NEWSLETTER

"Promoting the Highest Standards of Endocrine Nursing Practice, Education and Research"

Osteoporosis

Volume 14, Number 1 ***February, 2004***

Parathyroid Hormone: A New Era in Osteoporosis Treatment

Introduction

Betsy McClung, MN RN

Osteoporosis is a skeletal disorder characterized by compromised bone strength which can lead to fragility fractures, the most common of which are fractures of the spine, hip and wrist. Bone strength reflects the integration of two main features: bone mineral density as well as the characteristics of bone that contribute to bone quality. In older adults, bone density is an important determinant of fracture risk. However, other characteristics such as age-related changes in the geometry and distribution of bone mass, rate of bone turnover, damage accumulation (eg. microfractures) and degree of mineralization also influence bone strength and fracture risk.

Effective strategies now exist to identify individuals with or at risk for osteoporosis. A broad menu of therapeutic choices is available for the treatment of osteoporosis. Both antiresorptive and anabolic therapies decrease the risk of fracture but by different mechanisms. Antiresorptive therapies (bisphosphonates, SERMS, estrogen and calcitonin) slow bone turnover and increase bone mineral density by filling in the remodeling space, increasing mineralization and decreasing porosity. The primary goal of these therapies is to decrease fracture risk and to preserve bone structure.

By contrast, the anabolic therapy, teriparatide (recombinant human parathyroid hormone 1-34) directly stimulates new bone formation and bone turnover, increases true bone mass and restores bone architecture.

The primary goal of therapy is to reduce fracture risk. All approved therapies have been shown to accomplish this goal; however they do not prevent fractures completely. Interventions should be based on an individual patient's medical history, physical status, laboratory findings and specific fracture risk profile.

This review will describe the efficacy and clinical indications for teriparatide, followed by a guide for teaching patients how to use the pen delivery device to administer the medication.

Continued on page 2

From the Desk of Joanne Swenson

PRESIDENT'S MESSAGE

The new year is now upon us. Traditionally, the new year is a time for making resolutions, setting goals and planning for the future. At the very least it is a difficult, but important pursuit. I hope that some of your goals may include becoming more involved in the activities of the Endocrine Nurses Society (ENS).

The ENS may be small in total number of members but we are a varied and dynamic group. The expertise of all of our members is outstanding and important. The contribution of the Osteoporosis Task Force to this newsletter is a clear example. It can only get better if more members get active and involved. We need your help in any way that you can contribute. Your participation in any way, big or small will make a difference. Any committee or task force would benefit from your assistance. There will also be committee chairperson positions opening this year. Please consider getting involved in any way that you can. I can personally say that being involved with ENS committees and the board has been a very rewarding experience. I think that you would also find this to be true. Your help is needed and I would be happy to talk with you about the opportunities that are available. My e mail is: jswenson55@aol.com. I look forward to hearing from you.

The ENS board will have its spring meeting at the end of February. During this meeting we will work on the final issues related to our annual meeting and symposium in June. The program looks great and I hope that you will be attending. We will also be addressing other ENS projects such as the web site and our preceptor program.

I also want to remind you that we will be participating in the ICEN meetings in Lisbon, Portugal August 31 through September 4, 2004. This will be an exciting opportunity to meet with both ENS members and nurses from the international endocrine community. It should be a great experience. I hope that you will be able to attend one or both of these meetings.

Best wishes to all.

Parathyroid Hormone: A New Era in Osteoporosis Treatment

(Continued from page 1)

PTH

Cathy Kessenich, DSN,ARNP

Parathyroid hormone (PTH) is not a new concept in bone therapies. It was first described by Hans Seyle in 1932 in his experiments with the use of intermittent injections of bovine parathyroid gland extract to stimulate bone growth in rat pups.[1] PTH is classified as an anabolic agent because it acts to stimulate osteoblasts and build new bone. However, it must be given intermittently, at low doses to stimulate cortical and trabecular bone growth in humans. Continuous infusion of PTH will cause bone loss.

Pharmacology

There are several chemical forms of PTH. The form recently FDA approved is teriparatide (Forteo, *Eli Lilly*). It is manufactured by recombinant DNA technology and is identical in chemical sequence to the 34 N-terminal amino acids of natural human parathyroid. It is marketed in a disposable pen device that can be used for up to 28 days. Teriparatide is extensively absorbed after subcutaneous injection. The absolute bioavailability is approximately 95% based on pooled data from 20, 40, and 80 mcg doses.[2] The drug reaches peak serum concentrations one half hour after injection. The half-life of teriparatide is approximately one hour when administered by subcutaneous injection. Human metabolism and excretion studies have not been performed with teriparatide, however, the animal studies indicate that peripheral metabolism of PTH is believed to occur in the liver followed by excretion via the kidneys.[2]

Osteoporosis Clinical Trials

Teriparatide has demonstrated positive results in several clinical trials, with a variety of patient populations and in combination with other therapeutic agents.

In a small, randomized, double blind study of 34 postmenopausal women with low bone mineral density and prevalent fractures taking hormone replacement therapy, study patients received 400 Units of human parathyroid in daily subcutaneous injections over a 3 year period. Researchers found in this study that women taking hormone replacement therapy and PTH had continuous increases in vertebral bone mineral density and a reduced rate of vertebral fracture during the 3 year study period, compared to no significant change in the control group.[3]

Another small randomized clinical trial compared the efficacy of cyclical PTH to cyclical PTH and sequential calcitonin in 30 postmenopausal women with osteoporosis. In this 2 year study, short cycles (28 days) of daily 800 Units of PTH injection resulted in significant increases in lumbar spine bone mineral density and a very low incidence of vertebral fracture. Those women randomized to the PTH injection and sequential calcitonin therapy arm of the study achieved no greater benefit with the addition of the additional antiresorptive agent.[4]

Glucocorticoid-induced osteoporosis is the most common secondary cause of osteoporosis. Lane and colleagues have conducted several studies to examine the efficacy of PTH in reversing corticosteroid induced osteoporosis. In two separate randomized controlled trials, daily injections of PTH were found to dramatically increase bone mass in the postmenopausal women with corticosteroid induced osteoporosis.[5,6] Notably, in these studies, the positive effects of the parathyroid injections on bone mineral density continued for a period of 6-12 months after discontinuation of therapy.

The effects of parathyroid injections have also been examined in studies of men with idiopathic osteoporosis. An 18 month, randomized, double blind, placebo-controlled trial of 23 men with osteoporosis recently revealed that daily subcutaneous injections of 400 Units of PTH resulted in substantial increases in lumbar spine and hip bone density.[7] Thus, PTH may be a useful anabolic agent for men with osteoporosis.

The largest and most pivotal study of PTH to date was recently published by Neer et al.[8] In this study 1637 postmenopausal women were randomly assigned to receive placebo or daily subcutaneous injections of PTH over a two year period. Women receiving the parathyroid injections in this study experienced a decrease in the risk of vertebral and nonvertebral fractures and a concomitant increase in vertebral, femoral, and total body bone mineral density.

Clinical Indications

Teriparatide has been approved for the treatment of postmenopausal women who are at high risk for fracture. Additional approval was obtained to increase bone mass in men with primary or hypogonadal osteoporosis who are at high risk for fracture. It should be noted that this therapy is not intended for osteoporosis prevention and may not be suitable as a first line agent in many patients with osteoporosis. Appropriate patients for teripatide therapy are men and women with a history of osteoporosis related fracture. Additionally, patients who have multiple risk factors for fracture, or who are intolerant to previous osteoporosis therapy may be considered.

Interactions

Drug interaction data for this new compound is somewhat limited. The effects of teriparatide with two diuretics (hydrochlorothiazide and furosemide) have been studied and were found to be clinically unimportant.[2]

Adverse Effects

Teriparatide should not be given to patients with hypersensitivity to the compound. Teriparatide contains a black box warning due to the increased incidence of osteosarcoma in male and female rats during clinical trials *and* should not be prescribed to patients

Continued on page 3

Parathyroid Hormone: A New Era in Osteoporosis Treatment

(Continued from page 2)

who are at risk for osteosarcoma. Patients at risk for Paget's disease of the bone, those with unexplained elevations of alkaline phosphatase, open epiphyses, other metabolic bone disease or prior radiation therapy to the skeleton should not be prescribed this medication. Teriparatide has not been studied in patients with pre-existing hypercalcemia, but these patients should be excluded from therapy because of the possibility of exacerbating this electrolyte imbalance.[2]

In short term clinical pharmacology studies, transient episodes of orthostatic hypotension were observed, but relieved with placing the person in a reclining position and it did not preclude continuation of treatment. Other adverse advents reported in Phase 3 clinical trials were dizziness, leg cramps, muscle pain, headache, nausea, constipation, and rhinitis.[2]

Teriparatide is Pregnancy category C. The effect has not been studied on human fetal development. It is not intended for nursing mothers or pediatric patients.

Cost

Teriparatide will be a self-administered daily 20 mcg subcutaneous injection for a period of up to two years. Each injection cost approximately twenty dollars per day ($600 per month). However, manufacturer patient assistance programs and insurance plans can help to defray this cost.

Practical Tips for the Clinic Setting

There are 2 potential obstacles related to PTH therapy from the patient's perspective - the cost and the daily injections. From the nurse's point of view, the required patient education time and insurance questions can be overwhelming in these times of hurry –up health care. The following protocol has evolved within an osteoporosis and endocrinology practice. This system encourages maximum efficiency of time in an outpatient setting. In the ideal situation, this protocol includes only one additional follow-up visit after PTH treatment is recommended to the patient.

The patient is initially identified as a candidate for PTH treatment during a clinic evaluation. At this visit the physician makes his/her recommendation to the patient, carefully explaining the rationale and potential side-effects of PTH therapy. Only those patients who have significant bone loss or fractures on current treatment are offered PTH treatment. Because of their failure to respond to other treatment modalities, patients are very interested in another option. At this point the nurse reviews the following:

1. The "Customer Care Insurance Verification/Prior Authorization Form"
2. The Summary Overview of PTH therapy
3. Prescriptions for PTH and needles

The patient then returns home to begin the financial insurance coverage determination and make their personal financial decisions. After the PTH medication has been purchased, the patient contacts the office and is scheduled for a follow-up appointment. This visit is scheduled to allow adequate clinic time for the nurse to review injection techniques and to observe the initial injection administration. Follow-up laboratory tests are arranged and the patient is instructed to call back for results. During this visit it is important to document the average daily dairy intake and calcium supplement the patient is taking, as this might need to be adjusted after the laboratory results are completed. A 6-month return visit is scheduled to evaluate bone density response to treatment.

References

Seyle H. On the stimulation of new bone formation with parathyroid extract and irradiated ergosterol. Endocrinology. 1932; 16: 547-558.

Teriparatide (Forteo). Product Package Insert, Eli Lilly & Company, 2002.

Lindsay et al. Randomised controlled study of effect of PTH on vertebral bone mass and fracture incidence among postmenopausal women on oestrogen with osteoporosis. Lancet 1997 Aug 23; 350(9077): 550-5.

Hodsman et al. A randomized controlled trial to compare the efficacy of cyclical PTH versus cyclical PTH and sequential calcitonin to improve bone mass in postmenopausal women with osteoporosis. J Clin Endocrinol Metab 1997 Feb: 82(2): 620-8.

Lane et al. PTH treatment can reverse corticosteroid-induced osteoporosis. Results of a randomized controlled clinical trial. J Clin Invest 1998 Oct 15: 102(8):1627-33.

Lane et al. Bone mass continues to increase at the hip after PTH treatment is discontinued in glucocorticoid-induced osteoporosis: results of a randomized controlled clinical trial. J Bone Min Res 2000 May: 15(5): 944-51.

Kurland et al. PTH as therapy for idiopathic osteoporosis in men: effects on bone mineral density and bone markers. J Clin Endocrinol Metab 2000 Sep; 85(9): 3069-76.

Neer et al. Effect of PTH (1-34) on fracture and bone mineral density in postmenopausal women with osteoporosis. N Eng J Med, 2001 May; 344(19): 1434-1441.

Clinical Updates from the Pituitary Task Force

Medical therapy for growth hormone deficient adults in the form of recombinant human growth hormone is available from Eli Lilly (Humatrope), Genentech (Nutropin and Nutropin AQ), and Pfizer (Genotropin) as daily injections. Each company has a convenient pen device for administering the injection. Additionally, Pfizer provides a pre-filled single dose injection syringe which does not need refrigeration. A two week preparation, Nutropin Depot by Genentech is awaiting FDA approval for adults.

Medical therapy for Acromegaly includes a somatostatin analog, Sandostatin available from Novartis in a short acting formulation requiring three injections a day and a long acting formulation, Sandostatin LAR which is a monthly injection.

Another somatostatin analog is available in Europe with pending FDA approval for use in the United States. It is made by Beaufour Ipsen and Genentech as Lanreotide, a two week preparation and Lanreotide Autogel, a monthly injection.
In 2003 a new growth hormone antagonist from Pfizer was FDA approved and is available in daily injections.

ENS Osteoporosis Education Task Force Report; 2004

The osteoporosis patient education brochures continue to be well received with many requests coming from throughout the United States. If you would like copies of these brochures, please e-mail:
ginny.wiatrowski@aurora.org.

The monograph and slide program for advanced health care practitioners is being revised and will be available as a continuing education monograph later this year.
Respectfully submitted by task force members: Carolyn Bolognese, Cathy Kessenich, Beth Lucasey, Betsy McClung, Judy Overdorf and Linda Pachucki-Hyde.

Visit our website at
www.endo-nurses.org
to see “What is New”

ENS ON THE ROAD

ENS and its members will be represented at two spring conferences again this year. We will have an exhibit booth at the PENS conference in Las Vegas April 14 - 17, 2004, and at the AACE conference in Boston April 28 - May 2. You are encouraged to stop at the booth to see the display of educational materials developed and written by ENS members, and to support the members who are attending the booth as your representative.

Make plans now to join us in New Orleans in June!

The Crescent City, The Big Easy, The City That Care Forgot, however you refer to it, New Orleans is famous for many reasons. History, food, music, and spirituality combine here and provide a unique experience unlike any other. This city embraces visitors with its blend of French heritage and U.S. southern hospitality.

Hop on the St. Charles Streetcar and take a ride on a historic landmark. As the oldest continuously operating street railway system in the world, it's a great way to get an overview of the Garden District, Uptown, and the University areas of town. Once you get the lay of the land, stroll through one of the city's renowned cemeteries or take ride on an authentic riverboat on the mighty Mississippi. Of course no visit to New Orleans is complete without a walk through the famed French Quarter.

If shopping is your thing, then get ready for some fun! Some of the oldest treasures of New Orleans are discovered in the French Quarter. From Royal Street to Magazine Street and from the Riverwalk to New Orleans Centre, retail, retro, ribald, and regal - shopping abounds here. You'll also find unique art galleries, accent shops and three shopping centers downtown.

New Orleans is home to over 3,000 restaurants that tempt visitors with local fares such as spicy crawfish, Po-Boy sandwiches, shrimp étouffée, muffalettas, jambalaya, gumbo, Bananas Foster, and pecan pralines. And the "must have" on every list — hot beignets and café au lait from Café Du Monde.

Come learn the latest in Endocrine nursing and see what New Orleans is all about. Once there you may just find yourself agreeing with the locals to 'laissez les bons temps rouler'(let the good times roll)! To learn more about these attractions and others, visit the New Orleans Metropolitan Convention and Visitors Bureau at www.neworleanscvb.com or call them at 1-800-672-6124.

Have a Say in San Diego!

The Program Committee is looking for members who are interested in helping out with planning the June 2005 symposium in San Diego, CA. Opportunities include working with speakers, managing continuing education credits, meal planning, creating booklets and flyers, as well as many others.

If interested please contact Becky Qualey at qualeyr@mskcc.org or 212-639-8944.

Make your voice heard!

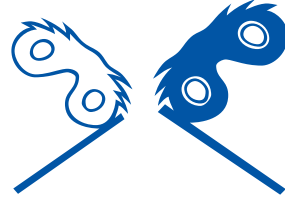
14th Annual Endocrine Nurses Society (ENS) Symposium
Ernest N. Morial Convention Center, New Orleans
June 17-18, 2004

Thursday, June 17

6:30-8:30 pm **Poster Session and Cocktail Reception**

Friday, June 18

7:30-8:00 am **Genomics 101**
Beth Lucasey, RN



8:05-9:00 am **Thyroid Incidentalomas**
Janet Walsh, RN
Susan Mandel, MD

9:05-10:00 am **Advances in Medical Therapies for Acromegaly**
Ariel Barkan, MD

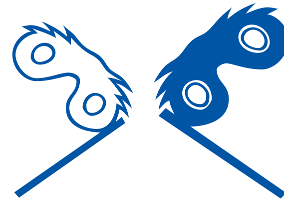
10:00-10:15am **Break**

10:15-11:10 am **Osteoporosis in Organ Transplant Patients**
Elizabeth Shane, MD

11:15 am-12:10 pm **Alternative Therapies in Menopause Management**
Kathryn Martin, MD

12:15-1:30 pm **Luncheon and Business Meeting**

1:30-2:25 pm **Childhood Obesity**
Cindy Cain, RN
Georgeanna Klingensmith, MD



2:30-3:25 pm **Adrenal Insufficiency**
Dana Ayer, APRN, AOCN
Carl Malchoff, MD

3:30-4:25 pm **Male Sexual Dysfunction**
Denise Kramer Levien, RN

4:30-5:00 pm **Evaluation/Raffle/Wrap Up**

QUESTIONS? Contact Program Co-Chairs:
Becky Qualey, RN, Phone: 1-212-639-8944, email:qualeyr@mskcc.org
Marian L. Shepphard, RN, Phone: 1-804-828-8932, email: mlsheppa@hsc.vcu.ed

Sign up now and take advantage of early bird registration!
Early Registration Deadline: April 23, 2004.

Registration forms can be printed out or on line registration can be completed at the Endocrine Society web site: www.endo-society.org. Call 1-888-695-5481 to have a registration form mailed or faxed to you. Registration cannot be done via the telephone.
Registration fee includes admittance to The Endocrine Society's 86th Annual Meeting as well as the 14th Annual Endocrine Nurses Society (ENS) Symposium.

Accommodations*

COURTYARD BY MARRIOTT CONVENTION CENTER
www.marriott.com
Rates: $149 Single, $169 Double

EMBASSY SUITES HOTEL NEW ORLEANS
www.embassyneworleans.com
Rates: $160 Single, $180 Double

HAMPTON INN &SUITES CONVENTION CENTER
www.neworleanshamptoninns.com
Rates: $136 Single, $156 Double

HILTON GARDEN INN NEW ORLEANS DOWNTOWN
www.hiltongardeninnneworleans.com
Rates: $129 Single, $149 Double

HOLIDAY INN SELECT CONVENTION CENTER
www.hiselect.com
Rates: $139 Single, $149 Double

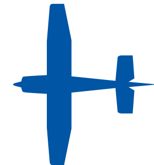
SPRINGHILL SUITES BY MARRIOTT
www.springhillsuites.com
Rates: $149 Single, $169 Double

**Accommodations listed are those closest to the Convention Center.*
For a complete listing please visit www.endo-society.org

Transportation

From the Airport:
Armstrong New Orleans International Airport is approximately 18 miles from downtown New Orleans. From the airport, one-way fares are currently set at $28 for up to two persons. The cost for three or more persons is $10 per passenger.

Taxicabs:
Marked cars are plentiful throughout the uptown and downtown areas of the city.



The Regional Transit Authority Bus Lines:
The buses run different schedules (any where from 10 to 20-minute intervals). VisiTour Passes entitle the bearer to unlimited ridership on all streetcar and bus lines, and are available at many downtown hotels, banks and shopping areas. You can also call the RTA RideLine at 248-3900 for the distributor nearest you. Cost: $5.00 for a one-day pass, $12.00 for a three-day pass.

Streetcars:
St. Charles Avenue Line: Runs 24 hours a day, everyday. Fare is $1.25 each way. Riverfront Line: Runs 6:00 a.m. to midnight, everyday. Fare is $1.50 each way. Exact change is required on both streetcar lines.

Travel Tips

Weather:
Average temperatures in New Orleans during June range from a low of 73º to a high of 90º.

Clothing:
In spring and summer, light clothing is most comfortable, although a raincoat and an umbrella should always be close at hand. Many New Orleans restaurants require that men wear a coat and tie; however, some permit jackets only. Because the French Quarter is best explored on foot, comfortable walking shoes are a necessity.

Safety:
New Orleans is a city, and like any other city, it is not immune to crime. However, the French Quarter, downtown, and the most areas of the city have seen a significant improvement in crime reduction over the last several years and millions of people visit New Orleans every year without incident.

2004 ICEN Research and Case Presentation Awards

The Endocrine Nurses Society is pleased to announce the availability of three **$750** grants to be awarded for Research and Clinical Case Presentations at the ICEN conference in Lisbon, Portugal.

Grants will be awarded to members to support nursing research or case studies related to the field of endocrinology. The ICEN Planning Committee and ENS Board of Directors want to encourage every member to further the science and professionalism of endocrine nursing by applying for these awards.

Deadline for submission is April 1, 2004.

CLINICAL CASE PRESENTATION OR NURSING RESEARCH GRANT

The purpose of the grant is to support the development and implementation of either an independent nursing research or a relevant clinical case study. Recipients are selected via a blind review process in accordance with the grant criteria. Outcomes of the grants will be presented via phone and/or email and also announced at the Annual ENS meeting in June 2004.

Criteria

Applicants must be current members of the ENS. The award is intended to support a clinical case study or nursing research study conducted by a registered nurse to address the clinical needs of endocrine patients. The ENS will expect the grant recipient to present an oral summary depicting their work at the ICEN meeting in Lisbon, Portugal.

Directions for Applicants

Please submit five copies (4 blinded) of the application to:

Sheryl Ness, RN • 4712 – 3rd Street NW • Rochester, MN 55901

Include:

1. Name and credentials of Principal Investigator or Project Developer
2. Title of Proposal
3. Abstract (limit to 150 words and summarize purpose of study or project)
4. Specific aims (goals and objectives)
5. Significance (background information indicating a need for this work)
6. Content (theoretical or conceptual framework if applicable, definition of technical terms)
7. Methods (plan, measurable outcomes, study site, evaluation measures, specific timetable that includes a plan for dissemination)
8. References (document only sources cited)
9. Budget (may include travel to the meeting, but travel may not comprise the largest percentage of the budget)

Applications are limited to five (5) pages of double-spaced text and the deadline for receipt of applications is April 1, 2004. If you have any questions regarding the Grant application, please contact Sheryl Ness, RN at 507-538-5259 or 507-292-9456.

Grant Expectations

Recipients of awards are expected to meet the following obligations:

1. File an abstract (Due June 1, 2004) for submission in the ICEN Program Syllabus.
2. Present your research results or clinical case presentation via formal presentation at the ICEN - ENS Symposium on September 1, 2004 in Lisbon, Portugal. Additionally, awardees must submit an article summarizing the case study or research for the ENS newsletter. The expenses related to this presentation are the responsibility of the grantee and may be a percentage of the budget for the grant.
3. Preference for awards will be given to members not previously funded.
4. Applicants must be members in good standing for at least 3 months prior to the grant and poster deadlines.

ICEN Portugal 2004

Goal: Global Endocrine Nurse Issues: Their Commonality and Diversity

WEDNESDAY SEPTEMBER 1st
Afternoon ENS

PLENARY **Is the Insulin Resistance Syndrome the "Missing Link"?**
Richard Hellman, MD, FACE, FACP

NURSES IN ACTION abstract submissions

THURSDAY SEPTEMBER 2nd
Morning UK

PLENARY ***PCO***

Afternoon PENS

PLENARY ***TURNERS Syndrome***
followed by case presentation and posters

FRIDAY SEPTEMBER 3rd
Morning ENSA (AU)

"An Endocrine Odyssey Through Asia"

(This presentation will focus on intersex disorders and how local culture and beliefs affect attitudes towards and decisions that are made about surgery, sex assignment and hormonal treatment.)

Endocrine Trivial Pursuit

NURSES IN ACTION Research & Case Presentations

CALENDAR OF EVENTS:

April 14 - 17, 2004	PENS, Las Vegas, NV*
April 22-24, 2004	Preventive Cardiovascular Nurses Association 10th Annual Symposium and Exposition, Orlando
April 28-May 2, 2004	AACE's 13th Annual meeting and Clinical Congress Boston*
Month of May	National Osteoporosis Awareness and Prevention Month (www.nof.org)
May 6-12, 2004	2004 National Nurses Week
June 4-8, 2004	American Diabetes Association 64th Scientific Sessions, Orlando
June 17-18, 2004	14th Annual Endocrine Nurses Society Symposium, New Orleans*
June 16-19, 2004	The Endocrine Society 86th Annual Meeting, New Orleans*
Aug 11-14, 2004	AADE 31st Annual Meeting, Indianapolis
Aug 31-Sept 4, 2004	2nd International Congress of Endocrinology Nursing, Lisbon, Portugal
Sept 29-Oct 3, 2004	76th Annual Meeting of the American Thyroid Association (ATA), Vancouver, British Columbia

* Please plan to visit the ENS booth if you are attending these meetings and meet up with members who share your interests.

ENS Board 2003-2004

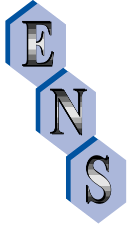
President: *Joanne Swenson*
President-Elect: *Marge Ewertz*
Treasurer: *Elease Rumbaugh*
Secretary: *Sheryl Ness*
At-Large Board Member: *Patricia Via*
Membership: *Rubi Defensor*
Program Co-chairs: *Marian Sheppard*, *Rebecca Qualey*
Research: *Cathy Kessenich*
Marketing: *Michel Martin*
Education Co-Chairs: *Karen Liebert*, *Teresa Kidder-Moore*
Development: *Joyce Kuntze*
International Liaison: *Molly Solares*
Publication: *Julie Hellman*

Welcome to new member:
Patrice Donovan from Cheshire, CT.

Message from Membership:

The 2004 Membership Directory will be mailed out in February.

We now have the ability to send more timely information and updates electronically but unfortunately we cannot find all of you. Please check your information in the new directory and send an update to ens@endo-nurses.org if you would like to receive e-correspondence.



ENDOCRINE NURSES SOCIETY

MEMBERSHIP APPLICATION

Date of Application__________

❑ Renewal of Membership

❑ New Member

Recruited by_______________

Name: Last First MI

Preferred Mailing Address

Organization/Employer

Position Title Subspecialty Area(s)

City/State/Province Zip/Postal Country *(if non-USA)*

Phone ❑ Home ❑ Business FAX Number E-Mail Address

Please provide the following information, allowing ENS to serve the needs of its members

Committee Interest
- ❑ Development
- ❑ Education
- ❑ Marketing
- ❑ Membership
- ❑ Program
- ❑ Publications
- ❑ Research

Education/Licensure
- ❑ RN
- ❑ NP
- ❑ MS
- ❑ CDE
- ❑ PhD
- ❑ Other: _______________ _______________

Position
- ❑ Clinical Staff
- ❑ Patient Education
- ❑ Staff Education
- ❑ Administration
- ❑ Clinical Specialist
- ❑ Study/Research Coordinator
- ❑ Nurse Practitioner
- ❑ Other: ______________________ ______________________

Birthday Month

❑ Jan	❑ Jul
❑ Feb	❑ Aug
❑ Mar	❑ Sep
❑ Apr	❑ Oct
❑ May	❑ Nov
❑ Jun	❑ Dec

Member Category:	Annual Dues	Amount Enclosed
❑ Full (RN status)	$65.00	$__________
❑ Associate (non-RN)	$65.00	$__________
❑ *Optional* - 2 yr. membership	$120.00 (save $10.00)	$__________

Method of Payment:

❑ Check enclosed (made payable to Endocrine Nurses Society)

❑ Charge my ❑ AmEx ❑ Visa ❑ MasterCard

Card no. ____________________________________exp:_______

Are you interested in (check all that apply):

❑ Preceptorship ❑ Presentation ❑ Publication

Office Use Only

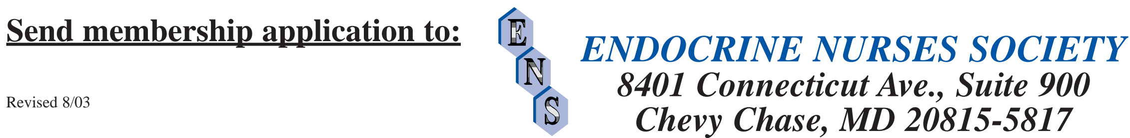
Date_______________

Check #_____________

Letter Y N

Member #____________

Send membership application to:



ENDOCRINE NURSES SOCIETY
8401 Connecticut Ave., Suite 900
Chevy Chase, MD 20815-5817

Revised 8/03

ENDOCRINE NURSES SOCIETY
8401 Connecticut Avenue, Suite 900
Chevy Chase, MD 20815-5817
http:\\www.endo-nurses.org

FIRST-CLASS MAIL
U.S. POSTAGE
PAID
Milwaukee, Wisconsin
Permit No. 104

INSIDE THIS ISSUE

Parathyroid Hormone: A New Era in Osteoporosis Treatment 1-3
President's Message 1
PTH Therapy Administration . . . . . Insert
Instructions for PTH Pen Device . . . . . Insert
ENS on the Road 4
Osteoporosis Education Task Force Report 4
Pituitary Task Force Update 4
Website 4
ENS Symposium in New Orleans 5-7
ICEN ENS call for Grants 8
ICEN Portugal 2004 9
New Members 10
Calendar of Events 10

We would like to thank the following companies for their gracious support:

Abbott Pharmaceuticals
Aventis
Eli Lilly
Genentech, Inc.
Genzyme Therapeutics
Novartis Pharmaceuticals
Novo Nordisk
Pharmacia