease.

These findings may help researchers to produce targeted therapies in the future that may prevent the development of diabetes and other obesity-related conditions.

### American Diabetes Association

70<sup>th</sup> Scientific Session (2010), June 25-29, 2010 - Orlando, Florida

#### Structured Diabetes Education: Impact on Quality of Life and Diabetes Self-Management Skills

Sarah V. O'Brien, Sunil Nair, Kevin J. Hardy.

Various studies have been conducted to show the clinically and statistically significant improvements in biophysical measures, such as glycated hemoglobin by means of patient education. A prospective study was conducted which used the WHO Quality of Life Questionnaire, Hospital Anxiety Depression Scale, Problem Areas in Diabetes tool and Summary of Diabetes Self-care Measures. The investigative interviews which included patients' feelings, beliefs, attitudes and awareness together with their apparent ability to manage their diabetes were also incorporated in this study.

The patients included in this study were evaluated before and after they attended a structured diabetes education programme delivered by professionals. The results revealed that after the education programme the patients showed reduced anxiety and depression; psychological, environmental and diabetes distress were also reduced.

Quality of life and diabetes self care improved in terms of general diet, exercise, blood sugar testing and foot care. Hence, it was concluded that diabetes education programmes improved overall quality of life and well being for newly diagnosed type 2 diabetes patients.

#### Residual Beta Cell Function in Recent-Onset Type 1 Diabetes: Impact of Atorvastatin Treatment

Hubert Kolb, Christian Herder, Nanette C. Schloot, Wolfgang Koenig, Tim Heise, et al.

Recently a trial was conducted on patients with recently diagnosed type 1 diabetes, to assess the role of atorvastatin in reducing immune-mediated disease activity in rheumatoid arthritis. The DIATOR (Diabetes and Atorvastatin) trial was conducted on patients with newly diagnosed type 1 diabetes and islet autoantibodies; these patients were aged between 18-39 years of age.

The patients were given atorvastatin for 18 months. The primary outcome was serum C-peptide level, and the statistical evaluation was done by SAS. Analysis of the data showed that atorvastatin treatment led to noteworthy preservation of C-peptide secretion. It also led to reduced systemic levels of C-reactive protein, total and LDL-cholesterol and of triglycerides. The changes in the C-peptide secretion with atorvastatin was not related to baseline age, BMI or serum C-peptide levels. Hence, based on the results of this study it was concluded that the loss of beta cell function in recent-onset adult type 1 diabetes was slowed down by atorvastatin.

#### Sitagliptin positively alters glucose levels in Patients with Type 2 Diabetes

Yukiko Taniguchi, Yutaka Mori, Kenichi Matsuura, Yohta Itoh, Kazunori Sezaki, Junichi Yokoyama, et al.

For collecting data for this study the investigators studied the effect of sitagliptin on 24 hours glucose levels in type 2 diabetes patients. The factors taken into account were 24-hour mean glucose values and their SD (mg/dL), total area for magnitude of 24-hour glycemic variation (mg·h/dL), mean amplitude of glucose excursion (MAGE) (mg/dL), and percentages of time in hyperglycemia ( $\geq 180$  mg/dL) and in hypoglycemia ( $\leq 70$  mg/dL).

The results of this study showed that not only sitagliptin decreases glucose levels in hyperglycemia, it also increases glucose levels in hypoglycemia.

These results also suggest addition of sitagliptin to the drug regime of patients on sulfonylureas because it is known that sulfonylureas are inept at reducing glycemic variation. Sitagliptin has proven efficacy in lessening the magnitude of 24-hour glycemic variation (as compared to the 24-hour mean glucose level) and hence, it can help in preventing not only post prandial hyperglycemia but hypoglycemia as well.

## Endobarrier, a gastrointestinal liner gains wider approval for the management of type 2 diabetes and obesity

Over the last few decades there has been a tremendous increase in the challenges posed by the ever-growing burden of type 2 diabetes and obesity. Newer drugs and technological innovations have helped tackle this twin burden but there is still a long way to go.

The Endobarrier, a non-surgical therapy, is a step in this direction, as it is a new class of metabolic treatment options that fit between pharmaceutical regimens and surgery, called non-surgical therapeutics. Although, the device has been known for many years now, it has recently gained European approval for 12 months of treatment of type 2 diabetes and obesity. It is suitable for patients with type 2 diabetes and a BMI of 30 to 50.

The device is an easily implanted gastrointestinal liner and has been proven to achieve glycemic control and significant weight loss without the need for surgery or additional pharmaceutical intervention. It is placed in the gastrointestinal tract through an endoscopic procedure where it creates a barrier between food and the intestinal wall thereby delaying the mixing of digestive enzymes with the food. Preventing food from coming into contact with the intestinal wall and delaying digestion, until lower down the intestine, alters the activation of hormonal signals that originate in the intestine. This in effect mimics the effects of a Roux-en-Y gastric bypass by influencing the way food moves through the digestive system. The procedure is quick, incision-less, and reversible, and can also be performed as a day-care procedure.



Endobarrier introduced via an endoscope



Endobarrier placed in the upper part of small intestine



Endobarrier in-situ



Endobarrier being removed



The device has been used in 300 patients and has demonstrated significant weight loss and diabetes improvement. This has been documented in its ability to lower HbA1c levels and achieve weight loss of more than 20.0 percent of total body weight during 12 months of treatment. No serious adverse events have been found to be associated with its use and the most common side effects include pain, nausea, and vomiting, which generally resolves in the initial few weeks of treatment.

Non-surgical therapeutics hold the potential to improve the patient's health, as the technique is non-surgical and helps in achieving lifestyle and nutritional improvements required to maintain therapeutic benefits and the ease of application and easy removal add to the overall acceptability.

## Laser to bust toenail fungus without pain

Good news for all and especially diabetics who have tried expensive oral medicines over long-durations with limited success in controlling onychomycosis. A company from USA has received FDA clearance for its FootLaser, which penetrates the nail bed, targeting the fungus causing onychomycosis, without damage to the adjacent health nail and soft tissue intact. Even more encouraging is the fact that with a single sitting of 30 minutes, 68 -81 % of the patients experienced increased clear nail at 6 and 12 months.



According to the company, advantages include:

- Pain-free treatment
- Better success rates than topical anti-fungal therapy
- Better safety profile compared to oral agents
- Non-surgical treatment; can be performed with out anesthesia.

## 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:

### Karnataka Chapter

New GC resumed the office on 28<sup>th</sup> Aug 2009 with newly elected members under chairmanship of Dr. Shankar V to chalk out plans for reviving CME, research activities, and other programs under KRSSDI. KRSSDI conducted about eight CME's and 6<sup>th</sup> Annual KRSSDI conference on 28<sup>th</sup> and 29<sup>th</sup> August at Belagavi during this academic year (2009-10). All CME's and conference witnessed great number of delegates. Two diabetes health camps in association with Diabetes Club were conducted. To live upto the objective of RSSDI, the chapter selected and funded three research projects in this academic year. The new office bearers are as follows:

Dr. Shankar V (Chairperson), Dr. Dinesh V Kamath (Vice Chairperson), Dr. Somashekara Reddy K S (Secretary), Dr. Ganapathy Bantwal (Joint Secretary), Dr. Balchandra G (Treasurer), Dr. Arvind Jagdish (Member), Dr. Suman R (Member), Dr. Sanjay Reddy A C (Member), Dr. Basvaraj M Patil (Member), Dr. Shrikanth N Hegde (Member).

### Andhra Pradesh Chapter

Andhra Pradesh chapter conducted **Diabetes Awareness Exhibition** on World Diabetes Day which was attended by about 300 people. The program was attended by Dr. BK Sahay, Dr. N. Sudhakar Rao, and Dr. P Raghuramulu. Particular attention was given to about 30 type 1 children who have attended the program. About 25 glucometers were distributed to them. Gaddar a famous singer and poet, a diabetic himself, interacted with the children. On 27<sup>th</sup> of this month, a day long **CME for rural doctors** at Bhaskar Medical College was conducted, which was attended by 200 doctors.



### Tamilnadu Chapter

The first annual conference of Tamilnadu chapter of RSSDI was conducted at Madurai on the 17<sup>th</sup> and 18<sup>th</sup> of April 2010. Two orations, named after Prof. M Viswanathan and Prof. Sam G P Moses, many scientific presentations, and free paper sessions marked the scientific programme. It was attended by more than 300 delegates. Satellite symposiums were also conducted at other places of Tamilnadu, one at Madurai, two at Coimbatore, and one at Vellore. All of them were well attended.

The next annual conference 2011 would be at Salem.

## 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 started its activities immediately after the new governing council was formed. After the new executive took charge under the chairmanship of Dr. Rajeev Chawla on 20<sup>th</sup> September 2010, first bi-monthly meeting of the Delhi chapter was held on 12<sup>th</sup> December 2010 at India Habitat Centre, New Delhi. Dr. SK Wangnoo presented his centre's data as well as a review of combination therapy with incretins and insulin. The meeting was chaired by Dr. SV Madhu, Honorary Secretary of RSSDI, and Dr. Rajeev Chawla, Chairman of RSSDI Delhi Chapter and was attended by a large number of physicians.

RSSDI Delhi Chapter also conducted a successful diabetes awareness program across the city of Delhi on the World Diabetes Day. Public awareness activities were conducted simultaneously at five places representing different geographic locations in Delhi. A symbolic walk to fight diabetes was held at GTB Hospital, East Delhi; Japanese Park, Rohini in North Delhi; District Park, Paschim Vihar; Community Park, Rajouri Garden in West Delhi; and at Malviya Nagar, South Delhi. Additionally, diabetes educational talks, preventive health checks, and diabetes screening were organised at all these locations. The theme of the awareness program was "PREVENT DIABETES – ACT NOW."



### RSSDI Secretariat

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