

# D Y S A U T O N O M I A   N E W S

D Y S A U T O N O M I A   I N F O R M A T I O N   N E T W O R K

FALL 2003

## In this Issue:

<b>Meet DINET</b>	<b>1</b>
<b>Forum Changes</b>	<b>2</b>
<b>Research Abstracts</b>	<b>2</b>
<b>Mayo Clinic and Mestinon</b>	<b>8</b>
<b>Recommended Reading</b>	<b>8</b>
<b>The Patient's Voice</b>	<b>8</b>
<b>Share Your Experiences</b>	<b>8</b>
<b>We Need Your Help to Continue</b>	<b>9</b>

*Dysautonomia News was created to inform and educate. The content should not be used as a substitute for professional medical advice, diagnosis or treatment. Readers are encouraged to confirm all information with other sources and a physician. Please keep in mind that research is continually evolving, and future discoveries may change or disprove some currently held beliefs.*

## Meet the Dysautonomia Information Network (DINET)

Our web site is growing in exciting ways! Please visit it and you will notice some big changes. We've been expanding to meet the needs of the dysautonomia community. Our web site no longer focuses solely on postural tachycardia syndrome, but now includes information on neurocardiogenic syncope, pure autonomic failure and multiple system atrophy. The name of our web site has changed as well. There is still a section called "POTS Place", but the entire web site is now called the Dysautonomia Information Network (DINET). We hope these new additions will better serve the dysautonomia community.

The Dysautonomia Information Network (DINET) is a volunteer run 501(c)(3) nonprofit organization. DINET's mission is to raise awareness of autonomic nervous system dysfunction and to promote dysautonomia education, support and networking. DINET is not affiliated with any other organizations.

Check out our new web site at [www.dinet.org](http://www.dinet.org) and become a member of the Dysautonomia Information Network. There are many ways we help members, including the following:

- Our “Meet Others Program” puts both patients and caregivers in touch with people that have also requested to meet others in their geographical region.
- Our “Forum” is a supportive community where patients and caregivers can discuss anything and everything related to dysautonomia.
- Our “List of Support Groups” can guide patients to other possible supportive resources.
- Our new “Physician’s List” helps patients locate doctors that treat dysautonomia around the world. Valerie Fenston, DINET’s Physician Survey Coordinator, is continually surveying physicians to build this list.
- The “Dysautonomia News”, our quarterly newsletter, keeps members informed of recent research discoveries, gives patients a place to submit their

writings and share experiences, and highlights dysautonomia teachings and conferences. Select, researched writings on dysautonomia are also included.

Our expanded web site will give us the opportunity to raise awareness of dysautonomia worldwide. Visit DINET’s website today to sign up for the Meet Others Program and newsletters; become a member of our forum; find a support group or physician in your area; and investigate our latest editions. We value members’ comments and hope to hear from you soon!

### Forum Changes

Our forum has moved! The new forum can be accessed at [www.dinet.org/forum.htm](http://www.dinet.org/forum.htm). Stop by and check it out!

### Research Abstracts

*Abstracts obtained from PubMed*

**The Second Vasovagal Pacemaker Study (VPSII).**  
Pacing Clin Electrophysiol. 2003 Jul;26(7 Pt 1):1565.

Connolly SJ, Sheldon R, Thorpe KE, Roberts RS, Ellenbogen KA, Wilkoff BL, Morillo C, Gent M; VPS II investigators.

The Second Vasovagal Pacemaker Study (VPSII): A double-blind randomized controlled trial of pacemaker therapy for the prevention of syncope in patients with recurrent severe vasovagal syncope.

Three previous small randomized trials have reported that pacemaker therapy is very beneficial for patients with severe recurrent vasovagal syncope. However these trials were not double blind and were thus at risk of bias in assessment of outcomes and of a 'placebo-effect' of surgery.

To determine if pacing therapy reduces the risk of syncope in patients with vasovagal syncope. A double-blind randomized trial of pacemaker therapy was performed. After implantation of a dual chamber pacemaker, 100 patients from 15 centers were randomized, double blind, to receive dual chamber pacing (DDD) with rate drop response or to have only sensing with no pacing (ODO).

Patients were followed for up to 6 months and the primary outcome of the study was time to first recurrence of syncope.

Results: Patients were well matched as to baseline characteristics. In the year prior to randomization patients had had a median of 4 episodes of

syncope. No patients were lost to follow up. Of the patients randomized to ODO, 22 of 52 (42%) had recurrent syncope within 6 months, compared to 16 of 48 (33%) of the patients in the DDD group. The cumulative risk of syncope at 6 months was 40% (95% confidence interval 25%, 52%) for the ODO group and was 31% (95% confidence interval 17%, 43%) for the DDD group. The relative risk reduction in time to syncope with DDD pacing was 30% (95% confidence interval -33%, 63%,  $p = 0.14$  one-sided). Lead dislodgement or repositioning occurred in 7 patients, one patient had vein thrombosis and another had pericardial tamponade leading to removal of the pacemaker system. One patient had infection involving the pacemaker generator.

Conclusions: This double blind randomized trial does not confirm the results of earlier smaller unblinded randomized trials. Because of the weak evidence of efficacy of pacemaker therapy and the risk of complications, pacemaker therapy should not be recommended as first line therapy for patients with recurrent vasovagal syncope.

**Editor's notes**

by Michelle Sawicki

This study was conducted to evaluate the effectiveness of pacemakers in evaluating vasovagal syncope. It was double-blinded, so neither the patients nor the physicians knew whether pacing therapy was being used or not.

A double-blind study helps to prevent experimenter bias and the placebo effect. Pacemaker therapy has been reported in several studies to be an effective treatment for vasovagal syncope. This particular study investigated whether pacemakers were beneficial because of their physiological effects on the heart or because of the psychological effects of surgery, or both.

The main finding of this study was that a statistically significant benefit was not found for pacemaker therapy for prevention of fainting in vasovagal syncope patients. The authors concluded, "considering the risk of complications, the rate of recurrence of syncope in the patients receiving a pacemaker and the weak evidence for any true benefit of pacing, pacemaker therapy should not be recommended as first-line therapy for patients with vasovagal syncope".

**Insulin sensitivity in young women with vasovagal syncope.** Am Heart J. 2003 May;145(5):834-40.

Ruiz GA, Calvar C, Hermes R, Rivadeneira D, Bengolea V, Chirife R, Tentori MC, Gelpi RJ.

**BACKGROUND:** Insulin, in addition to its known metabolic effects, has sympatho-excitatory and vasodilatory actions on muscular blood vessels. The goal of this study was to evaluate insulin sensitivity in young women with vasovagal syncope and positive tilt test results (HUT+) and to compare it with that in patients with negative tilt test results (HUT-) and in control subjects without a history of syncope.

**METHODS:** Different indices of insulin sensitivity were obtained by an oral glucose tolerance test (OGTT) in 13 young women with syncope and HUT+ (age 26.8 +/- 9.1 years, body mass index 20.4 +/- 2.1), 8 patients with HUT- (age 26 +/- 5.6 years, body mass index 21.9 +/- 2.4), and 13 control subjects without syncope and HUT- (age 28.9 +/- 8.8 years, body mass index 23.1 +/- 1.7). The following parameters were assessed: fasting glucose and insulin levels (G(0), I(0)); G(0)/I(0) ratio; G(0) x I(0); areas under the curve for glucose and insulin; homeostatic model assessment (HOMA);

quantitative insulin sensitivity check index (QUICKI); and composite whole-body insulin sensitivity index (ISI).

RESULTS: G(0) and I(0) values were significantly lower in patients with HUT+ than in control subjects (G(0) 4.9 vs 81.9,  $P < .05$ , I(0) 4.7 vs 9.1,  $P < .005$ ). All the fasting values-based indices (ie, HOMA 0.9 vs 1.9,  $P < .005$ ) and the ISI (12.8 vs 7.1,  $P = .01$ ) differed significantly in both groups. None of the parameters showed significant differences between patients with HUT- and control subjects. Sixty-one percent of patients with HUT+ had a vasovagal reaction during OGTT.

CONCLUSIONS: Young women with vasovagal syncope and HUT+ have a greater insulin sensitivity. They have a propensity to reproduce symptoms during the OGTT. This hypersensitivity could be one of the predisposing factors for vasovagal episodes.

\*\*\*\*\*

**Paced breathing can prevent vasovagal syncope during head-up tilt testing.**

Can J Cardiol. 2003  
May;19(6):698-700.

Jauregui-Renaud K, Marquez MF, Hermosillo AG, Sobrino A, Lara JL, Kostine A, Cardenas M.

BACKGROUND: Clinical experience suggests that, through the control of heart rate, paced breathing may prevent syncope.

OBJECTIVE: To assess the effect of metronome-paced breathing (0.2 Hz) on the outcome of head-up tilt test (HUT) in patients with vasovagal syncope.

PATIENTS AND METHODS: Ten patients (two men), mean +/- SD age 18.4 +/- 5.1 years, with a positive HUT with spontaneous breathing and no evidence of cardiovascular or neurological disease, were exposed to a second HUT under metronome-paced breathing (0.2 Hz). Continuous electrocardiographic recordings were obtained during the two tests, and heart rate variability was analyzed off-line.

RESULTS: During HUT with metronome-paced breathing, only one of the 10 patients developed bradycardia, hypotension and syncope ( $P < 0.01$ , Wilcoxon). Compared with HUT with spontaneous breathing, HUT with paced breathing induced a larger increase in the heart rate in the first minute of tilt (4 +/- 6 beats/min versus 16 +/- 12 beats/min,  $P < 0.05$ ).

CONCLUSIONS: The results show that paced breathing can prevent vasovagal syncope

induced by HUT. This finding suggests that respiratory training could be useful to prevent vasovagal syncope.

### Editor's Notes

by Michelle Sawicki

This was a small study of ten non-medicated, non-smoking vasovagal syncope patients. The patients were given one tilt table test in which they breathed spontaneously and then a second tilt table test during which they engaged in metronome-paced breathing.

All ten patients fainted during the first tilt table test, throughout which they breathed spontaneously. During the second tilt table test, given three to five days after the first, only one patient fainted. The patients engaged in metronome-paced breathing during the second tilt, which consisted of twelve evenly spaced breaths per minute.

The authors of this publication state the influence of paced breathing can be explained by two factors: the action of respiration on the baroreflex response to upright posture, and the prevention of the hyperventilation response that patients with orthostatic intolerance can have during tilt. The authors further state that the findings of this study suggest that controlled

breathing has an influence on the autonomic regulation of the cardiovascular system, including heart rate variability. The authors conclude, "patients may be trained to regulate their breathing, at rest and during changes of posture, and then use regulated breathing to abort syncope whenever they are in provoking situations or have presyncopal episodes".

I have personally found paced breathing to be beneficial when walking up stairs. Breathing in this manner helps me to be much less symptomatic when I finally do reach the top. Hopefully larger studies will be done in the future to determine more of the possible ways paced breathing may help dysautonomia patients.

*Patients should always obtain a physician's approval before trying any new treatments.*

\*\*\*\*\*

**Does severe nutcracker phenomenon cause pediatric chronic fatigue?** Clin Nephrol. 2000 Mar;53(3):174-81.

Takahashi Y, Ohta S, Sano A, Kuroda Y, Kaji Y, Matsuki M, Matsuo M.

BACKGROUND: In the past five years we experienced 9 fatigued disabled children who were

intermittently or persistently absent from school.

**PATIENTS:** They had been suspected to be burdened with psychosomatic disorders, having orthostatic hypotension, postural tachycardia, or other autonomic dysfunction symptoms.

**RESULTS:** Investigating the cause of moderate orthostatic proteinuria in some of them, we found by chance severe typical nutcracker phenomenon (NC), which was present in all 9 children complaining of chronic fatigue.

**CONCLUSION:** Their symptoms filled the criteria of chronic fatigue syndrome or idiopathic chronic fatigue (CFS/CF). An association between severe NC and autonomic dysfunction symptoms in children with CFS/CF has been presented.

### **Editor's Notes**

*by Michelle Sawicki*

This research suggests nutcracker phenomenon (left renal vein compression) may be associated with autonomic dysfunction. Dr. Takahshi, one of the physicians who reported this finding, has provided DINET with testing criteria for the nutcracker phenomenon. Anyone wishing to have this information sent to them can

contact DINET at:  
[staff@dinet.org](mailto:staff@dinet.org)

\*\*\*\*\*

**Multiple system atrophy: an update.** *Mov Disord.* 2003 Sep; 18 Suppl 6: S34-42.

Wenning GK, Geser F, Stampfer-Kountchev M, Tison F.

Multiple system atrophy (MSA) is a sporadic neurodegenerative disorder that usually manifests in the early sixth decade of life and progresses relentlessly with a mean survival of 9 years.

Clinically, MSA is dominated by autonomic/urogenital failure, which may be associated with either levodopa (L-dopa) - unresponsive parkinsonism in 80% of cases (MSA-P subtype) or with cerebellar ataxia in 20% of cases (MSA-C subtype).

Pathologically, MSA is characterized by a neuronal multisystem degeneration and abnormal glial cytoplasmic inclusions containing alpha-synuclein aggregates.

Pharmacological treatment of motor features is disappointing, except for a transient L-dopa response in a minority of MSA-P patients. In contrast, autonomic and urogenital features of MSA should be identified early on, because they can be treated effectively in many instances.

Neuroprotective strategies are presently unavailable, however, two multicentre European trials have been launched to evaluate the effects of riluzole and human recombinant growth hormone on disease progression in MSA.

Clearly, further randomized, controlled trials are required to identify effective symptomatic or neuroprotective agents in MSA. Several in vivo models have become available to allow a careful preselection of candidate agents. Several research groups have been formed in Europe (EMSA-SG, NNIPPS) and United States (NAMSA-SG), providing a framework for coordinated trial activity in MSA.

#### Mayo Clinic and Mestinson

Read about the new treatment (Mestinson) Mayo Clinic has tested for people who experience dizziness upon suddenly rising from a prone position at:  
[http://www.mayoclinic.org/new\\_s2003-rst/1954.html](http://www.mayoclinic.org/new_s2003-rst/1954.html)

#### Recommended Reading

*Why buy when you can borrow? Your local library may be able to interloan the books we cover in this section.*

**The Medical Clinics of North America: Case Studies in**

**Neurology, Part II**, published a chapter titled "Syncope and Orthostatic Intolerance" in the Volume 87, Number 4, July 2003 edition. This chapter is on pages 835-865 and was written by Louis H. Weimer, MD and Olajide Williams, MD.

#### Share Your Experience

DINET has received many letters from patients thanking us for publishing patients' personal stories of life with dysautonomia. Readers tell us the stories help them to better understand dysautonomia, and that the stories help them to feel validated. We'd like to continue helping readers in this way. If you'd like to share your personal story about any form of dysautonomia, please contact DINET at: [staff@dinet.org](mailto:staff@dinet.org)

#### The Patient's Voice

**The Patient's Voice is an area for patients to express themselves** and write about experiences relating to dysautonomia - both positive and negative. It is a place to share medical experiences, suggestions, short stories and poetry, etc. If you would like to contribute to The Patient's Voice, please email [staff@dinet.org](mailto:staff@dinet.org) or write to:

DINET  
 P.O. Box 55  
 Brooklyn, MI 49230

\*\*\*\*\*

**Views expressed in The Patient's Voice are not necessarily those of the Dysautonomia Information Network or its members.**

\*\*\*\*\*

**They Don't Know Me**  
*by Stacey Yount*

They don't know me  
These people who say  
They are my friends  
They don't know me  
How alone I have been  
Sitting here, lying here  
Day after day  
They quip:  
Get up  
You don't sound sick  
You don't look sick  
Get up  
They say:  
Listen to me and my life  
Hear my stories  
They will inspire you

Cheer you up  
They don't know me  
I don't want deep understanding  
Just a little support  
Not doubt  
They don't know me  
Sitting here, lying here  
Day after day  
Wondering, Waiting, Wanting  
Soon I'll too say  
And they will hear  
Listen to "well me" and my life  
Perhaps they are acquaintances  
not friends

**We Need Your Help to Continue**

Please consider supporting DINET. We are supported entirely by donations. We receive no funds from government agencies or pharmaceutical companies.

Donations are vitally important to our ongoing functioning because they pay for medical articles, which allow DINET to keep dysautonomia patients

informed of research breakthroughs and treatments. Donations also fund our web site, which has allowed us to provide dysautonomia education to people around the world. Donations keep our forum operating, which has become a supportive resource for patients and caregivers around the world.

Donations help in other ways, too. They are allowing us to build a list of physicians that treat dysautonomia worldwide. They cover the cost of printing and mailing educational material. They pay for the everyday supplies that are required to bring dysautonomia information to you. We need your help to continue. No donation is too small and each one is greatly needed and appreciated.

We are a 501(c)(3) organization, and donations are tax deductible according to IRS regulations.

To donate by check, fill in the following donation form and mail it to the address provided. To donate by credit card, visit [http://www.dinet.org/how\\_you\\_can\\_help.htm](http://www.dinet.org/how_you_can_help.htm) and give through Network for Good. Thank you.

**Donation Information**

\_\_\_\_\_  
Name

\_\_\_\_\_  
Address

\_\_\_\_\_  
City

\_\_\_\_\_  
State

\_\_\_\_\_  
Zip

\_\_\_\_\_  
Phone

\_\_\_\_\_  
Email Address

Make checks payable to **DINET** and mail to:

DINET  
P.O. Box 55  
Brooklyn, Mi 49230

DINET is a 501(c)(3) organization. Donations are tax deductible according to IRS regulations.

**Dysautonomia News** is a quarterly publication of the Dysautonomia Information Network. Subscribe to Dysautonomia News at: [www.dinet.org](http://www.dinet.org)

DINET would like to thank the following people for making this newsletter possible:

**Michelle Sawicki**, Editor  
**Judith Pettibone**, Copy Editor  
**Stacey Yount**, Contributor