

SANDRA BARCELO ADAIR R.N., C., A.R.N.P.

Family Nurse Practitioner, Certified Diabetes Educator

348 Miracle Strip Parkway S.W., Suite 29
Fort Walton Beach, FL 32548
(904) 244-1404

u

Eugene B Draper
President
Pacific International, Ltd.
555 Birch Street
Nekoosa, WI 54457-1397

July 18, 1994

Dear Mr. Draper,

This letter is to thank you for your program, and to give you a personal feedback from two points of view, a personal one as a mother of an enuretic child and as a professional that has taken care of several enuretic children following the medical/ drug regimen model with no success.

I am a Nurse practitioner working with families for the past several years in a Primary care/Family Practice Health care setting. In the course of my daily practice I probably see approximately 2 to 3 enuretic children per month.

Until I knew your program I followed the medical community model that treats enuresis as a combination of physical/physiological/ psychological medical problem.

The drug of choice for the treatment of enuresis is DDAVP which is an antidiuretic hormone primarily used for the treatment of diabetes insipidous. This drug is extremely expensive, and produces mixed results. I used the drug with my patients with poor results.

When my daughter continued to be wet at night at the age of five I started to panic and took her to several pediatricians, Psychologists, Urologists, and Nephrologists. She was given a wide variety of costly, invasive procedures with negative results; she was put several times into the same drug regimen with DDAVP, when this did not work she was put into psychotic medications that produced severe negative side effects. In 1990 we moved to France where I started the same process again with the same results, the French Physicians followed the same approach treating my daughter as a psychological case.

I became so discouraged that my only hope was to pray and wait for divine wisdom until I saw your program announced in one drug store and as the last hope I wrote you not hoping to find no more new results, yet I was determined that my daughter could reach adolescence without this "shameful problem" that we had tried so hard to solve.

Leslie, became dry within a week of your program, she has been dry for six months, and all I can say is that we need to educate the medical community in the appropriate treatment for enuresis, being a sleep disorder rather than a psychological, genital urinary abnormality. A lot of pain and money can be saved to those parents that continue to be

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treated with the above approach. I certainly will be a spoke person for your program in this community, and I will refer my patients to you. Thank you for helping us to deal with this frustrating situation to a successful end.

Sincerely


Sandra Barcelo Adair

909112 AGE 9
MR. & MRS. ADAIR
LESLIE ADAIR
528 GARDEN OAKS COVE
NICEVILLE , FL 32578
(904)897-8095
PLACED 2/26/94 DRY 6/28/94
A. HERBERT MORTON - BJS C/D

911931 AGE 10
MR. & MRS. TOTTEN
FRANK TOTTEN
2609 BELLE CREST LN.
SILVER SPRING , MD 20906
(301)871-3388
PLACED 5/28/94 DRY 11/03/94
MICHAEL WOOD - SJG C/D

April 14, 1995

Eugene B. Draper, President
Pacific International, Ltd.
Case Direction Center
555 Birch Street
Nekoosa, WI 54457

RE: 911931

Dear Mr. Draper,

I highly recommend Pacific International to remedy enuresis. I have a 10 year old son who continually wet his bed until we began treatment with Pacific International.

Frank's self confidence has improved greatly as well as his general outlook on life. He used to be down on himself for no apparent reason. The source of his anxiety was bed-wetting.

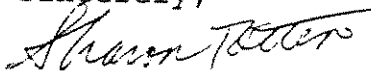
Fortunately, Frank never had a problem with hearing the alarm. Just hearing the alarm the first night of treatment boosted his self confidence. When someone who has a problem knows they can do something about it will feel better just knowing they can do something. Incidentally, we had tried DDAVP from Frank's pediatrician, but this did not work.

Having weekly feedback letters helped to keep us on course. Frank for some reason would act like he was not interested in the letters, but I would go over everything with him. He would not say a word, but when bed time came, he would smile and say he was ready.

Also, after we had begun treatment, I discovered that a co-worker in my office had his son use Pacific International about 10 years ago. He said that his son told him a few years later that he had no idea how grateful he was for his dad helping him to stop wetting the bed at night. I am sure Frank will also tell us the same thing in a few years.

In addition to telling others about Pacific International, we have another son who is 2 1/2 years old. If he has any trouble with staying dry at night after he is potty trained, we will know who to call. Thank you for offering an alternative solution that works for enuresis.

Sincerely,


Sharon Totten

918682 Age 21
Anne Montgomery
1350 Smokey View Road
Mooresville IN 46158
(317)-831-6384
Placed 11-17-95 Dry 5-29-96
RALPH MYERS - LAK C/D

June 29, 1996

Pacific International, Ltd.
Eugene B. Draper, President
Case Direction Center
555 Birch Street
Nekoosa, WI 54457-1397

Dear Eugene,

Thank you for the letter of congratulations. I am so happy to be dry. Without the help of Pacific International, Ltd. I would still be washing my sheets everyday.

I am 22 years old and up until just a few weeks ago I had been a bed wetter all of my life. After seeing many doctors and specialists I had just about given up hope of ever becoming dry. I was so tired of trying to come up with excuses as to why I could not spend the night with my friends. If and when I did stay with a friend I would stay awake as long as I could so there would be less of a chance that I would have an "accident".

My mom found out about Pacific International through her sister-in-law who had successfully helped her 6 year old become dry. My mom told me about it and asked if I wanted to make an appointment with a Consultant. I wasn't real enthusiastic. I said, "Sure, why not we've tried everything else." After my consultation I was excited, Pacific International had given me new hope of getting dry.

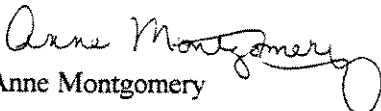
Due to my age I was getting very worried about what would happen when I got married. Would I be able to sleep with my husband or would we have to have separate beds. To some people that may be an amusing question, but to a bed wetter in their late teens and early twenties who is anticipating a husband or wife in their future and knowing that person would not want to wake up in a wet bed with a wet spouse every morning, that question is not funny.

The program takes commitment and a true desire to become dry. I feel sorry for the children whose parents are making the decision that their child is not bothered too much by being a bed wetter. I have a request for those parents, "Put plastic around your mattress and pour water on yourself and your bed, then sleep in it all night. Do this for a week then ask yourself if it bothers you."

I hope and pray that the people out there who are suffering with the serious problem of bedwetting, find Pacific International. Pacific International works for individuals. They are committed to helping individuals get dry. They don't take bedwetting lightly, it is their goal to help YOU get dry!!!

Thank you for helping me get dry. This accomplishment is for both of us to celebrate. With that in mind, Congratulations to you too!

Sincerely,


Anne Montgomery

January 19, 1998

Pacific International, Ltd.
Case Direction Center
555 Birch Street
Nekoosa, WI 54457-1397

Attention : Eugene B. Draper, President

Dear Mr. Draper:

Thank you! Thank you! Thank you! Your program for us has been an overwhelming success for our son, Justin. We started the program on May 1, 1997 and he was declared dry on September 10, 1997. We achieved in four months what we had tried to achieve on our own for over five years. For the first time ever, Justin, at age ten slept over a friend's house. The freedom, confidence, and happiness he now experiences is amazing.

Your staff from the consultant, Soren Jorgenson to Justin's personal case director, Lynette Krueger were both personal and professional. We were always made to feel our case was special because of the personalized phone calls and letters. Justin would look forward to his own letters of encouragement. We would highly recommend your program to anyone who has gone through the frustration for the individual and family of not being "dry" at night.

We are now a family that is extremely happy and appreciative of being dry together.

Sincerely,



John & Susan Colley
and Justin



929251 AGE 9
MR & MRS COLLEY
JUSTIN COLLEY
14730 PARKVIEW
RIVERVIEW MI 48192
(313)282-6194
PLACED 5/01/97 DRY 9/10/97
SOREN JORGENSEN - LAK C/D

Jeremy & Cheryl Webber
1689 Chateau Drive
Dunwoody, GA 30338

February 8, 1998

Eugene B. Draper, President
Pacific International, Ltd.
555 Birch Street
Nekoosa, WI 54457

928964 AGE 13
MR & MRS WEBBER
LEESA WEBBER
1689 CHATEAU DR
DUNWOODY , GA 30338
(770)394-2958
PLACED 4/15/97 DRY 1/19/98
WILLIAM PORTER - VLZ C/D

Dear Mr. Draper,

We had tried many things to help our daughter become dry. None of them seemed to work. We tried things such as no drinks before bed and getting her up in the middle of the night. We took her to her doctor who could only offer medication on a temporary basis for those times that she spent the night else where. Nothing permanently helped. This had been going on for two years before we finally had one of your representatives come to our house.

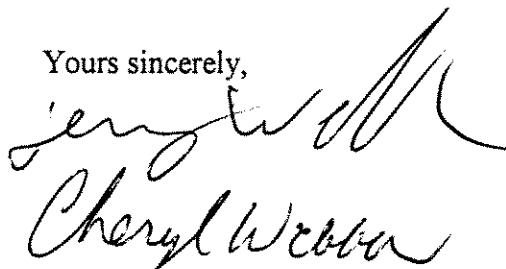
Initially we were skeptical both because of the cost and about the possibility of success. We never make immediate decisions when someone comes and presents something to us. This was different. It was a long evening as we wrestled with the decision to use your service. The presentation convinced us that we were dealing with a problem that was different than the one we had been treating. Late that night we decided to go ahead.

Although it was not easy, the relief at putting this problem into someone's hands who knew what they were doing was great. Almost immediately, our daughters problem was improved. Although it took about 9 months to declare her completely dry, accident frequency dropped right away. Because of the alarm equipment, we were now able to change her bed on a normal cycle instead of daily. She felt better about herself. We felt better because she felt better about herself and because we were no longer frustrated about what to do.

I am amazed at how little the medical community really knows or understands this problem. I have already told a counselor of the immediate successes that our daughter had and, when asked, gave them literature about your company. Last time we saw her pediatrician, he asked how she was doing. When we told him about the results and why, he asked us to bring him some information next time we came in. We plan on doing that. Both doctors sincerely wanted to know of something that would work for their other patients.

Thanks for helping our daughter feel better about herself.

Yours sincerely,



Jeremy & Cheryl Webber

Deborah R. Oates



13461 Vassar Road ◆ Millington, MI 48746-9212
Home Phone (517)871-9614 ◆ Email oa88@tds.net

June 10, 1998

Eugene B. Draper
Pacific International, Ltd.
555 Birch Street
Nekoosa, WI 54457-1397

Dear Mr. Draper,

It is my pleasure to write a recommendation for your company. My son is ten years old and his self-esteem has been restored with the declaration of dryness. I did not truly realize how much the bedwetting affected him until your representative was here to speak to us and at the end of the meeting he looked at me with pleading eyes to try this program.

Personally I was put off at the idea of having an "alarm" under my son while he slept, but he thrived on it. It took a while before he could wake up enough to go to the bathroom without first having to be coaxed awake. His smiling face in the morning when he wakes up dry is the best reward I could ever want.

Tomorrow we leave to visit one of my sisters for vacation. He is feeling great knowing he won't have to sneak around in the morning to get the wet sheets dry before anyone finds out.

We are continuing to follow the final instructions given. Joseph usually sleeps through the night but every time he does wake up it gives me assurance that he is sleeping properly and is attuned to his body functioning.

Thank you so much. We had reached a dead end in our own efforts. We couldn't figure out what "caused" the problem. For him to be able to drink whatever he wants and not have to check the clock means the world to both of us.

Sincerely,



DEBORAH R. OATES

Case ID: 931145

931145 AGE 9
MS OATES
JOSEPH OATES
13461 N VASSER ROAD
MILLINGTON , MI 48746
(517)871-9614
PLACED 8/21/97 DRY 5/20/98
SUSAN SITES - VLZ C/D

THE UNIVERSITY OF CHICAGO

DEPARTMENT OF HISTORY

1126 EAST 59TH STREET
CHICAGO • ILLINOIS 60637
U. S. A.

Constantin Fasolt
Associate Professor

direct (773) 702 7935
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email icon@midway.uchicago.edu

Eugene B. Draper
President
Pacific International, Ltd.
555 Birch Street
Nekoosa, Wisconsin 54457-1397

October 5, 1998

Dear Mr. Draper,

Since my daughter has just successfully completed your program, I would like to take the opportunity to thank you for your help. I would also like to write a few words in support of your program.

At about four years of age my daughter became aware that she needed diapers when other children did not. We tried everything we could to help her wake up in a dry bed. Nothing worked. We consulted physicians, psychologists, psychiatrists, urologists, and friends. The advice we heard most often was that, given time, things would take care of themselves. But they did not. Ten years later, she could still not sleep at a friend's place or go on school excursions without embarrassment.

We heard about your company by chance: I saw a leaflet in a supermarket. I did not trust the information it provided. But I thought I would at least find out what you had to offer. What could be wrong with trying yet another approach?

I am glad we did. My daughter, now fourteen, started her program with you in January of 1998. The program required nothing more than the ability to follow a few simple instructions to the letter, and the patience to keep following them until they worked. They began to work quickly. After eight months you were able to declare her dry. Now she can go to sleep wherever she likes, like any other child.

Your company did exactly what it said it was going to do. There were no surprises and no disappointments. Everything turned out exactly as you said it would, and when you said it would. In fact, it all worked so much according to plan that I would have found it completely unremarkable, had it not

been for ten years of experience in which nothing else had worked according to plan.

I only wish we could have known about your company sooner. We would have saved our physicians and our insurance company a lot of unnecessary and expensive trouble. We would also have saved my daughter many years of unnecessary frustration.

I hope you will find a means of publicizing your work, and the extensive research on which it is based, more widely and more effectively. If this letter could help you in doing so, I would be very pleased.

Sincerely,



Constantin Fasolt
Associate Professor of History

934261 AGE 14
MR FASOLT
CATHY FASOLT
18100 ROCKWELL AVE
HOMEWOOD IL 60430
(708)798-6797
PLACED 12/05/97 DRY 9/14/98
EUGENE DRAPER - LAK C/D

THE UNIVERSITY OF CHICAGO

DEPARTMENT OF HISTORY

1126 EAST 59TH STREET
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Constantin Fasolt
Associate Professor

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Dr. Janis Mendelsohn
Department of Pediatrics
University of Chicago Friend Family Health Center MC 4027
5841 S. Maryland Ave.
Chicago, IL 60637

October 6, 1998

Dear Dr. Mendelsohn,

I am writing to thank you for your help last year in obtaining coverage for my daughter Catherine's treatment for bedwetting by Pacific International, Ltd. It took a long time, but in January of this year Catherine was finally able to start the program. It wasn't difficult and it worked like a charm. By March it was clear that an end to her bedwetting was on the horizon, and by June it did actually end. Pacific International continued to monitor her for another three months and has just now officially declared her "dry." You can imagine how happy Catherine is.

For your information I am enclosing the letter of thanks that I am sending to Pacific International. I can only say that I am very impressed by their professionalism, the care with which they screen and monitor patients, the large and detailed database they have accumulated over decades of treating tens of thousands of patients, and above all, of course, by their success.

With many thanks again and best wishes,

sincerely,



Constantin Fasolt

cc. Eugene Draper, President
Pacific International, Ltd.

January 4, 1999

Eugene B. Draper
Pacific International, Ltd.
Case Direction Center
555 Birch Street
Nekoosa, Wisconsin 54457-1397

937588 AGE 9
MS BOMBECK
DANIEL BOMBECK
3796 BLACKHAWK RIDGE CIR
EAGAN , MN 55122
(651)681-0145
PLACED 8/25/98 DRY 12/14/98
CAROL PENTECOST - VLZ C/D

Dear Mr. Draper,

I want to thank you and those at Pacific International, especially Vicki Zellner and Carol Pentecost for helping my son, Daniel.

He was very happy to be declared dry just before Christmas. He said, "It was one of the best Christmas presents he could have". He was excited about sleeping over at Grandma's house and not having to worry about wetting the bed. He is also looking forward to going to camp this summer and sleeping over at his friends' house.

My many thanks to Pacific International and the help we (Daniel and I) have received. We are grateful for your program!

I have recommended this program to others. But, the cost seems to be a deterrent for some not wanting to participate. The other factor seems to be; "Oh my pediatrician says he'll/she'll grow out of it". I think this problem is far more serious than letting "time" take care of it. I'm happy for Daniel and glad to be sharing in his success. -- The others don't know what they're missing!

While Daniel was going through the program, I went through a very difficult divorce. One of the things we went to court over was, that I wanted Daniel's Dad to pay for half of the cost. -- And guess what? -- The Judge ruled in his favor. The fair thing would have been to have split the cost. The Judge said, "There is a nasal spray that can help your son". I was appalled to think that in this day, when everything is so "anti-drug", that an officer of the court would recommend something like that! That spray can have long term adrenal gland effects. -- Something which I felt was not an option for Daniel.

My only recommendation would be to "get out the word" on Pacific International. Ignorance on this program is alive and well in Minneapolis/St. Paul.

Again, Thank You very much!

Special thanks to Vicki Zellner and Carol Pentecost, they did an excellent job!

Sincerely,

Karen Bombeck

Karen Bombeck
3796 Blackhawk Ridge Circle
Eagan, MN 55122

January 26, 1999

Len and Sharon Mazzocco
3402 Sagamore Drive
Huntington Beach, CA 92649
714-377-6245

Pacific International, Ltd.
555 Birch Street
Nakoosa, Wisconsin 54457-1397

Dear Mr. Draper,

We are so pleased with your effective program that I enthusiastically volunteer to become a referral for your prospective clients.

Shortly after becoming potty trained our daughter started to wet the bed. It became a very frustrating situation for the whole family. Our pediatrician claimed she would grow out of it, even though she would soon be entering Kindergarten. Meanwhile, the washer was going non-stop and we were trying every trick in the book to no avail. It became increasingly more difficult for everyone to stifle his or her negative emotions.

What we found to be the most difficult, as parents, was the feeling of helplessness. When our sweetie would ask to cuddle with us in our bed we would sadly turn her away. Many nights she would get me up because she was so cold from being wet. She also needed to wear Pull-ups for a sleep-over or when traveling. Her self-esteem became an issue for us.

Then one day, quiet by accident, I discovered Pacific International, Ltd. I almost let the opportunity slip by because I had many negative thoughts, many of which may be shared by other families. But after a few correspondence with various associates we decided to give you an opportunity to visit our family. We got the impression you were sincerely eliminating situations that would not be compatible with your service and it wasn't just another sales pitch. We appreciated your honest approach in preparing the home coach and child for the necessary willingness to play their major role in achieving dryness.

Once we started the program, no matter what, my love for my daughter and the feeling of having some control helped me to persevere. In our case, the toughest stage did not last nearly as long as I anticipated. We began to look forward to the exercises and pep talks received in the mail. My daughter and I started to battle over who got to write the word DRY on the card. Then the best piece of mail arrived, the Certificate of Achievement. The period of time prior to the program proved to be more challenging than the several months on the program. My daughter certainly deserves recognition and I'm sure she won't mind if we share in the glory.

Sincerely yours,


Sharon Mazzocco

937187 AGE 5
MR & MRS MAZZOCCO
APRIL MAZZOCCO
3402 SAGAMORE DR
HUNTINGTON BCH , CA 92649
(714)377-6245
PLACED 5/03/98 DRY 12/16/98
DAVID TAYLOR - LAK C/O

January 29, 1999

Pacific International, Ltd.
Case Direction Center
555 Birch St.
Nekoosa, Wisconsin 54457-1397

RE: 935879

To Whom It May Concern:

We wish to extend our sincerest thanks to every staff member at Pacific International for helping our daughter achieve dryness. We are experiencing many emotions related to her success. Certainly, we are truly happy for our daughter at having achieved this goal. For a child who was wet every single night before starting your program, achievement of dryness has been quite an accomplishment. She worked hard, as we did, but the effort certainly paid off when she received her certificate of completion.

We also wish to extend our gratitude to Sarah, our daughter's case manager, for her patience, understanding, and expertise. I called often at the start of the program, and occasionally thereafter. At first, I was a bit hesitant to call, but Sarah quickly put my concerns to rest with her friendly but professional way of handling my questions and concerns. Her suggestions always proved to be effective and helpful, and her letters to Katy very supportive and encouraging. We also extend our gratitude to the staff who handle equipment problems. We had only a few minor problems, but they were taken care of quickly and with no inconvenience to us.

Our thanks must also be extended to the Consultant who came to our home to carefully and patiently explain the program, get to know our daughter, and start us on our way. The hour grew quite late till we were finally finished asking all of our questions. I know he had a long drive home, yet he willingly phoned us very early the next morning to find out how we had made out that first night. He did so every morning thereafter for approximately two weeks. He was extremely supportive, something we desperately needed at that point in time.

We will admit that we were skeptics at first. Could this program really help a child who was wet every single night? Was the substantial financial investment really safe, or were we participants in a scam that was taking advantage of our desire to help our daughter? We almost laugh as we recall these thoughts and concerns, because Pacific International turned out to be one of the most well run, "consumer friendly" organizations we have encountered... and an organization that kept its promise to our daughter and to us. Every penny we invested was well worth it.

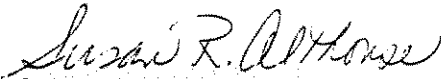
935879 AGE 9
MR & MRS ALTHOUSE
KATY ALTHOUSE
367 TIMBER BLVD
LEBANON PA 17042
(717)272-1626
PLACED 1/05/98 DRY 1/11/99
PHILIP WEINERT - SJG C/D

In closing, we would not hesitate to recommend Pacific International's program to anyone. As a matter of fact, we have already shared our positive feelings about the program with many of our friends and relatives, as well as a coworker whose child has a problem with enuresis. Keep up the good work. You are helping many individuals to improve their quality of life!

Sincerely,



E. William Althouse



Susan R. Althouse

April 5, 1999

To Whom It May Concern:

Pacific International, Ltd. of Nekoosa, Wisconsin is a company that engages in the correction of nocturnal enuresis (bedwetting).

Our family has used these services and we believe they are not only successful in correcting the bedwetting problem, but also very beneficial to our child's quality of life as a result of the elimination of the problem.

It was a year ago when our son turned eight years old that we finally decided we had to try and help him kick this problem which was causing him a lot of embarrassment. He was being asked to overnight birthday parties and campouts with friends but chose to stay home for fear of being "found out". We had approached our son's pediatrician two years earlier with the problem and he tried to reassure us that he would eventually mature out of this. However, he did give us a prescription for a bedwetting device that might help if our son was mature enough to use it. We decided to wait. I contacted Pacific International through an add I found in the newspaper. Within days our family was contacted by a representative and asked if we would like to make an appointment in our home to hear how the program worked. My husband and I decided that we had nothing to lose to listen and our son had everything to gain. Our conference with the representative from Pacific International was very professional. It was not a "hard sell". The research on its success spoke for itself. The representative also talked with our son in a very respectful way about the bedwetting problem. Although the program seemed expensive we felt that our son's happiness and self-esteem was definitely worth the financial investment. Five and a half months later, in July of '98, our son was declared dry and has been ever since. I need to underscore one very important point before I close this letter. Had it not been for the letters and phone calls from the counselor assigned to us by the company we would have given up. The bedwetting device alone would not have been enough to ensure his success. Each of us needed the emotional as well as the physical support this program provided.

Our family was so fortunate to be able to afford this program but we can understand the dilemma faced by many families. Children today have so many challenges to meet on a daily basis. Bedwetting and the resulting unhappiness and low-self esteem it causes should not be added to the list. State Senator Kevin Shibilski is in favor of the cost of Pacific's correction being handled by the State of Wisconsin for those who cannot afford it. We urge you to support this coverage so there is a comprehensive and successful correction of this problem that is also cost effective. Our son just turned nine. He is happy and confident. Not too long ago he attended an overnight birthday party for a friend at a local hotel. His comment to me was that the party was "awesome". A year ago he would have stayed home. If you have questions, please let us know.

Sincerely,

Mr. and Mrs. Dennis Brotz

Mr. and Mrs. Dennis Brotz

April 13, 1999

My name is Eugene Draper. I am the President and owner of Pacific International, Ltd. Pacific International corrects the problem of nocturnal enuresis throughout the United States and Canada. In our 48 year history of correcting this problem we have corrected over 300,000 cases.

This problem affects 15% to 20% of school age children between the ages of 4 and 16 and 2% to 5% of adults.

When I started helping enuretics at Pacific International, in 1964, 35 years ago, it was a severe closet problem, nobody talked about it and people were even ashamed to admit they had it in their family. Today, even though it is discussed and studied, it still is a closet problem.

This problem affects the self-esteem of the child at an early age and affects the outcome of school, how they see themselves. They cannot do things children ordinarily do as they grow up and mature, like going to camp and having friends over to stay without putting fear and stress on them - fear that they might be discovered or they might wet when friends are there.

The other side of this condition is a sleep problem. The child or adult who has this problem is sleeping incorrectly and too deep and cannot wake up like he or she is supposed to. Because of that, they may have different problems associated with that sleep such as ADD and ADHD and problems of being able to concentrate.

There are different characteristics which show up with this problem such as, not getting started in the morning, taking mom 15 to 20 minutes to get the child going and out the door, starting things and not following through.

When they get older and in school teachers will invariably say, "your son or daughter is extremely bright but he or she does not work up to their potential, they could do better, they have a lack of attention span and they daydream". Also, they get themselves over excited because they have been deprived of the proper REM sleep that they should enjoy all the time.

The literature supports Pacific International's correction process overwhelmingly. We utilize a behavior modification process with reinforcement and retraining using a moisture sensing alarm with step-by-step case management from beginning to end until the child is dry. An average case takes 4 to 6 months to correct and we follow-up for any relapses or recurrences for two full years.

Currently, 243 insurance companies and several HMO's have reimbursed us in part or whole. We have over 15,000 testimonial letters from individuals who we have corrected with this problem. A few are in the kit we have prepared for you.

It is sad when you see adults with this problem who have been told repeatedly that there is nothing that can be done for them and they would outgrow the problem. It is tragic because of the quality of life they forfeit in not being able to function, especially when there is a valid and successful way of correcting this properly.

The people who get assistance from the state of Wisconsin need this program as much, if not more, than people who are able to pay for it. Because of their circumstances it hampers their quality of life and their development. We urge you to consider helping them financially so these children and adults can be helped over this problem.

Thank You.

Dr. Douglas Palmenter

Pediatrician

*920 South Helbron Avenue
Evansville, Indiana 47714
(812) 479-6907*

Dear Colleague,

I have been a practicing pediatrician for 15 years and would like to share some valuable information with you.

For many years, I have been frustrated by the lack of an effective treatment for nocturnal enuresis. Like most of us, I have tried various drugs and monitoring devices only to be disappointed with the results. I was both surprised and elated to discover an organization that maintains a 98% success ratio. For over 40 years, Pacific International, Ltd. has been correcting bedwetting for children and adults on a guaranteed basis.

I have examined their proven therapeutic approach to dealing with this parasomnia and have found their management of cases to be superb and thoroughly professional. Pacific International's structure and disciplined approach allows them to correct enuresis in almost any type of case in the absence of organic defect.

I thoroughly support Pacific's corrective methods, not just because of their guaranteed success, but because they deal with the innate cause of the enuresis, which is a sleep disorder. This results in a proper correction of the problem and affords the patient the opportunity to learn to sleep more normal.

The emotional and psychological trauma of bedwetting can be devastating if left unchecked. I urge you to consider utilizing Pacific International's proven corrective methods.

Sincerely,

Douglas Palmenter M.D.

Dr. Douglas Palmenter
Pediatrician

927512 AGE 27

MS BRADY

REBECCA BRADY

343 12TH ST #6

PLAINWELL

, MI 49080

(616)685-6065

PLACED 1/15/97

DRY

5/25/97

RICHARD BITTLE

- SJG C/D

I am 27 years old and I have wet the bed all of my life. I have tried everything to quit wetting the bed. I would quit drinking early at night so that I would be sure not to wet. Most of the time it would not work. So I would rack my brain and try to figure out why! Depression set in so bad some times. Just because I had a wet bed most of the time. I tried another program similar to that of Pacific International once. It had a pad that when it gets wet, a buzzer would go off. It never worked. Because I was never really trained.

So when the man who introduced me to Pacific International first came to my house and told me of the program, I was very skeptical. I was sure it would not work for someone like me. But Rich was so convincing, I decided to give it a try. I mean why not? I have tried everything else. I was so amazed at all of the instructions. After a couple of months I was real sure it would not work but I prayed and kept working the program to the best of my ability. After awhile every week I was waking up wet less and less. It was so great to wake up every morning in a dry bed. How amazing. It was actually working! The day I was declared dry was one of the best days in my life.

I have so much faith in this program. I was so sure it would not work for me. Because I was different and had a terrible problem and very low self esteem. Nobody knew how I felt or what I had been through. If anyone with this problem feels like I did please try this program out. Since I have been declared dry, my spirits have been lifted, I am no longer afraid to spend the night at a friends house. I sleep much better at night. And I am no longer afraid of what I will find when I wake up. I know it will be a dry bed.

I feel I owe this company alott. Especially Richard, because without him I never would have even tried this. And Sarah, my case director, who helped me through this whole thing and gave me all of the instructions. I thank you all very much. I would even like to get involved in the company and help people. It worked for me and I would like to help people to believe in this.

With my life I thank you again Pacific International, Sarah and Rich. Please give me a call Rich so I can thank you personally. Thank you again.

Sincerely,
Rebecca
Brady

Robert Luedke
2042 Aspen Pl
Lewisville, Tx 75067

Eugene Draper
President
Pacific International, Ltd.

Dear Sir:

We were very pleased with your program in helping our son get over his bed wetting problem. I was skeptical at first, but soon became a believer, as slowly but surely he began to make progress.

I feel the biweekly letters from the counselor were especially helpful in motivating my six year old to achieve better results. And the exercises all helped him to move forward toward the goal.

Over the years I have thrown money away on worthless products and business ideas as most of us have, so naturally I was hesitant to invest such a large sum up front in this situation. But let me say this was one investment which was well worth the money, because Pacific did what it promised and helped my son feel proud of the achievement.

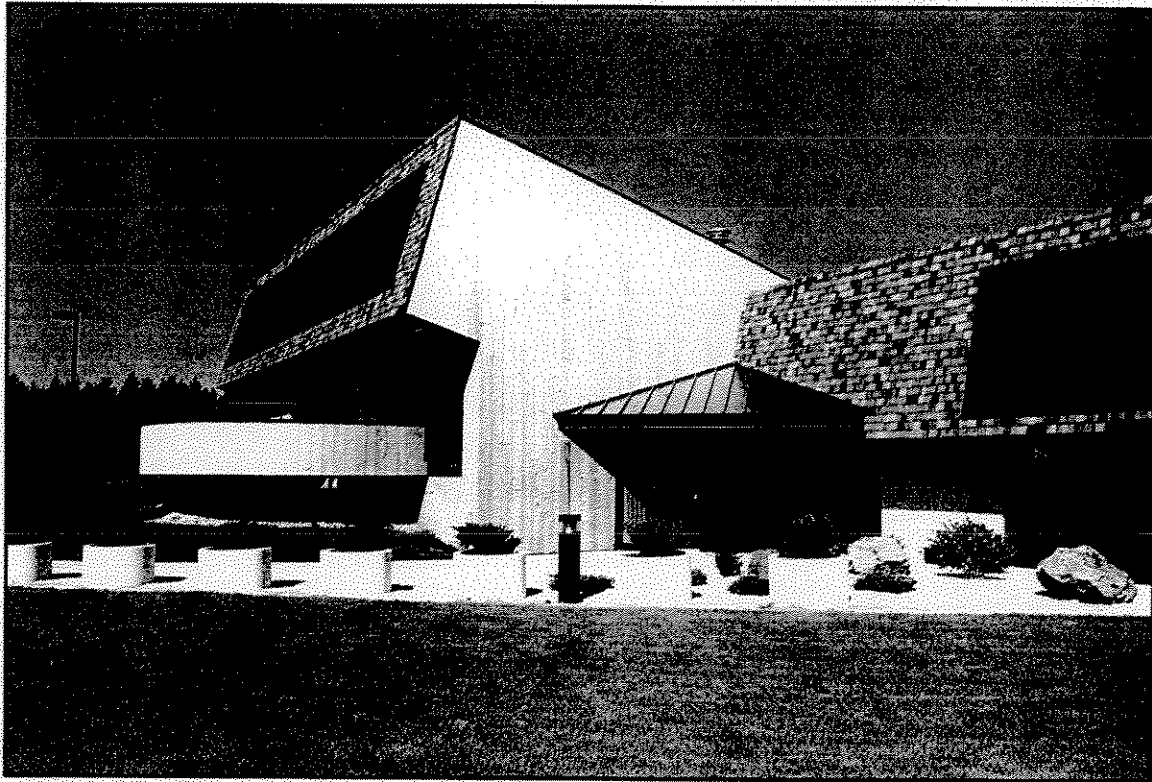
Once again, thank you and best of luck in the future.

Truly,



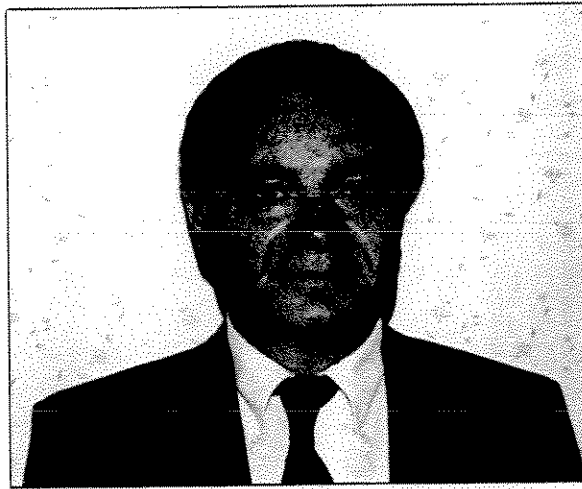
Robert Luedke

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PETE BREYTENBACH - SJG C/D



THE
PACIFIC
INTERNATIONAL
PROFILE

A Professional Approach To Bedwetting
Specialists Since 1951



Dr. Douglas Palmenter, M.D. a practicing Pediatrician, is the Medical Director for Pacific International.

Is Bedwetting Prevalent?

Over a period of one and a half years, Pacific International received 270,788 inquiries from people seeking help for bedwetting. It is noteworthy that 44,659 cases, or 16.5% of all inquiries were adult bedwetters.

Do child bedwetters outgrow this problem?

Obviously, most of those wetting during childhood or adolescence stop at some point before adulthood. However, no one knows exactly when that will occur and, more importantly, how it can affect ones self-image and self-esteem.

They may be restricted in many ways and be inhibited in their social development.

Since enuresis is the symptom of a sleep disorder, the wetting can cease and the individual may still retain the improper sleep. Proper correction through Pacific International's program gives the enuretic the opportunity to sleep better or more normal.

PACIFIC
INTERNATIONAL
LTD.

Effective
Nocturnal Enuresis
Correction

Pacific International, Ltd. offers an educational and motivational program developed after years of experience with thousands of cases, we do not sell a product. Our professional program successfully incorporates our own experience in the field with the most current research available on normal and abnormal sleep patterns. This enables us to achieve a **proper correction!**



Eugene B. Draper
President

PART I HISTORY OF PACIFIC INTERNATIONAL LTD.

Overview

Pacific International, Ltd. was founded in 1951 for the purpose of seeking answers to the dilemma of functional nocturnal enuresis. Though not a new disorder, enuresis was a persistent parasomnia lacking an effective solution. As a non-life threatening problem, progress within the medical community was slow. Our organization was determined to find answers while helping bedwetters overcome the problem.

In 1976, Eugene B. Draper became President of Pacific International, Ltd. His experience and background with our organization since 1964 and his determination to find solutions to the problem of nocturnal enuresis, enabled Pacific International to expand throughout the United States and Canada.

Pacific International's success is at least partly due to their undertaking an in-depth study of the more complex cases of enuresis. As a result, we have been able to identify many factors common among its clients which helped to end their bedwetting properly. This has allowed Pacific International to help those who previously faced continuation of enuresis into adulthood.

Common Misconceptions

One of the problems in the past that continues today, is that solutions to bedwetting are sought as if the condition were pathological.

This misconception contributes to the delay in correcting the problem. It is not generally known that nocturnal enuresis is a symptom, rather than a physiological dysfunction.

With advanced technology, grant funds to conduct research, and dedicated professionals, the medical community now has more information on enuresis. As a result, certain archaic theories have been questioned or abandoned, including:

1. "Don't Worry - They'll Outgrow It." This theory is difficult to embrace when so many teenagers and adults fail to outgrow their bedwetting. The number of adolescent and adult enuretics in our program confirms it is something that should not be ignored in childhood. Even when enuretics "outgrow" bedwetting, emotional problems may have already occurred. Enuresis can contribute to low self-esteem and self-image.
2. Many feel that bedwetting is an indication of an emotional problem, and that the child is expressing anger or exhibiting guilt. Those embracing this view often feel that bedwetters could control themselves if they "really wanted to." Too many cases exist involving highly motivated and emotionally well-adjusted enuretics to substantiate this theory.
3. The "small bladder" theory gained popularity years ago after observing that small amounts of urine were emitted by many enuretics. It gains further credence due to the short time between bedtime and the first wetting. One of the common approaches was to restrict liquids prior to bedtime, or even earlier. This deprived the kidneys of the vital flow necessary to perform their balancing duties and did little, if anything, to help the enuretic.
4. A weak sphincter muscle was blamed by many through the years. Elevating the foot of the bed was practiced in hopes of relieving the pressure on the sphincter. Liquid was sometimes withheld or increased, depending on the vogue at the time, but these efforts proved futile.

5. Urinary infection has been offered as a cause, and without a doubt, urinary infection can cause deterioration of control. Since bedwetting is nocturnal, however, it is difficult to accept a 24 hour infection to be symptomatic only at night. Additionally, only a small percentage of bedwetters are found to have urinary infection, and when they do, a diurnal problem usually co-exists.

Identifying The Problem

The World Health Organization has classified nocturnal enuresis as a parasomnia disorder. This was a major step. It has encouraged researchers to explore areas surrounding the etiology of enuresis by investigating the causes of other parasomnia disorders. Researchers, however, have been confounded by the effects of prolonged deep sleep cycles because not all subjects have the same degree of sleep problems, nor the same degree of enuresis.

Current research studies have indicated, however, that an abnormal deep sleep pattern was the most common denominator in identifying enuresis. This confirms Pacific International's conclusions based on its experience with literally tens of thousands of cases. One of Pacific's priorities has been the analysis of deep sleep patterns, and other common denominators regarding enuresis and other parasomnia disorders. Our company's commitment to research and development should allow us to find other answers in order to become even more effective.

Description and Classification of Functional Nocturnal Enuresis

Nocturnal enuresis has been classified as a sleep disorder (parasomnia), and included as a health-related disorder by the World Health

Organization. They have assigned it the following diagnostic codes:

ICD9 - CM 307.46

ICD9 - CM 780.46

They describe nocturnal enuresis as usually idiopathic (primary) or symptomatic (secondary). The ASDC-APSS (Association of Sleep Disorders Centers) classification states: "Bedwetting after three years of age is considered to be an enuretic disorder. It is a syndrome mainly, but not exclusively seen in children."

Pacific International accepts cases involving Sleep Related Enuresis in the absence of organic (urinary) conditions.

Correcting The Problem

Many methods of enuresis correction have been attempted. Unfortunately, they have not dealt with the problem completely and, therefore, have not been successful. A review of literature on treatments for nocturnal enuresis in children was published in Psychological Bulletin which supports the use of a moisture-sensing alarm, combined with positive reinforcement (education, training and motivation).

The author found greater effectiveness with behavior oriented therapies as opposed to medical or psychodynamic procedures. Even with these therapies, however, lack of parental cooperation was the single most common reason for failure.

Proper instruction and direction can greatly enhance parental cooperation and increase the rate of success. This principle has made Pacific International's program highly successful. It has also alleviated friction and frustration between the child enuretic and the parents, siblings and peers. (Doleys, Daniel M. Psychological Bulletin, 1979, Vol. 84, No. 1, 30-34).

PART II

THE

PACIFIC

INTERNATIONAL

PROGRAM

Pacific provides the services, equipment and professional staff necessary to correct nocturnal enuresis. Our staff is trained and qualified to perform the necessary functions and services for each case.

Each case receives continuous attention and supervision by a trained and experienced Case Director. The family and the enuretic are provided with an individualized program of instructions and procedures.

It's important to remember that we're not dealing with **just** a bedwetting problem. The enuretic is sleeping improperly and Pacific International's individualized program affords that person the opportunity of overcoming that incorrect sleep and to learn to sleep better or more normal.

It is not uncommon for enuretics to "outgrow" the bedwetting and exhibit some other symptom of the sleep disorder. The most common occurrence is bruxism (nocturnal tooth grinding). When this happens, the individual retains the incorrect sleep and merely exhibits it in another symptom. When Pacific International's program is fulfilled, it's possible for both problems, the cause as well as the symptom, to be eradicated.

Case Directors monitor each case according to a plan consisting of graduated, detailed instructions, based on the information and concerns communicated to them by parents every two weeks. The Case Director analyzes the enuretic's correction process and modifies the instructions, if necessary. Cases needing special attention are also reviewed and referred to a Client Specialist.

Pacific International's success in correcting bedwetting can be attributed to the educational and motivational components of the program. Continuous reinforcement of the enuretic and the family, along with the total involvement of our Case Directors and Field Specialists, has

resulted in the highest percentage of corrections in our field. In addition, the Re-Indoctrination System, developed by Mr. Eugene B. Draper, has been responsible for correcting even more difficult and complex cases.

The Re-Indoctrination process utilizes highly specialized equipment and techniques to solve difficult and complex cases. Our Galvanic Skin Response (GSR) device allows us to activate an alarm even before wetting occurs.

There is a single, one time fee which includes whatever services and equipment are necessary to correct the problem.

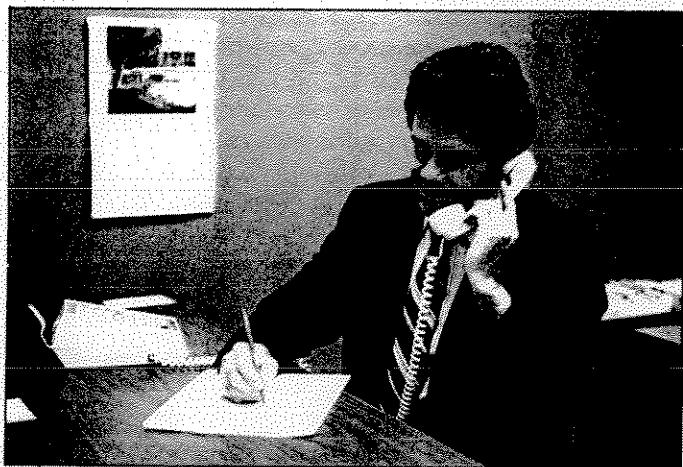
Procedures

1. **A Consultant** conducts an interview with the family, records a case history and determines whether or not it is an acceptable case. This covers a broad spectrum of specific details including motivation of both the enuretic and the parents. He then educates and prepares the family for each step and phase of the program.



Consultant enrolling family in the program.

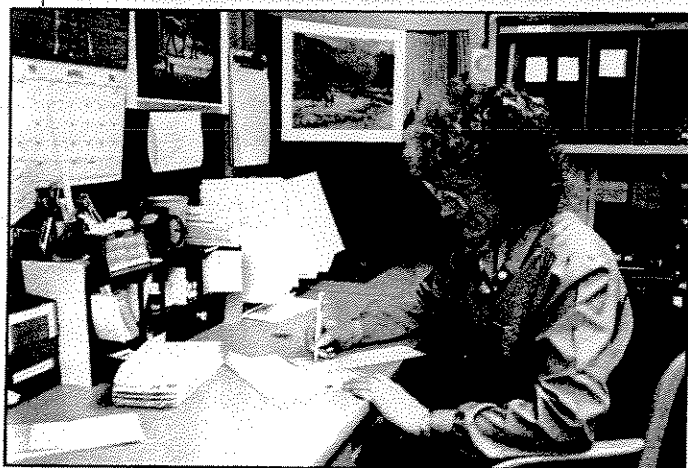
2. **The first morning** after the program has been initiated, the Consultant speaks to the parents. He remains in contact for several days until he is certain that the program is progressing properly and helps the family if any problems arise.



Consultant following up with family.

3. **The Clients** send in a report card every two weeks. This card contains information about the enuretic, such as bed-time, wetting activities (such as spot size), the time wetting occurred, and other information. This information is utilized by the Case Directing Department to develop instructions for each case. The Case Director is skilled and trained to professionally deal with:

- A. The individual wetting pattern of the enuretic.
- B. Problems that occur in each case as it progresses.
- C. Motivational procedures in order for the enuretic to carry out the program.



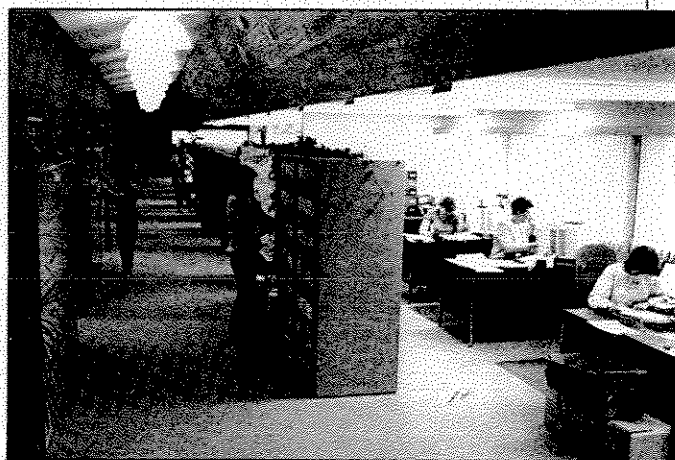
Case Director analyzing client's report card.

4. **The Case Director** declares the enuretic dry after achieving a minimum of 30 consecutive nights of dryness. Some cases require 40, 50 or even 60 nights of dryness, depending upon that individual's wetting pattern and how they have responded to the program.

Final instructions are then sent to the family to ensure against recurrence. They consist of

re-inforcement procedures that Pacific International has developed over a period of years.

5. **Pacific International covers recurrences** for a period of two years from the date the enuretic was declared dry. This is part of the company's follow-up services. In the event of recurrence, the client is to notify the company immediately so the re-inforcement procedures can be implemented. In some cases, this ends the problem with no further procedures. In other cases, however, it may be necessary to re-institute the program in order to obtain the proper correction.

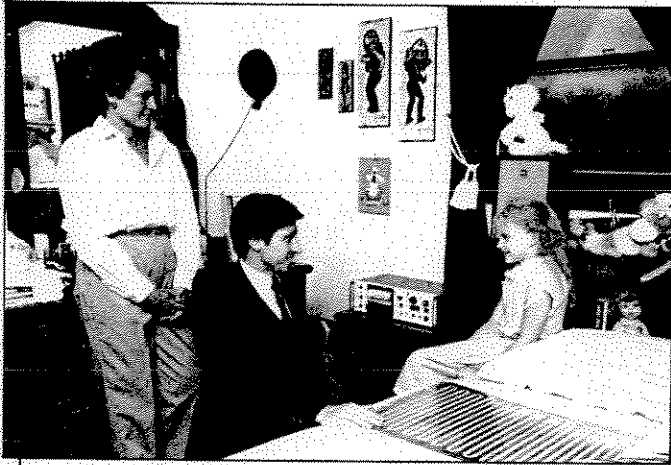


Case Direction Center

6. **In difficult cases** that do not progress properly or satisfactorily, a review is conducted to determine why the enuretic did not respond as expected. A decision is then made as to whether or not an interruption of the program is warranted.

If an interruption has occurred, a Field Specialist then returns to the home to visit with the family. This person is trained and qualified to investigate and determine what problems were, or are, in existence that have prevented successful completion of the program. If the Specialist concludes that dryness is achievable, the family and enuretic are re-indoctrinated. The Field Specialist is then responsible for directing and guiding the case to a successful conclusion.

All additional costs related to the re-indoctrination process are absorbed by Pacific International. This is part of the commitment that the company makes with each family. Knowledge obtained from this process may also result in additional understanding which can be utilized when working with other difficult cases.



Field Specialist conducting re-indoctrination.

7. If **Pacific International** determines that an enuretic cannot become dry, after compliance with the program, a refund is made.



Case Direction Conference with President Eugene B. Draper.

Prognosis

The prognosis for complete correction is above 98% for those who follow the program to completion. The length of the program varies according to the depth of the problem, the cooperation of the enuretic and family, and the enuretic's ability to respond to procedures and corrections. The period of correction averages from about four to six months, but some cases last over a year. There is no additional fee for longer cases.

Enuresis does not always correct itself, nor does a child always outgrow it, as some have indicated. Adult enuretics comprise approximately 8% of Pacific International's cases. Although some adult cases may show signs of emotional problems, we have found that psychological disturbances are not the cause of enuresis, but can result from it.

PART III

RESEARCH

AND

DEVELOPMENT

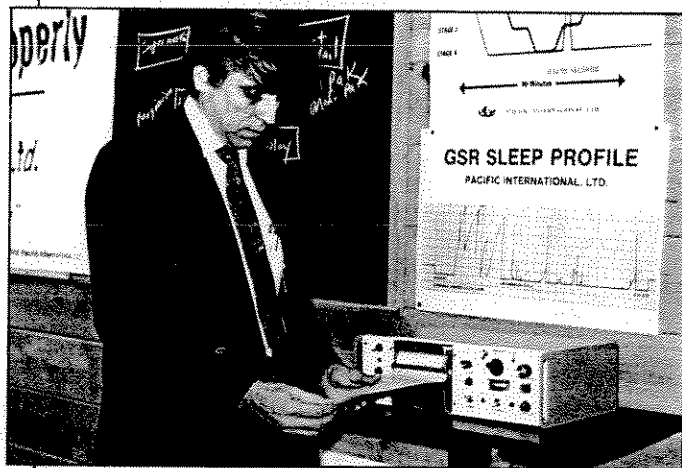
A large number of people suffer from a sleep-related disorder. Although our commitment is to the correction of nocturnal enuresis, we are beginning to research other sleep-related problems.

Sleep deprivation studies, such as those conducted by Dr. William Dement of Stanford Medical Center, show that depriving subjects of REM (Rapid Eye Movement) sleep has more drastic effects than depriving them of NREM (Non-Rem) sleep. (Hauri, *Current Concepts, The Sleep Disorders*, 1982.) Psychological problems become sleep disorders when they disturb the neural balance between the arousal system and the sleep system. This in turn, upsets the physiological balance.

Since many bio-chemical and physiological factors change during sleep stages, the need for adequate REM sleep is critical to avoid and control parasomnia disorders. In addition, the body's communication system, such as the brain signal to the bladder, is impaired by REM deprivation.

Sleep recordings show that enuretics are deep sleepers who exhibit irregular sleep cycles and spend much less time in REM sleep than non-enuretics. The enuretic often plunges immediately into deep sleep and remains there for an unusually long time, resulting in varying degrees of REM deprivation.

In contrast to enuretics, severely depressed and psychotic patients are frequent night walkers, awakening from dream-state REM sleep.



Eugene B. Draper reading a sleep profile.

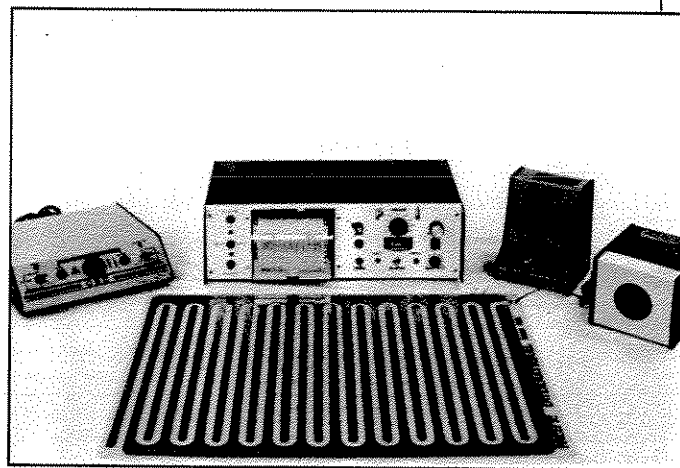
Low levels of Stage 4 (deep) sleep found in 40-50% of schizophrenics studied proposed that NREM sleep is a correlate of a metabolic process that acts to reverse the effects of waking on the brain. More research needs to be conducted because the significance of Stage 4 sleep is difficult to interpret because biological functions of sleep have not yet been firmly established. (Hiatt, Archives of General Psychology, Aug. 1985).

Other factors have been recognized as having effects on prolonged deep sleep and REM deprivation. Among these are diet, including food sensitivities, allergies and low blood sugar. At the Second International Symposium on Narcolepsy (a related sleep disorder), noted researchers stressed the importance of diet and its relation to sleep disorders. Interestingly, sleep researchers have found that deep sleepers with other parasomnia disorders had a high percentage of food sensitivities and even allergies. We have been able to concur with these findings based on some of our complex cases.

It has been documented that during deep sleep, the volume of blood to the brain is reduced. During REM sleep, the volume is increased. Peter Steincrohn, M.D., points out that sugar-poor blood can cause a problem absorbing oxygen properly. As we investigated the many aspects of allergies and food sensitivities, we discovered comments about hypoglycemia. Our Case Directors sent out questionnaires and they found most of our complex cases had a high

intake of simple carbohydrates and sugars. Although no cause and effect relationship has been established, it is an interesting area to pursue.

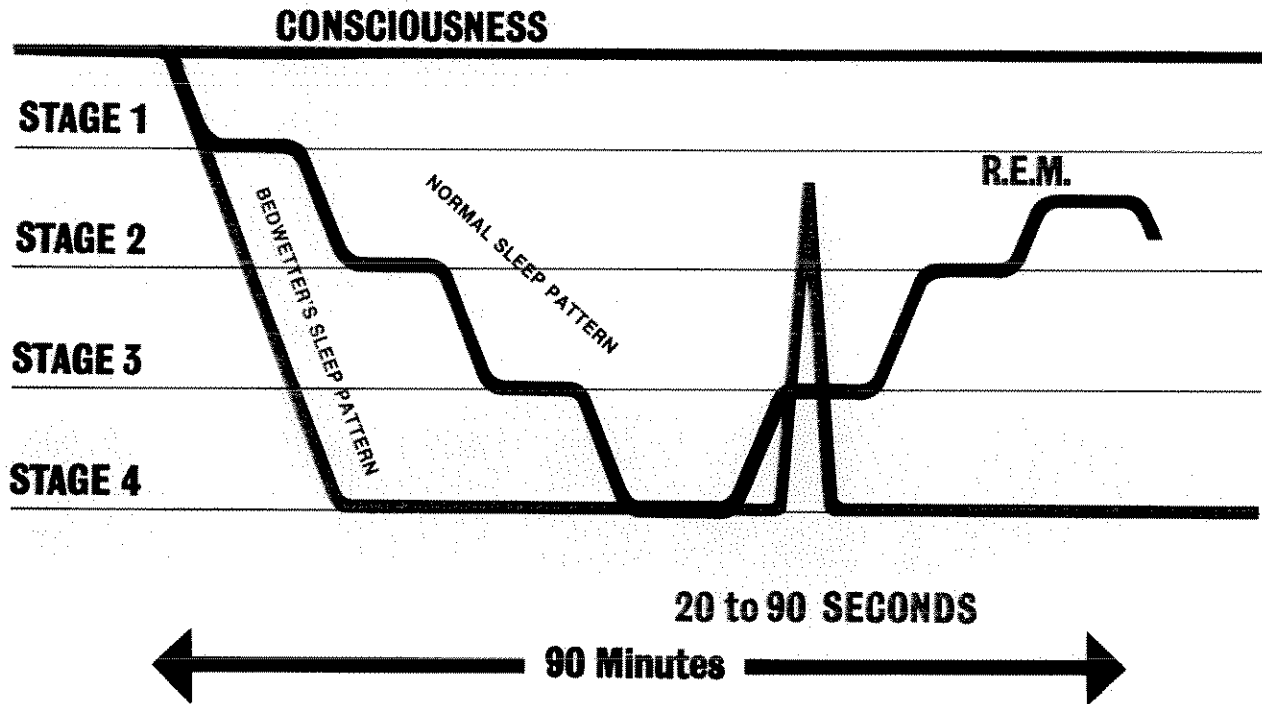
The potential for research studies on enuresis and other parasomnia disorders with the instrumentation designed and developed by Pacific International offers new and exciting methodology in gathering data, as well as empirical information. Now that enuresis has been recognized as a sleep disorder, we hope that others will join us in a search for answers in identifying the cause(s) of deep sleep. Even though bedwetting is not life-threatening, the life-long ramifications of its lingering effects are undeniable in many cases.



Equipment used by Pacific International in its program and for research studies.

As Pacific International continues to involve itself in studies of sleep problems and common factors affecting parasomnia disorders, new methods of identification and treatment can be utilized to bring assistance to the millions of people who visit their physician each year concerning sleep-related problems.

DERIVED FROM 3½ YEAR STUDY CONDUCTED BY THE NEUROLOGICAL
DEPARTMENT OF MCGILL UNIVERSITY AT MONTREAL, CANADA



PACIFIC INTERNATIONAL LTD.

McGill Study Chart

A theoretical model of a "normal" sleep pattern, transposed with an enuretic's sleep pattern. Notice the rapid drop into deep sleep and the rapid and brief REM stage of an enuretic, in comparison to distributed periods of sleep stages throughout the 90 minute cycle of a "normal" sleeper.

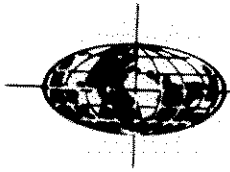
We welcome your comments and inquiries regarding our company. We would like to help you deal with this problem. Please call our Case Direction Center at:

800-477-2233

Pacific International, Ltd.
Executive Headquarters
and Case Direction Center
555 Birch Street
Nekoosa, Wisconsin 54457-1397

PACIFIC INTERNATIONAL'S CORRECTION PROCESS

- I. Screening by referring physician
- II. In home visit by Pacific International's Consultant
 - A. Takes a case history of client
 - B. Educates enuretic and family about the problem
 - C. Explains correction process in detail
 - D. Motivates entire family to carry out instructions and procedures
 - E. Consultant monitors the case daily for four to five days (longer if necessary) to insure it gets started properly
- III. Report cards go to the Case Direction Center every two weeks with new instructions and procedures designed to fit the individuals' wetting pattern
 - A. Case Director assigned to each case
 - B. Letters and instructions are addressed to the enuretic
 - C. Family communicates any questions or problems they may encounter
 - D. Special services by Client Specialists or Field Specialists will be administered if the correction process warrants intervention
- IV. After an acceptable period of dryness is achieved, the enuretic is declared dry
 - A. Final instructions are given to guard against recurrence
 - B. Average time for correction is four to six months
 - C. Pacific International follows up for two full years in the unlikely event of recurrence
- V. The correction process is designed to afford the enuretic the opportunity to sleep better or more normally while ending the enuresis
 - A. This is achieved through the individualized instructions every two weeks and the Case Directors' personal involvement



Pacific International, Ltd.

CASE DIRECTION CENTER © 1992

555 Birch Street / Nekoosa, Wisconsin 54457 / Toll Free (800) 477-2233
United States and Canada

TO INSURANCE CARRIERS

PACIFIC INTERNATIONAL PROGRAM

CORRECTING NOCTURNAL ENURESIS

PACIFIC INTERNATIONAL-CENTER FOR ENURESIS CONTROL

We have been the leader in correcting Nocturnal Enuresis (bedwetting) since 1951. We provide professional services, equipment and personnel necessary to correct this problem. We are registered as a Wisconsin corporation, in the State of Wisconsin. Our services are provided to enuretics, throughout the United States and Canada.

DESCRIPTION OF THE HEALTH-RELATED PROBLEM

Pacific International and its Center for Enuresis Control corrects Functional Nocturnal Enuresis. Nocturnal Enuresis has been classified as a sleep disorder (parasomnia) and health-related problem by the World Health Organization. It is a syndrome of prolonged deep sleep and cannot be successfully treated with common medical procedures. It is considered to be a problem that must be corrected after the age of four (4) years and on into adulthood.

The AMA Current Procedural Terminology, 4th Edition, Medical Diagnostic Code and Description is 307.6 Enuresis.

PACIFIC INTERNATIONAL'S PROGRAM FOR CORRECTING NOCTURNAL ENURESIS

The following information is provided to you to assist in the processing of insurance claims for the correction of Nocturnal Enuresis. Included herewith is a description of our program and services. We are a health care service provider and recognized as the leader in correcting Nocturnal Enuresis.

Enuresis is a sleep disorder and is corrected with progressive therapeutic procedures, which we utilize. We are dealing with a health care problem and our treatment approach has been recommended by physicians and other health care professionals. The enuretic is monitored and evaluated by a physician during the course of the treatment and is re-evaluated periodically throughout the program by a physician. Dr. Palmenter supervises guidance for these effective correction methods and the individual instructions and procedures given to the enuretic are overseen by him.

CHANGES IN SLEEP OF ENURETICS BEFORE AND AFTER SUCCESSFUL NON-MEDICATION TREATMENT

Alexander Golbin, MD
Sleep & Behavior Medicine Institute at
Rush North Shore Medical Center
Chicago

Objectives:

1. To investigate polysomnographic (PSG) changes in sleep of children with enuresis;
2. To evaluate the effect of treatment on sleep architecture.

Method: 20 children with nightly primary enuresis, medication free, ages 6-13 (17 males, 3 females) were evaluated in a Sleep laboratory before they underwent an independent non medication program of enuresis elimination, developed by Pacific International Ltd. Treatment was claimed to be achieved after 30 successive dry nights. All children pronounced dry after 3-5 months. Two receded and had a second course.

Nine children (8 males and 1 female) came back to the Sleep Lab for the post treatment sleep study. PSG and scoring were standard except of an additional "Wet sensor" for the registration of act of enuresis.

Published PSG values (William R. L. Karacan I. Hurch, C. J. 1975) were used as a control.

Results: As a group, enuretics in our sample had a short sleep latency (mean 5.5 ± 3.1), increased delta stage (29.8 ± 5.8), an essentially normal amount of REM stages for this group (20.1 ± 3.2). For bedwetters with deep sleep, almost all delta sleep was in the first 1-2 cycles (means REM latency - 201.4 ± 37).

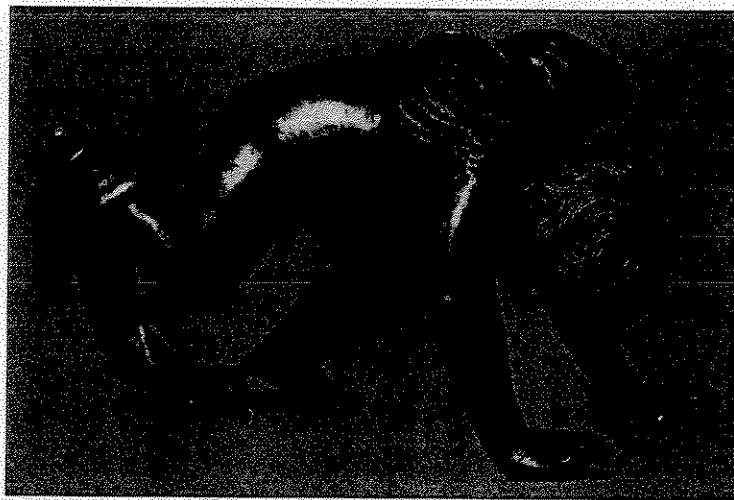
Additional finding in enuretics before treatment were: high amplitude delta paroxysms - 9 children (41%), apnea (RDI - 5.0) - 7 children (20%), heart arrhythmia with PVC's - 3 children (15%), reversed sleep architecture (delta sleep was predominantly in the morning) - 2 children (10%).

After successful elimination of enuresis, children slept less deeply and had a more normal sleep architecture: sleep latency (14.0 ± 3), REM latency (108.7 ± 29), no apnea episodes, and awakened more easily in the morning.

Conclusions: Preliminary data suggest the following:

- 1) Non-medication intensive educational / behavioral program was successful in treatment of enuresis.
- 2) Children with enuresis, as group have polysomnographic abnormalities in sleep.
- 3) Elimination of enuresis is associated with normalization of sleep architecture.

ENURESIS CONTROL IN PRIMARY CARE



A GUIDE TO CARE

Cover illustration: After *Tumbling, Winged Putto*, Workshop of Peter Vischer the Elder (c1508-10); Vienna, Kunsthistorisches Museum, Sammlung für Plastik und Kunstgewerbe.

This illustration from a statue of a falling angel represents the struggle of a child to overcome the problem of nocturnal enuresis. Modern methods of enuresis control presented in this monograph give physicians, parents, and children the tools to overcome this problem.

Illustrations:

Cover concept, Elizabeth Alderman; 30, Paul Singh-Roy.

Photographs:

3, 21-24, Jim Ziv.



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ENURESIS CONTROL IN PRIMARY CARE

*Proceedings from a Symposium on the
Control of Uncomplicated Primary Nocturnal Enuresis*

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Family physician

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Control of Uncomplicated Primary Nocturnal Enuresis



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ENURESIS CONTROL IN PRIMARY CARE

M i s s i o n

To advance the recognition of primary nocturnal enuresis (PNE) and to improve the care of children with uncomplicated PNE by providing a balanced, practical, and comprehensive perspective on management that comprises both pharmacologic and nonpharmacologic approaches to enuresis control.

Learning Objectives

After reading this monograph, the primary care clinician should be able to:

1. Define primary and secondary nocturnal enuresis.
2. Diagnose uncomplicated PNE.
3. Incorporate the current understanding of PNE as a sleep disorder into a management plan.
4. Recognize the indication for treatment when a child has uncomplicated PNE.
5. Evaluate pharmacologic therapies used most often in managing PNE.
6. Compare and contrast the relative advantages and disadvantages of these agents.
7. Describe and evaluate roles for nonpharmacologic therapies in managing PNE.
8. State concise guidelines for diagnosis and therapy in PNE.
9. Formulate a practical individualized approach to effective control of PNE that utilizes pharmacologic and nonpharmacologic therapeutic components in an appropriate and cost-conscious manner for optimal patient care.

EXECUTIVE SUMMARY

Primarily nocturnal enuresis (PNE) is nighttime bed-wetting that is not associated with daytime incontinence, that occurs in a child who has never had nighttime control over urination, and that persists after the age at which the child is expected to be able to achieve nocturnal control. It occurs in approximately 5 million children in the United States. Between 10% and 15% of 5-year-old children have PNE, but only 1% to 2% of 15-year-olds do.

Early intervention to achieve control is important because a child's self-image is at stake and because family stress can be severe when bed-wetting is chronic. Waiting for the child to simply "grow out of" habitual bed-wetting is usually not indicated, but it may be appropriate in selected situations.

Diagnostic investigation needs to be thorough enough to identify or rule out certain medical, behavioral, and developmental conditions. Usually, historical and physical findings indicative of PNE are sufficient for diagnosis. Urinalysis should always be done, although results are rarely abnormal. Imaging and invasive methods are rarely indicated. Culture is appropriate when there is burning or pain on urination or other indications of infection are present.

The highest control rates are achieved through comprehensive programs that educate the child and family members; demystify the problem; offer behavior modification and motivational counseling; provide age-appropriate imagery and relaxation techniques accomplishing, in effect, self-hypnosis; do not require long-term medications for control; and absolve blame and guilt. Medication with imipramine or desmopressin is most appropriate when absolute dryness must be achieved immediately but not permanently, such as times when a child has a sports trip or visit with a friend or relative that involves overnight accommodation away from home.

INTRODUCTION

Nocturnal enuresis is the most common childhood urologic complaint encountered by pediatricians and family physicians.¹ Children with enuresis who are brought to the attention of primary care physicians, however, may represent only a portion of the actual number of cases because families are often disinclined—through embarrassment or shame—to mention the problem.

To help primary care physicians make appropriate management decisions, this monograph provides guidelines for the diagnosis and treatment of uncomplicated primary nocturnal enuresis (PNE). To physicians, patients, and family members alike, PNE is among the most frustrating disorders of childhood. Despite its prevalence—and the fact that physicians' attempts to manage the problem have been recorded since at least the time of Pliny the Elder in 77 AD—the problem is poorly understood, fraught with myth, and all too frequently ignored or belittled.

Medical care for the condition has come a long way since Pliny advocated a specialized dietary supplement: boiled mice, wood lice, and urine of spayed swine.² The simplest, safest, and most successful treatment regimens for nocturnal enuresis are based on behavioral and developmental approaches. Pharmacotherapy has a more limited role.

Uncomplicated PNE is defined by the following criteria:

- Urinary discharge occurs nocturnally, not diurnally.
- The child must not have been dry at night previously for any significant period.
- The child has passed the age at which nocturnal control is usually achieved.

By definition, whether bed-wetting occurs nightly or several nights a week, the child with primary enuresis does not attain nocturnal dryness consistently by the age of 5 or 6 years. The underlying cause of PNE remains unclear. It is important to remember, however, that enuresis is a symptom, not a disease in itself. Once underlying causes of secondary or complicated enuresis are ruled out, the family physician or general pediatrician has ample opportunity to help the child achieve control without needing to consult with other specialists or engage in complex and expensive treatment regimens.

THE SCOPE OF THE PROBLEM

Prevalence

By most estimates, between 10% and 20% of 5-year-old children will have PNE. This equates to approximately 5 million children in the United States.³⁻⁵ After age 5, the number of children with enuresis drops by about 1% per year.^{2,3} By age 15, only 1% to 2% of adolescents continue to wet the bed.^{3,5} About 1% of adults have PNE.²

Psychological and Sleep-Related Factors

Several studies have shown that the majority of enuretic children do not have major psychiatric disorders. Although enuretic children have abnormally high rates of behavioral problems, this is probably a result of, rather than a cause of, PNE.³ A large New Zealand study showed no correlation between psychosocial problems and PNE.⁶

The role of sleep dysfunction in the pathogenesis of enuresis is both complex and controversial. Although most earlier studies show no clear evidence of sleep disturbances in PNE,^{1,3,5} recent research suggests a link between disordered sleep and enuresis exists. Symposium faculty member Alexander Z. Golbin, MD, PhD, for example, thinks the link with disordered sleep is central to understanding why enuresis occurs and may provide a handle for effective nonpharmacologic therapy (see "Disordered Sleep and Enuresis: A New Understanding?" page 25).

Complicated Enuresis

Children are classified as having complicated enuresis if they have a positive urine culture, a history of urinary tract infection (UTI), abnormal neurologic findings, any significant daytime voiding dysfunction (infrequency, severe frequency, urgency, urge incontinence, or poor urinary stream), encopresis, or constipation.⁵

Consequences of PNE

The faculty members for this symposium—comprising both pediatric subspecialists and primary care physicians—are unanimous in their clinical observations on consequences of PNE: Children with primary enuresis often suffer from poor self-image, low motivation, social withdrawal, and lack of success in school. Ignorance and misunderstanding about the true nature of PNE can adversely affect intrafamily dynamics, create marital stress, and even provide the proximal cause of—or excuse for—child abuse. These factors sometimes combine, leading to a cycle of further stress and a deteriorating psychosocial situation. Even in the best circumstances, faculty members agree, PNE creates barriers to a child's participation in camping, competitive sports, or any other activity involving an overnight stay. For these reasons alone, the faculty advocates early intervention.

DEVELOPMENTAL MILESTONES IN URINARY CONTROL

At what age is it appropriate to intervene for PNE? Age 5 is the typical benchmark when bed-wetting is considered abnormal, but the child's and family's attitudes toward bed-wetting will guide the physician's decision to intervene.

Essential to the definition and diagnosis of PNE is an appreciation of the normal developmental milestones leading to adult urinary patterns (Figure 1). In newborns, reflex voiding occurs with small volumes about 20 times per day. After 6 months, the volume of urine increases, while the frequency of reflex voiding drops. By 1 to 2 years of age, the ability to recognize the sensation of bladder fullness has usually been acquired. Complete daytime control is attained by most children at approximately age 3. By 4 years of age, most children have an adult pattern of urinary control, and they have dry nights nearly all the time.⁵

Distinction between biologic and chronologic age may be important. Most children are neuromuscularly and physiologically capable of attaining nighttime bladder control at about the age they begin walking. Bladder ca-

capacity in young children correlates approximately with chronologic age. A simple way of calculating normal capacity—in ounces—of a child's bladder is by adding 2 oz to the child's numeric age. For example, a 5-year-old child should be able to fill a 7-oz cup. By puberty, this correlation no longer applies. Bladder capacity reaches approximately 10 to 15 oz in adults.

Implicit in the definition of PNE is that nighttime wetting continues beyond the age at which the society, the family, or the child determines that bed-wetting is acceptable. This age varies from culture to culture around the world. Some Asian parents, for example, expect nighttime dryness by the age of 1, and some Russian parents expect it by age 3. In the United States, 5 years of age is the generally accepted benchmark for achieving nocturnal dryness, and approximately 81% of 5-year-olds are able to remain dry essentially every night (meaning they wet the bed no more than once a month).² By age 7, the proportion of dry children climbs to 90%, and by age 10 it reaches 95%.²

AGE

Birth	Voiding reflex occurs approximately 20 times per day.	<p>MILESTONE</p>	<p>INTERVENTION</p>
6 months	Urinary volume increases and frequency of reflex voiding decreases.		
1-2 years	Ability to recognize sensation of bladder fullness is acquired.		
3 years	Daytime control is achievable by most children.		
4 years	Adult pattern of urinary control is acquired.		
5 years	Normative milestone for nocturnal dryness in the United States: 81% of 5-year-olds remain dry essentially every night. NOTE: Bed-wetting beyond this age is considered to be abnormal.		
6 years			
7 years	Proportion of dry children in the United States passes 90%.		
8 years			
10 years	Proportion of dry children reaches 95% in the United States.		
12 years		<p>Intervention not appropriate.</p> <p>Age-appropriate interventions for PNE include self-awakening hints, healthy bedtime hygiene and habits, and praise on dry mornings.</p> <p>Age-appropriate interventions include self-awakening programs, use of imagery and relaxation, demystification, simple behavior modification, motivational techniques, and individualized case management.</p> <p>Age-appropriate interventions include enuresis alarms, education involving anatomy and function, imagery, intermittent medication use for special situations, and case management.</p> <p>Nonpharmacologic approaches continue to be most appropriate. In addition, medication may be useful for short periods (2-6 months).</p>	

Figure 1 — Developmental milestones in urinary voiding control. The techniques used for enuresis control can be matched to the age of the child, so that the enuresis management program is individualized and therefore maximally effective. Programs developed by behavioral/developmental pediatricians and reputable private agencies account for these milestones in their age-appropriate diagnostic evaluations and interventions.

ETIOLOGY OF ENURESIS

In more than 95% of children with enuresis, the cause is unknown (no pathology is demonstrable), and the bed-wetting is attributable to PNE. Most physicians agree that the cause of PNE need not be determined in every case. A treatment program for PNE may be initiated safely once the common causes of secondary or complicated nocturnal enuresis have been ruled out by simple office-based methods.

Although no conclusive evidence of a generally applicable or broad-based etiology exists,⁷ recurrent themes appear in the literature of general pediatrics, developmental and behavioral pediatrics, pediatric nephrology, pediatric urology, and medical genetics. These reflect an understanding of PNE as a product of one or more of the following conditions in certain children:

- **Sleep disorder** Some sleep specialists have found sleep anomalies in children with enuresis, and parents often report that their children with enuresis are unusually heavy sleepers (see "Disordered Sleep and Enuresis: A New Understanding?" page 25). The etiologic and clinical ramifications of putative sleep-enuresis connections remain to be elucidated.
- **Hormonal imbalance** A number of studies have implicated the lack of a nighttime peak in secretion of antidiuretic hormone (ADH) from the posterior pituitary. It appears that because enuretic children produce less ADH in the evening, urine pro-

duction continues at a high rate throughout the night, exceeding bladder capacity.^{3,8,9} While an association between such polyuria and low ADH is demonstrable, the lack of a nighttime peak in ADH fails to explain why children with enuresis do not wake when they have a full bladder.

- **Small bladder** Other studies implicate small bladder capacity in a minority of enuretic children.^{1,5,10} As with the ADH hypothesis, however, a small bladder does not provide a reason why the enuretic child fails to awaken when the bladder becomes full.
- **Delayed maturation** Some researchers have postulated that PNE results from delayed maturation of the central nervous system, precluding age-appropriate acquisition of nocturnal bladder control.^{3,11} Although this explanation has achieved considerable popularity among clinicians, it is not well supported by data.⁵

In fewer than 5% of children with enuresis, however, the problem is secondary to a medically treatable or surgically correctable condition. The common medically treatable causes are diabetes mellitus, diabetes insipidus, fecal impaction, constipation, and urinary tract infection. Surgically correctable causes include bladder calculus, foreign body in the bladder, ectopic ureter, lower urinary tract obstruction, neurogenic bladder, and sleep apnea associated with adenoidal hypertrophy.

DIAGNOSIS IN PRIMARY CARE

Ideally, the first step in the diagnosis of PNE comes before the primary care physician ever hears a complaint from the child or parents about bed-wetting. The key is to be proactive in history taking and patient interviewing. Many families may be reluctant or embarrassed to talk about bed-wetting and may require prompting because they think nocturnal bed-wetting is normal, acceptable, or something their child will outgrow.

For children who have persistent bed-wetting beyond age 5 years or who have not achieved daytime dryness by age 3 years, evaluation comprises a medical history, voiding history, and physical examination. Urinalysis is always indicated, but results are rarely abnormal (Figure 2). Urine culture is indicated when a child has urgency, pain or burning on urination, or other evidence of possible infection. Pinworm studies may also be indicated.

History

Inquiry about toilet habits is appropriate for children age 3 years and older. Include specific questions about urinary and nocturnal habits, even in routine well-baby and well-child visits. Once it is determined that a child is wetting the bed at an inappropriate age, a complete medical history and physical examination will usually reveal any medical problems that require specific treatment or referral to a pediatric neurologist, endocrinologist, urologist, psychiatrist, or sleep specialist (Table 1).^{9,12}

Essential elements of the history include questions about:

- Onset and pattern of bed-wetting
- Voiding behavior
- Family history of enuresis
- Psychological and psychosocial factors
- General behavior
- Sleep patterns and parasomnias
- Medical conditions (especially to elicit information on endocrine and neurologic disorders and urinary tract infections)
- The potential for child abuse and sexually transmitted disease

The onset, pattern, and severity of enuresis and the circumstances in which the child wets the bed usually provide the greatest insight.¹² To assess the severity of the enuresis, the physician must determine both the nocturnal urinary volume and the persistence of the problem. Is it nightly? More than once a night? Occasionally?

Bladder instability or small functional capacity is likely in the child with urge incontinence, squatting or posturing during urination, and small voidings. The child who

**Table 1—Urinary Habits and History:
What to Ascertain When Diagnosing Enuresis**

Behavioral history

- Drinking habits (especially just before bedtime and use of caffeinated beverages)
- Environmental factors (such as preferred sleeping temperature)
- Other parasomnias (sleepwalking, sleeptalking, nightmares, night terrors, bruxism)
- Psychiatric symptoms (defiant or aggressive behavior, hallucinations, psychosis)

History that suggests medical etiology

- Abnormal findings on a basic neurologic examination (including gait, reflexes)
- Anatomic problems (posterior urethral valves, spinal cord lesions, spina bifida)
- Diabetes insipidus
- Diabetes mellitus (insulin-dependent)
- Encopresis or constipation
- Endocrine problems, such as hyperthyroidism
- Evidence of allergies or asthma
- Family history of PNE
- Heavy snoring (indicating possible sleep apnea)
- Kidney or bladder infection
- Lesions on skin, especially urethra or genitals
- Potential child abuse
- Previous lumbar punctures

Voiding history

- Full history of nighttime urinary behavior
 - Presence of daytime enuresis
 - Relative severity and constancy of enuresis
 - Weakness or intermittency of urine stream
-

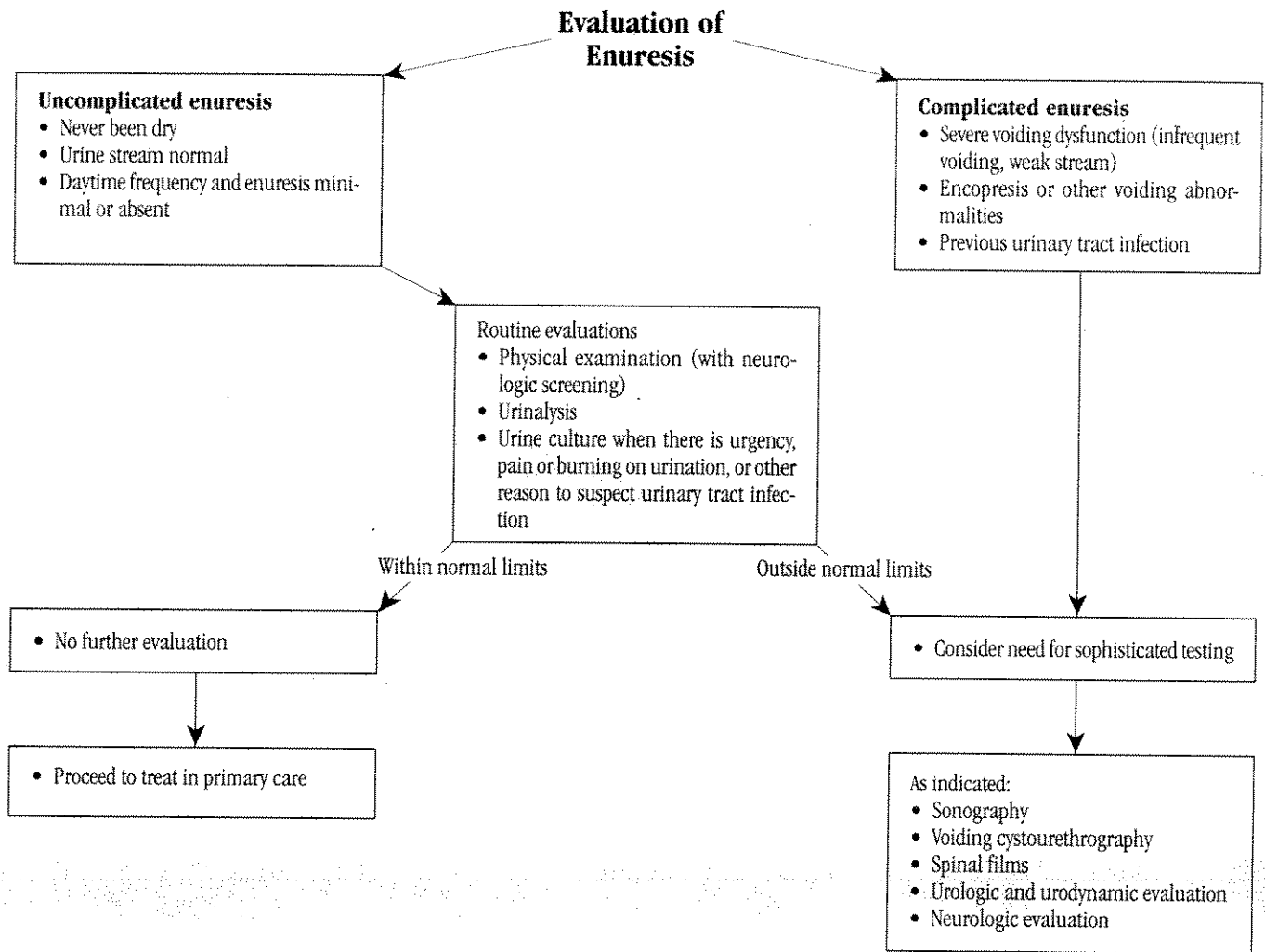


Figure 2. The evaluation of the child with enuresis can be simple and rapid, as in this sample algorithm. The results of the history and physical examination frequently are all that are necessary to conclude that a child has PNE and is therefore a candidate for enuresis control in primary care. Adapted from ⁵.

voids infrequently usually has a large bladder capacity, tends not to urinate when awakened in the morning, and has paradoxical urgency and urge incontinence when the bladder is full.

The voiding history includes both urinary and fecal elimination habits. Most significant in the voiding history are changes noted over time and whether the child has daytime enuresis. Frequency of bed-wetting is less important than changes in patterns or symptoms that accompany urination. The severity of the problem does not correlate with the frequency of bed-wetting; the child who

wets only once or twice a week may experience as much or more adverse psychological or emotional distress as the child who wets every night.

The urinary voiding history may suggest anatomic bladder problems, including small capacity, valve defects, detrusor-sphincter dyssynergia, or bladder instability. Possible clues include diurnal enuresis, intermittent or weak urinary stream, frequency, urgency, or very infrequent voiding. It may be worthwhile to suggest that the parents or the child who is old enough maintain a voiding diary. When the child's history includes UTI, there is increased

likelihood that the child has an anatomic problem or bladder instability.

Burning or pain when urinating is an important finding, as is associated encopresis. If the voiding history includes bowel problems, the child may have constipation, neurologic disease, or a severe form of voiding dysfunction that requires specialized evaluation and care.¹²

The likelihood of PNE is only 15% when neither parent was enuretic; it rises to 44% when one parent had PNE and soars to 77% when both were enuretic.¹² In addition, many studies point to the correlation between PNE and either low socioeconomic level or family-related stress.

Physical Examination

The vast majority of children with nocturnal enuresis will have no physical abnormalities. Those with physical findings may require further assessment or referral because they may have complicated PNE or secondary enuresis. The comprehensive physical examination should include abdominal evaluation (especially for palpable distended bladder), genital evaluation (especially for bifid clitoris, ectopic ureter, signs of sexual abuse, such as distortion, scarring, or warts), and attention to the following:⁵

- Abnormalities during voiding (under direct observation)
- Anal sphincter tone
- Gait
- Perineal sensation
- Peripheral reflexes
- Physical appearance of the lower back (evidence of sacral dimpling, cutaneous anomalies)
- Pooling of urine within the vaginal vault

Laboratory Tests and Imaging

Urinalysis is the only laboratory test that can be justified without specific indications. A sterile midstream catch is sufficient; no catheterization is necessary. The absence of glucose rules out diabetes mellitus and a specific gravity of 1.015 or greater rules out diabetes insipidus as causes of nocturnal enuresis.⁹ A dipstick and microscopic examination of the urine is a useful initial screen for underlying disorders.

When there is burning or pain on urination, urinalysis and urine culture are mandatory.

Indications for other testing are limited. Office ultrasonography has been reported to provide clinically significant information in 30% of enuretic children.³ Such findings include bladder wall thickening, fecal impaction, residual urine, and hydronephrosis. Few clinicians recommend ultrasonography without at least a clinical suspicion to justify its use, however.

Urodynamic testing, voiding cystourethrography, and intravenous pyelography are rarely appropriate for an enuretic child. A sleep study may be a reasonable option when nocturnal enuresis is resistant to control and appears to be associated with sleep disturbances or parasomnias. These include night terrors and sleepwalking.

After ruling out anatomic and physiologic problems and exploring family dynamics, the primary care physician will still be left with many children who are physiologically and psychologically normal but wet the bed. Most patients with uncomplicated PNE are best managed by the primary care physician and usually should not require referral for further diagnostic evaluation or for treatment.

TREATMENT APPROACHES IN PRIMARY CARE

While PNE may not be a significant medical problem, a consensus has evolved among clinicians from numerous disciplines, ranging from general and behavioral pediatrics to pediatric urology and nephrology, that PNE should usually be treated, always explained, and certainly not ignored. Experts from many disciplines now understand that failure to intervene is not in the best interests of the child or the family. Even well-intended comments about the child outgrowing the problem to reassure the parents and child can sometimes be inappropriate.⁹

The primary care physician serves as the linchpin of a clinical support team that offers education about enuresis, demystifies bed-wetting and absolves the child of guilt and blame, provides motivational counseling and behavior modification, gives reinforcement when dryness is achieved, and devises a management plan including elements of hypnotherapy (such as imagery and relaxation techniques) that can readily be incorporated into primary care without special training. When the primary care physician desires, a developmental/behavioral pediatrician, child psychiatrist, hypnotherapist, enuresis case manager, or any combination of these can be added to the management team. If the physician chooses to delegate day-to-day care, a case manager or trained home care representative can take over much of the individualized care and report back to the physician. This approach has proved successful when the individual or agency assuming responsibility has the expertise and resources to provide such a service in the home.

The expectations for successful therapy using such an integrated, multifaceted approach to individualized management are legitimately high. For practical purposes, a primary care physician is in an ideal position to provide or oversee all the components of such a program.

Management Overview

Two approaches to treatment are available for the child with PNE—pharmacologic and nonpharmacologic. Quick

and temporarily effective pharmacologic treatment can be considered for short-term control when appropriate. Nonpharmacologic options involving education, behavior modification, counseling, and case management are safe and effective, and most clinicians recommend them over medication. These approaches are not mutually exclusive and may be used in tandem as necessary.

In about 10% of children with PNE, bed-wetting may be cured simply by eliminating certain foods, such as milk or citrus products or beverages that contain carbonation or dyes.³ Data on controlled studies of elimination diets are scant, however.³ Although studies of postprandial fluid consumption are also lacking, the consensus is that changing drinking habits is unlikely to help PNE, except in cases of habitual heavy fluid consumption after the evening meal.

For the child with PNE, education and motivation to achieve control are at least as important as strict medical intervention. Since every family is different, however, the best treatments are tailored to the needs and abilities of the family and take into account the home environment of the child.⁵

Since enuresis is frequently secondary to emotional stress, posttraumatic stress disorder, or other illnesses, the treatment approach to PNE and some forms of secondary enuresis may be very similar. Once significant physical causes for wetting have been ruled out by the primary care clinician, a practical approach to control usually need not be delayed for diagnostic reasons.

In general, the faculty of this symposium is strong in its recommendation that clinicians opt for the safer, albeit slower, approach that combines education of the child and family, behavior modification, motivational counseling, elements of hypnotherapy, use of bed-wetting alarms as part of a multifaceted program, and other individualized components of therapy such as case management and home visits (Figure 3). The faculty further advises that drug therapy be considered primarily for short-term control of PNE and that bed-wetting alarms alone are not usually