Bruxism With Enuresis And Its Inter-Relationship

It has been reported that signs and symptoms related to bruxism have been found in up to 78% of the population. (1)

In a study done by Glaros of 1,052 dental patients, 30.7% either had past or current bruxism. (2)

The literature shows that nocturnal and diurnal bruxism are two different problems occurring in different sleep stages with different etiologies. (3, 4, 5, 6, 7)

This review will concentrate upon nocturnal bruxism - its relationship with nocturnal enuresis and its correction, by utilizing a moisture-sensing alarm along with individualized behavior modification procedures and support.

Sleep-related bruxism can result in many conditions; for example, symptoms such as pain, or clicking sound, temporomandibular joint (TMJ) pain, grinding down of the teeth and destruction of dental restoration and, ultimately, degenerative joint problems. (8)

Reding and Associates found bruxism to occur in all stages of sleep with it being prevalent in stage 2. They reported that little tooth grinding occurred in stage 1, Rapid Eye Movement (REM) stage, which conflicts with some of the theories that bruxism occurs in light sleep only. (9)

In a recent study done by Ware and Rugh, they utilized three different groups. One was a destructive group, which had complaints of severe TMJ and masticatory muscle pain believed to be caused by chronic sleep-related bruxism. This group totaled five female patients. The second group consisted of a sleep group that was referred for evaluation for either insomnia or excessive daytime sleepiness. They selected for the third group nine depressed female patients complaining of insomnia, who were included as a control group. (10)

They reported the bruxism in all groups usually was accompanied by general body movement regardless of its sleep stage relationship. This report hypothesized that REM sleep bruxism results in greater masticatory force and greater stress on the muscles surrounding tissue, teeth and temporomandibular joint. "This greater force results in the symptoms and problems seen in the destructive bruxism group. From the current data, it appears that as little as one minute of REM sleep bruxism per night may contribute to the destructive bruxism symptoms." This study stated the current results suggest that in attempting to study and deal with the etiology, pathological consequences and management of these patients, it may also be useful to subdivide bruxism into the stage of sleep during which it occurs.

Since 1983, hundreds of cases of nocturnal enuresis were corrected by a comprehensive program using a moisture-sensing alarm, along with individualized behavior modification and support. A reoccurring phenomenon was observed. When a case of enuresis was corrected through this method, a high percentage of the bruxism, night terrors and sleepwalking dissipated and disappeared entirely. After analyzing this for years, it appeared that there was a relationship between correcting nocturnal enuresis and nocturnal bruxism as well as other parasomnias.

As a result of our observations, an investigative survey was initiated. 193 cases were surveyed and interviewed before and after the correction of their nocturnal enuresis. Correction occurred by utilizing a moisture-sensing alarm, along with individualized behavior modification and support. Management of the case occurred every two weeks by written instructions, phone calls, utilization of audio cassettes for both motivation and technique. Procedures were altered to accomplish the correction depending on how the enuretic was responding to the treatment. Length of correction: 4 cases took 2 months, 56 cases took 3 months, 86 cases took 6 months, 29 cases took 6-9 months, 12 cases took 9-12 months, 6 cases took over a year. 122 were male, 71 were female, 10 were adults. All subjects had the problem of bruxism (nocturnal tooth grinding). Four cases had night terrors. 100% of the cases reported that their enuretic was initially a deep, sound sleeper, which they were unable to arouse. After the correction of their enuresis, these results were reported: 86% of the subjects discontinued or lessened their bruxism. 100% of the night terrors discontinued. 85% reported that after treatment, they woke up easier in the morning. 69% said that they could observe a distinct difference in their sleep where they had appeared to sleep very deep before correction and much lighter after. 78% reported that the subject was easier to wake up at night and 81% reported they appeared to be more rested. Improvement occurred in their behavior which enhanced their self-esteem. 79% reported that they could see an improvement in their self-esteem and being proud of themselves. 79% also reported a better self-image. 27% showed definite improvements in deportment (grades) and 26% improved in their behavior in school. 50% showed a better ability to follow through after starting a project or an activity. 27% showed less daydreaming. 60% showed a better attention span. (See chart.)

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VENKAT R. CHALLA, M.D.
SURYA KANTAM CHALLA, M.D.
200 FLINTSHIRE ROAD
WINSTON-SALEM, NORTH CAROLINA 27104

April 27, 1988

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

Dear Mr. Draper,

Thank you for your letter of April 6, 1988. I am interested in seeing that the medical community, psychologists, parents and other interested personnel are educated about the innovative and effective method of treatment for enuresis developed at Pacific International. I would like you to send me a dozen or so additional profiles so that I can add a letter of introduction of my own and pass them on to the child guidance center, the chairman of the department of psychiatry, local psychologists and psychiatrists many of whom are my wife's friends. Our letter will ask them (in a subtle way) to open their eyes and consider the advances made by your company for the benefit of their clients. My wife was telling me that one child psychiatrist asked her to entice our daughter to give up bed-wetting by offering a large bag of chocolates and another psychologist friend told her that if she insisted on our daughter keeping everything scrupulously clean she would give up bed-wetting because that was too much work. This shows that ignorance of this subject is widespread even among professionals who are supposed to help patients with this specific problem. Neither ploy worked. My daughter tried sincerely for several weeks and collected several bags of chocolates and kept her bed and room clean for all those weeks and her bed-wetting problem was still there. So she gave these ideas up in disgust. These are the kind of things that happened in our own case which make me agree fully with you that there is a real need for educating the professionals in this respect.

Within my time constraints I will help you all I can. I will be eager to express my suggestions when we talk, some of which may be practical from your point and others may not be. My wife thinks that all the psychological problems associated with enuresis are the result of it rather than the cause.

Thank you again for your letter.

Sincerely,

Venkata Ramana Challa

V.R. Challa, M.D.

EDGAR D. GRADY, M.D., P.C.

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Edgar D. Grady, M.D.

December 26, 1984

Mr. Eugene Draper
Pacific International , Ltd.
555 Birch Street
Nekoosa, Wisconsin 54457

Re: Kenneth Grady

Dear Mr. Draper:

The entire Grady Family appreciate you and your services. We have all benefitted from your program.

One of the best ways that I can and have shown how much we appreciate the service is that I have referred Mr. and Mrs. James C. Daniel and their daughter Kimberly, who is approximately 14 years and a lovely young lady. They live directly down the street from us and sought our emotional support. We referred them to you!

Happy Holidays from the Gradys.

Sincerely,

Pat Grady RN

Dr. and Mrs. Edgar D. Grady and Kenneth

PG

K.B. Rajani, M.D., M.R.C.P.
Neonatologist
5428 North Pleasant
Fresno, California 93711

Dial (209) CALL ICU (225-5428)

June 7, 1988

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

Dear Mr. Draper:

As a member of the medical profession, I would like to take this opportunity to endorse Pacific International, Ltd. Your company has made continuous accomplishments in the correction of the problem of habit bedwetting (enuresis).

I personally became acquainted with Pacific International when I enrolled one of my children in their program. We followed their program as directed and our child became "Dry".

Pacific International's selection process is thorough and their management of cases is superb. They have high standards and disciplines in accomplishing their goal of correction.

Bedwetting, as I understand it, is a sleep problem. By correcting the bedwetting, it also can help the individual overcome this problem. The correction can help them sleep better or more normally. It can also help to improve their self-esteem and self-image.

I was able to observe that there was a difference in how my child had slept before and after the program. This in itself is of benefit.

Pacific International has been correcting enuresis for 37 years and Mr. Draper has been working with enuretics for 25 years. Their correction rate is 98% plus for those who carry out the program after being evaluated by a physician to assure that there are no physiological problems.

I encourage my fellow colleagues and anyone in the health industry to consider Pacific International as an alternate correction source for their enuretic populations because of their ability to correct bedwetting so successfully.

Sincerely yours,

K. B. Rajani, M.D.

sd

Oakhurst Medical Clinic
FREDERICK W. CLARKSON, D.O., P.A.
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13020 PARK BLVD.
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TELEPHONE 393-3404

May 12, 1988

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

Dear. Mr. Draper,

I want to thank you for the recent success we have had in solving our son's problem with enuresis. When we first heard of Pacific International I was somewhat skeptical as to how much success we might have with the program. It sounded to me as though it was another gimmick or sales pitch just to buy some equipment at an inflated price and then be left holding the bag when there was no follow-up. The thing that impressed me the most was the follow-up and the program itself.

My son, Todd, has had a problem with enuresis for his entire life. He had been examined by pediatric urologists and other physicians including psychologists and psychiatrists who had no specific therapy, nor could they offer me any solution to the problem other than "he will probably grow out of it". By the end of the first week however, I could see that he was definitely making progress towards controlling his problem. Although my wife and I didn't get much sleep, he was dry on two or three nights and our laundry bills were cut by at least one third. The weekly follow-up letters and progress reports received from the counsellor throughout the entire program were of great help and were personalized to the point that Todd felt it was his program and not our program.

Perhaps he would have eventually outgrown the problem, that we will never know, but I do know that the program helped to educate our whole family as to the real problem behind enuresis. The end result of which was that Todd, after about 20 weeks, was completely free of his bed wetting problem and has developed much more self confidence. He is able to visit friend's houses without any fear.

I hope you have continued success with your company, and hope I have been some help in spreading the word to other physicians about this "not talked about" disorder. If I can be of any further service, please advise me.

Yours very truly,

F.W. Clarkson D.O.

F.W. Clarkson, D.O.

History of Pacific International

Pacific International was originally started by Robert C. Stearns in 1951, in the San Francisco Bay area. Hence, the name Pacific. Mr. Stearns developed and ran the company up until 1968.

At that time the company was sold to the order of St. Paul (Catholic Church), and they owned Pacific International until 1971. It then came back to two brokers named Robert Bernstein and Barry Pearl. Mr. Stearns, Mr. Bernstein and Mr. Pearl then operated the company up until 1976.

In 1976 Eugene B. Draper bought the company from Bernstein, Pearl & Stearns. Pacific International is a Wisconsin based corporation and is solely owned by Eugene B. and Pamela Draper.

When Mr. Draper took over the company, the Case Direction Center was located in Wayne, Pennsylvania. Mr. Draper operated the company along with another Case Direction Center in Nekoosa, Wisconsin, until 1978, when the Case Direction Center was then moved to Nekoosa.

The original Case Direction Center was built in 1982.

The old Case Direction Center, which was located at 311 1st Street, was abandoned and it then became the Communication Center at which time setting the appointments for the Consultant was established in 1984. M & L Acceptance Corporation, which finances the program for Pacific International, is now housed at the 311 1st Street location.

The Communication Center is responsible for setting all the appointments throughout the United States and Canada. They average 400 to 600 appointments per week. The new Center has the capability of making 1,000 to 2,000 appointments per week.

The Case Direction Center has a staff of 42.
The Communication Center has a staff of 49.
M & L Acceptance Corporation has a staff of 17.

In the Field, we have between 45 and 60 Consultants (salespeople) who market our program directly in the home. By the end of 1998, we expect to have 75 to 80 Consultants in the Field on a consistent basis.

In 1998, Pacific International consolidated the Communication Center with the Case Direction Center, which is now this entire building. At that time, the original Case Direction Center was renovated and the expansion of the Case Direction Center continues on the south bank to the end of the new building.

On the north bank of the new expansion is the Communication Center.

The expansion of the Case Direction Center enables it to handle up to 20,000 cases per year.

It currently handles between 7,000 to 8,000 cases per year, and in 1998 we anticipate doing 9,000 to 10,000 cases.

In 1999, we anticipate doing 15,000 cases, and in the year 2000, we anticipate doing 20,000 cases.

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 themsevles 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 assitance 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.

- Pacific International is a 48 year -old local business managing over 10,000 patients annually with Nocturnal Enuresis nationwide

- The therapy of choice for Nocturnal Enuresis is the Bell and Pad program with behavioral modifications as provided by Pacific International

- Nocturnal Enuresis is documented to decrease self-esteem and quality of life for individuals, treatment reverses this. Care givers spend up to 1,200 additional hours annually caring for these children.

- Pacific International therapy includes retreatment for 2 years.

- The Wisconsin Medicaid is currently paying for the more toxic and costly second line therapy not the first line therapy.
  - Most people are currently treated with drugs such as DDAVP because of its simplicity and it is covered by insurance

- Pacific International therapy is a more cost effective when compared to DDAVP.

Pacific International	$2,628/successful outcome
Oral DDAVP	$3,618/successful outcome
Inhaled DDAVP	$5,386/successful outcome

- Children receiving vasopressin has been associated with 23 hospitalizations from seizures, 1 death, 10 % hyponatremia and other adverse advents

- While on therapy, up to 85% relapse after stopping DDAVP.

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

Family Nurse Practitioner, Certified Diabetes Educator

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Fort Walton Beach, FL 32548
(904) 244-1404

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 determinated 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 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

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

Family Nurse Practitioner, Certified Diabetes Educator

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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

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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

Constantin Fasolt
Associate Professor of History

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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

Constantin Fasolt

cc. Eugene Draper, President
Pacific International, Ltd.

937588 AGE 9
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PLACED 8/25/98 DRY 12/14/98
CAROL PENTECOST - VLZ C/D

January 4, 1999

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

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 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 out 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

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. Incidently, 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

Sharon Totten

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

HYPNOTHERAPY: WHY NOT USE IMAGERY AND RELAXATION IN PRIMARY CARE?

Behavioral pediatrician Scott H. Faber, MD, of Rainbow Babies' and Children's Hospital and Case Western Reserve University School of Medicine in Cleveland, encourages general pediatricians and family physicians to take a page from the behavioral/developmental pediatrician's book and use techniques based on hypnotherapy to help children older than 5 years with PNE to attain nighttime control. According to Dr. Faber, an interested clinician can become proficient in the use of imagery, relaxation, and suggestion for this problem in several days. For pediatricians who are interested in delving deeper into medical hypnosis, Dr. Faber suggests the 3-day practical course given by the Society for Developmental and Behavioral Pediatrics. He also recommends these published materials:

Olness K, Kohen D. *Hypnosis and Hypnotherapy With Children*. 3rd ed. New York, NY: The Guilford Press; 1996. The classic textbook on hypnotherapy in pediatrics.

Sugarman LI: Hypnosis: teaching children self-regulation. *Pediatr Rev.* 1996;17(1):5-11. The latest review article, and a reflection of the fact that hypnosis techniques have been mainstreamed into general pediatrics.

Basics of Imagery, Relaxation, and Suggestion

When a child is relaxed and cooperative, formal hypnotic induction is not always necessary to achieve the therapeutic goal in enuresis management. Most pediatricians and family physicians know full well the power of imagination in communicating important clinical messages to their patients. In the office, let the child imagine that he or she feels the urge to urinate but then holds the urine in the bladder, and takes the appropriate steps to avoid wetting the bed.

The ability to imagine controlling the bladder requires age-appropriate explanations of how the brain and bladder are connected and how they communicate. Taking the mystery out of enuresis through education is essential no matter what the age of the child. Even for a very young child, a drawing of the brain, spinal cord, bladder, and urethra is helpful (Figure 5). The child is encouraged to take the drawings home and to make his or her own versions at home.

Dr. Faber explains to the child that bed-wetting is a communication problem between the brain and the bladder. He makes clear, in age-appropriate language, that bladder control comes with maturity and that bed-wetting does not mean the child is bad or "wrong" in any way. With the youngest children he treats, he uses "kidspeak," but once children are in the second or third grade, they can begin understanding terms such as urine, bladder, nerves, and brain.

In addition to using drawings, Dr. Faber sometimes touches the child's head, then moves his hand down along the spine, and when he gets toward the base of the spine he says: "There's the connection, right *there*, to where you hold your urine."

To relax the child into a state in which imagery and suggestion can be effective, Dr. Faber engages the child in a quiet, peaceful, and nonthreatening manner. In his own words: "I play with the child. It's a bit like a dance, where we both get into the same rhythm. Sometimes just having the child focus on breathing will do it. Then I encourage the child to go—in the imagination, of course—to a special place where he or she can concentrate on an internal vision, any internal image the child is comfortable with." At that point, Dr. Faber focuses the child on the bladder-brain connection or the urge to urinate.

For example, the child can simply imagine that it's the middle of the night, think about feeling the need to urinate, and then concentrate on keeping the urine in the bladder. Then Dr. Faber will have the child imagine getting up, walking to the bathroom, urinating, and returning to a dry bed. He will go through this exercise once or twice with the child in one session.

More playfully, a child can be a Superhero, pilot, or an astronaut. In one effective scenario, the child can imag-

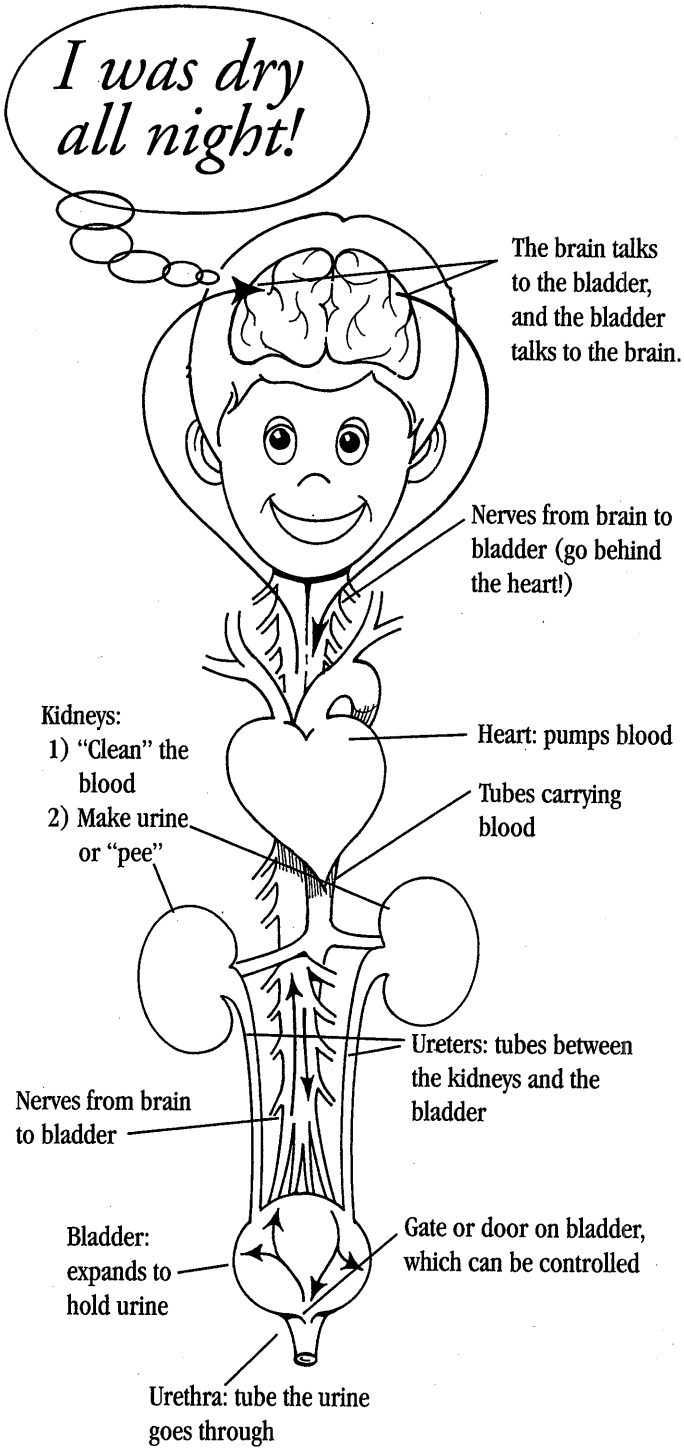


Figure 5. The brain-bladder connection. Adapted from[18]. [© 1996. Health Communications, Inc. This patient education illustration may be photocopied by physicians for distribution to their patients. Written permission is required for any other use.]

ine riding in the Batcar with Batman and getting the urge to urinate. The imagery here can go in either of two ways, both acceptable. The child can say: "You know, Batman, I feel the need to pee, but I'm going to hold it in while we ride in your car." Alternatively, the child can say: "Pull the Batcar over, Batman, and wait while I go to the bathroom." Either way, the car—a metaphor for the bed—remains dry.

Hypnotherapy in a Comprehensive PNE Treatment Program

Imagery, relaxation, and suggestion, according to Dr. Faber, are best employed within a larger context of education, demystification, counseling, and behavior modification. His treatment protocol for PNE generally comprises six steps and is effective in significantly improving PNE in approximately 80% of children, with the occasional need to repeat the program:

- Explain enuresis in an age-appropriate way, so the problem is demystified and the emotional baggage of guilt and blame are eliminated.
- Implement a reinforcement calendar for tracking "dry nights" and celebrating dryness the following morning. The calendar features the child's favorite theme stickers.
- Prescribe an inexpensive bed-wetting alarm and educate the family and child about its correct use.
- Assign age-appropriate cleanup responsibility to the child without punitive intent.
- Begin working with the child on relaxation, imagery, and suggestion.
- Have the child practice imagery at home. It is important that the parent not remind the child to practice. The child can draw a "reminder picture" in the office and place it in his bedroom. The imagery practice is often crucial to achieving control in PNE. It can be done alone, or with a parent if the family mood is positive, reflecting enjoyment rather than tension.

Once the child is able to practice imagery at home, Dr. Faber schedules office visits monthly or less frequently.

For physicians who do not have the time or inclination to provide this type of treatment, Dr. Faber recommends referral to a behavioral/developmental pediatrician or clinic with experience in hypnotherapy.

Resources when considering hypnotherapy for an enuretic child include the Society for Developmental and Behavioral Pediatrics, the American Society of Clinical Hypnosis, the Society for Clinical and Experimental Hypnosis, and the American Board of Medical Hypnosis.

EDUCATIONAL APPROACHES TO BEHAVIOR MODIFICATION

Bed-wetting, as the entire faculty of this symposium agrees, is a common problem. For example, over a period of 18 months, Pacific International, Ltd., a commercial agency that provides individualized education, behavior modification, and case management at home, received more than 250,000 inquiries from families seeking help for bed-wetting—almost 500 per day every day.[24]

A key element in enuresis education is operative right at the beginning: Many people do not appreciate the significance of the condition. Educating the medical profession about contemporary thinking in enuresis management, according to the symposium faculty, is as important as educating the public.

The damage to a child's self-esteem incurred by uncontrolled enuresis far exceeds the toll taken through extra laundering and loss of sleep. Merely outgrowing bed-wetting does not allow a former enuretic to leave behind the emotional baggage of low self-image. The scientific data point strongly to the conclusion that willful wetting, weak muscles, and small bladders play only small roles in the etiology of enuresis, but countless children suffer emotional damage needlessly from guilt or punitive physical abuse.

Emerging evidence suggests that disordered sleep is a significant factor in enuresis etiology. The World Health Organization has classified nocturnal enuresis as a parasomnia, and the Association of Sleep Disorders Centers defines bed-wetting after age 3 as a disorder. No one, however, knows the real reason for most PNE. For many patients, however, such etiologic precision does not matter as long as potentially serious medical and behavioral problems are ruled out by an experienced physician.

The majority of children can be helped to control enuresis by a combination of age-appropriate education and demystification, family education, relaxation–imagery techniques, correction of poor intrafamily dynamics, and some combination of behavior modification and motivational counseling. Although none of this is beyond the capabilities and skills of a family physician or pediatrician, not all clinicians have the time to devote to the enuretic child and his or her family that will ensure a good result.

According to Edward J. Saltzman, MD, clinical professor of pediatrics at the University of Miami (Fla.) School of Medicine, and chairman of the American Academy of Pediatrics' Section on Administration and Practice Management, busy clinicians can lead their patients to high-quality and individualized care by turning to agencies that specialize in such comprehensive programs and have the personnel to achieve guaranteed results in patient after patient. Comprehensive education and behavior modification programs can be structured in various ways. The objective is to give the child as much attention as necessary, help the family recognize and correct developing psychopathology secondary to the presence of enuresis and the stresses it creates, and address recidivism in enuresis control promptly, before all preceding effort is rendered a waste.

Such agencies deal with enuresis management from an educational and motivational point of view, not a strictly medical one, so the diagnosis of PNE and the rule-out of serious underlying pathologic conditions by an experienced physician is of paramount importance. Full-service agencies that offer enuresis control programs, according to the symposium faculty, should be multifaceted, be capable of providing completely individualized care, and have the professionalism and integrity to reject cases that do not conform to strictly defined uncomplicated PNE on physical or psychological grounds. For example, if a bed-wetting alarm is deemed to be appropriate, then the program is obligated to offer the education necessary to use the alarm correctly, the data collection tools to track the information the alarm provides (such as frequency of wetting, spot size of wetting, time of wetting, and whether the alarm woke the child), the specific response to any

child's individualized needs, and the means to reinforce progress so control is maintained.

The typical program begins with an initial screening of the child and family by a trained professional. A protocol based on nonpharmacologic methods of treatment is then developed for the child. Intrafamily dynamics are addressed as necessary, and age-appropriate explanations are provided so the child feels no guilt or shame about his or her bodily function and the undesirable wetting. Awareness of the sensation of bladder fullness and the need to urinate is cultivated, using imagery and other teaching techniques that enable the child to exert deliberate control.

Continuous reinforcement by agency representatives of the rewards and positive feelings associated with achieving enuresis control maximizes compliance with instructions. Family members or case managers keep in close contact with the agency by submitting progress reports at predetermined intervals.

An enuretic child is declared dry after a target number of consecutive nights pass without wetting. Usually this ranges from 30 to 60 nights. In the event of relapse—reemergence of PNE within months or years of achieving dryness—the case management agency can provide reinforcement for its partially successful behavior modification and motivational counseling techniques.

ENURESIS CONTROL THROUGH CASE MANAGEMENT

The following is one type of case management approach, involving comprehensive education for the child and the family plus the full range of behavior modification and motivational counseling, that has been associated with high success rates in controlling PNE.[24]

I. Immediate: The child's primary care physician or other clinician screens to rule out secondary and complicated enuresis.

II. Immediate: The case management agency representative makes an initial home visit.

A. The representative takes the history of the patient and the family.

B. The representative offers enuresis education at the appropriate level of detail to the child and the family.

C. The representative explains how enuresis can be controlled with combined nonpharmacologic methods.

D. The representative provides motivational counseling to maximize compliance with an individualized enuresis control program.

E. The representative monitors the child's progress and the family's comprehension of the treatment protocol daily for 4 to 5 days—or longer if necessary—to be sure that the enuresis control program is being applied correctly.

III. As needed, usually 4 to 6 months: Progress reports are made by the family to the agency every 2 weeks, and new instructions and procedures designed to fit the child's wetting pattern are developed.

A. A case manager is assigned.

B. The case manager gives specific instructions and written guidelines to the child and family.

C. The child and family communicate questions and problems to the agency through the case manager.

D. The case manager provides special services as necessary to help the child with enuresis meet his or her predetermined dryness objectives.

IV. Indefinitely as necessary to completion and satisfaction: Attainment of better and more normal sleep.

E. The enuresis control process is intended to improve sleep quality as well as prevent bed-wetting.

F. Individualized instructions from the case manager are assessed and modified every 2 weeks.

V. "Graduation" on reaching and maintaining the goal: Announcement of success after a predetermined acceptable period of dryness is achieved.

G. Final instructions are given to guard against recurrence.

H. Follow-up is provided by the agency, either by the case manager or a supervisor, for at least 2 years to ensure that relapse does not occur.

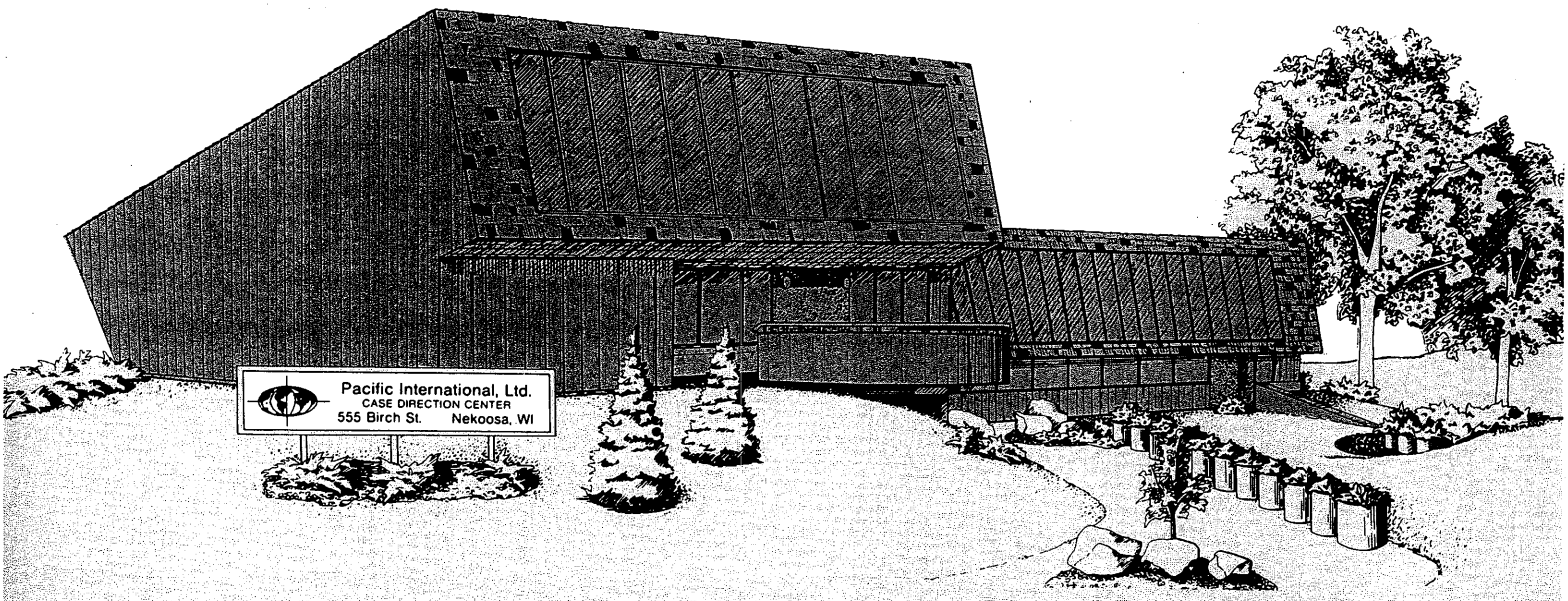
REASONABLE EXPECTATIONS AND A TIME LINE FOR HOME CARE

It is reasonable to expect an agency that provides comprehensive management of PNE to take on whatever role is necessary depending on the characteristics of the enuretic child in question and the child's response to previous and present therapy. A reputable case management agency is able to offer whatever mode of therapy a particular child needs. Some children need exercises in holding their urine. Other children need bed-wetting alarms. Still others benefit from imagery and behavior modification techniques. Families also differ in the nature and extent of education, counseling, and other interventions they need to defuse a situation that centers around a bed-wetting child.

Most primary care physicians who are committed to helping children overcome PNE should be able to achieve a high success rate, according to Scott H. Faber, MD, the behavioral/developmental pediatrician on the symposium faculty. Simply with conventional methods comprising demystification, family education, bed-wetting alarms (used correctly in the context of a comprehensive program), cleanup responsibility, and a reinforcement calendar, physicians can achieve approximately a 60% success rate. Addition of imagery, relaxation, and suggestion can be expected to raise the figure to about 80%. When initially successful children relapse, re-treatment will usually help the child return to having dry beds. If all physician and family efforts are initially unsuccessful and the family dynamic is not being affected adversely, a 6-month or 1-year wait before re-treatment can increase the chance of success due to neurologic maturation, renewed motivation, and a reexplanation of the suggested treatment so the recommended procedures are followed.

Most children achieve complete dryness within 4 to 6 months when follow-up is provided for 2 years from the time dryness is achieved. Among families that have reasonably followed through with the enuresis management program provided by Pacific International, Ltd., that includes close follow-up, the success rate among children with PNE approaches 98%.[24] The anticipated relapse rate following initial correction may be expected to be approximately 15%, but better than 95% of the children who relapse ultimately achieve control when efforts at correction are repeated. The dropout rate may reach 8% to 10%, but this may be a misleadingly large proportion. Typically, 65% to 70% of the dropouts have attained dryness and quit formal efforts at correction without being involved in further follow-up.

The faculty for the symposium on the control of uncomplicated primary nocturnal enuresis have shared their expertise on current methods for alleviating childhood bed-wetting. Their goal is to give primary care physicians the tools and guides not only to control the physical aspects of enuresis but also to help restore the child's self-esteem and improve child/parent/physician communications. If you have comments on "Enuresis Control in Primary Care" or questions on enuresis control, please contact Enuresis Control, Health Communications, Inc., 397 Post Road, Darien, CT 06820-3647. Telephone: (203) 655-2599; Fax: (203) 656-2852; E-mail: Info@ Healthcom.com.



Enuresis Corrected Properly

Since 1951

Bedwetters Sleep Improperly

Center FOR Enuresis Control

Pacific International, Ltd.
555 Birch Street, Nekoosa, WI 54457
1-800-NITE-DRY 1-800-648-3379

A Critical Review Of Pacific International's Correction Process For The Problem Of Nocturnal Enuresis

By Dr. Douglas Palmenter, Pediatrician

The uniqueness of Pacific International's ability to correct nocturnal enuresis is its case management. From beginning to end, Pacific International has a thorough management process for each individual case.

Pacific's correction rate is 97.9% of the pure cases; that is where the client has sent in the report cards and followed the program and the procedures.

Definition - We define functional nocturnal enuresis as incontinence during sleep in the absence of organic defect or disease. There is a general agreement that this encompasses more than 97% of all nocturnal enuresis cases.

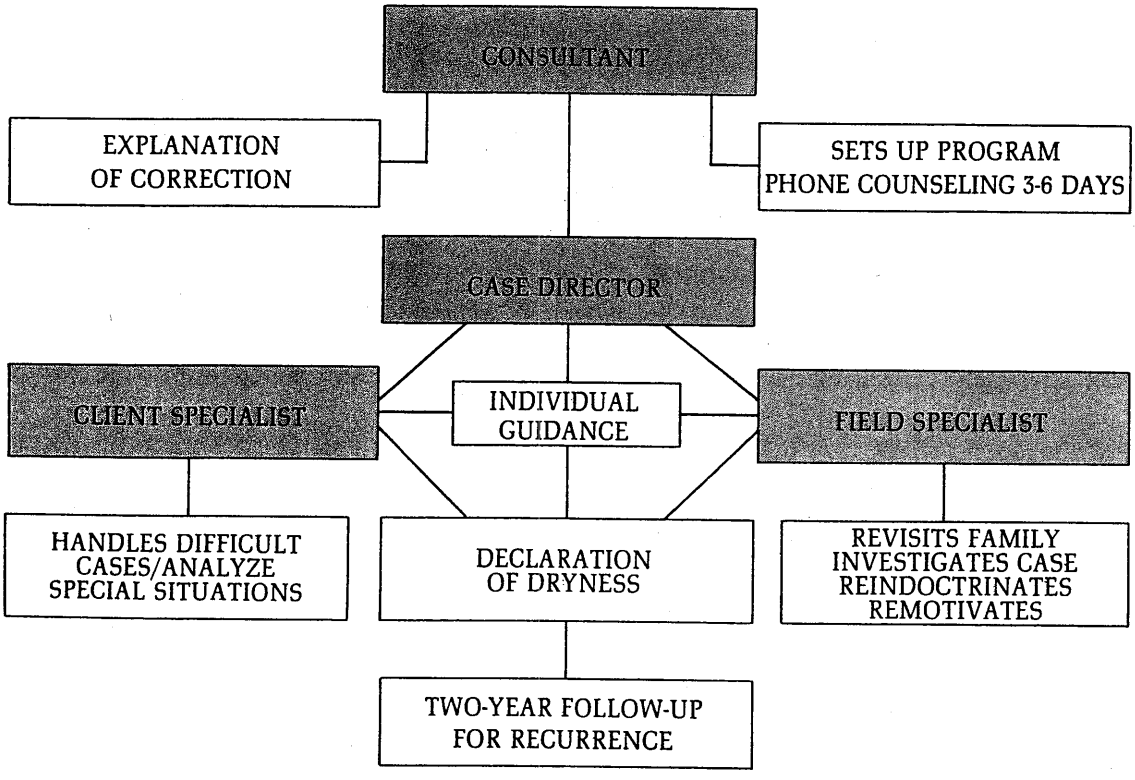
Incidence - Statistics on the subject show a considerable variation, approximately 16% between the ages of 4 and 16 and as high as 20% according to some reports. There is evidence to show that there is a high percentage of adults still wetting, even though it is supposedly "common knowledge" that it is outgrown. Thorne's findings in a study of 1,000 army selectees show that a high percentage continued into adulthood. Bier, in a study of 1,500,000 men called up for examinations between 1960 and 1962, revealed that 11% had the problem of enuresis.

Pacific International works for a **proper correction**; meaning not only a **dry child**, but one that learns to **sleep better or more normally**.

The introduction of electroencephalography in the early 1950's made possible sleep monitoring of children with nocturnal enuresis. Early results showed that enuresis occurred during lighter sleep stages (Ditman L, Blin LA 1955). Broughton 1960 proposed a different theory that enuretics slept normally but had an abnormal arousal. He described enuresis as an episode beginning in the deepest sleep stage, from which the enuretics lightened their sleep but were unable to wake up completely. Mikelsen and Rapoport (1980) did a very extensive study which stated that nocturnal enuresis was independent of sleep stage and hence could take place during both deep and light sleep.

The flow chart below provides an illustration of case management at Pacific International.

CASE MANAGEMENT



Pacific's program begins with the **Consultant**, who educates the parents and provides a basic understanding of the sleep problem. The **Consultant** then sets up the program, indoctrinates the parents and the child together and motivates the enuretic so there is a complete understanding of the program within the family.

The **Consultant** then contacts the family the very next morning and calls them a series of three, four, five or six times. In some instances, they will call for up to two weeks or more to counsel the parent and enuretic to make sure the program is running properly and to deal with any problems they may be encountering. In 1980, J. Bollard and T. Nettlebeck reported "adequate patient-therapist contacts appear to be an important factor in the effective treatment of nocturnal enuresis in children when the treatment is based on the use of a urine-alarm device."

The **Consultant** provides proper education, a full explanation of the problem and use of the urine-alarm, as well as specific procedures and instructions to carry out the program effectively. The excitement level and motivation that is created by the **Consultant** has a tremendous impact on rapid correction, as well as reducing the relapse rate. By initiating the correction process properly, they are able to circumvent learning obstacles before they occur. A study done by Azrin (1973) found no reduction of bedwetting by the urine-alarm apparatus unless social and motivational events were associated with the buzzer.

After the **Consultant** has indoctrinated the parents and child, the case is assigned to a **Case Director.** The **Case Director** has expertise and training in the art of directing and guiding each case in response to a report card sent in to the Center every two weeks until the enuretic has become dry.

The urine-alarm is utilized to establish the wetting pattern so the **Case Director** can properly direct and guide the enuretic through the program every two weeks (in response to report cards) until dryness is achieved. The urine-alarm, which is called a Little Watchman, is used for motivational purposes. It is utilized to obtain data throughout the program until dryness is achieved.

Literature reveals that the initial rate of arrest can be as high as 80-90% with the urine-alarm (Jones 1960, Lovibond 1964, and Yates 1970). However, relapse rates have been reported to be as high as 69% when using an alarm only (Young and Turner 1965). Twenty to 25% of the people who inquire of Pacific International have used a urine-alarm or device previously without success.

It is crucial to have the child interested and actively involved in attempting to achieve dryness (Fritz and Armbrust 1982). The child is encouraged to assume responsibility for his or her enuresis and to be an active participant in the treatment program (Marshall and Marshall 1973). This promotes development of a positive relationship between parents and child and provides positive reinforcement. It is important to clarify that the child is not at fault and punishment for bedwetting is discouraged. The child is encouraged to assume responsibility for his or her own learning. Responsibility-reinforcement therapy is one form of this approach. "Sensation awareness", an improved recognition of bladder sensation and fullness, is another responsibility that the child assumes (Rushton 1989).

The **Case Director** utilizes various methods of *reinforcement, including individual instructions, continuous reinforcement* and *over-learning*. It is the continuous reinforcement and the over-learning of the **proper instructions at the proper time** which achieves the ultimate correction rate. These instructions and procedures are sent to the client every two weeks, in response to the client report cards, instructing both the parent and the enuretic in how to deal with the problem. The instructions are usually addressed directly to the enuretic for motivational purposes. Parental support, empathy and patience are key elements in any successful plan of management of the child with enuresis. Likewise, reassurance, periodic feedback and encouragement of the parents and child are necessary for optimal results (Rushton 1989). A similar step-by-step program developed by Martin Scharf utilizing a urine-alarm along with reinforcement techniques, involvement and participation of parent and child has a 91% proven success rate.

Intermittent reinforcement and over-learning may decrease relapse (Bollard 1982). This, **combined with guidance**, is the keystone to achieving **a proper correction**. This method, which incorporates the use of the urine-alarm with a variety of other procedures can be closely compared to the enuresis method developed by Azrin, Sneed and Foxx (1974) which has been reported to be highly effective.

As the program progresses and if more intricate or difficult problems occur, a **Client Specialist** may enter the picture and help deal with that individual problem in the case until it is overcome. The case is then either directed to the end by the **Client Specialist** or returned to the **Case Director**. Dry bed training has been found to be superior to the use of the alarm alone, no treatment, and retention control training (Azrin, Sneed and Foxx 1974; Azrin and Thienes 1978; Bollard and Woodroffe 1977 and Doleys, Cominero, Tollison 1977). It also has the lowest rate of relapse of all treatments. A simple modification of treatment to include a period of over-learning has been found to reduce the relapse rate substantially (Young and Morgan 1972b, 1972c; Taylor and Turner 1975).

The positive reinforcement, combined with the client's access to either a **Case Director** or a **Client Specialist** as the program progresses, makes the difference in the correction process as well as dramatically reducing the high percentage of relapse that exists using an alarm only.

Pacific International also has **Field Specialists** on staff. These individuals are eminently qualified to go back to the home and investigate and evaluate a case that has not become dry for whatever reasons. If the **Field Specialist** then believes that the case can be corrected, Pacific indoctrinates and remotivates both the enuretic and the parents in a positive manner so they can achieve a quick and **proper correction.**

The case is directed until a declaration of dryness is provided by the **Case Director.** Pacific requires at least 30 consecutive nights of dryness before the case is declared dry. Some cases require as long as 40 consecutive nights of dryness and some as long as 60 consecutive nights of dryness before the **Case Director** declares that case dry.

When dryness is declared, final instructions are provided to the parents for the child to follow for a period of time to assure there is no regression or recurrence problem.

There is a two year coverage for relapse in the event there is a problem. Any recurrence is reported to the Case Direction Center on what are called "spot cards".

Pacific has a relapse rate of 15%. These are recorrected by utilizing several different methods.

1. Some cases receive **reinforcement procedures**, without the urine-alarm, which clear up the wetting and the program itself need not be formally reinitiated.

2. In relapses where there is no apparent indication of what caused the recur, **reinstitution of the program** is instigated and a recorrection can be accomplished.

3. Where there is an indication of **other problems** that may have **caused the recurrence, special procedures are initiated** so that a recorrection can be accomplished.

4. In highly **difficult or intricate cases** of recurrence, **a revisit by a Consultant** or **Field Specialist** may be necessary to reinitiate the program.

5. When a case recurs a number of times, a complete investigation takes place to discover what the problems are. These **cases are called Yo-Yo's** and normally a **thorough investigation reveals the problem** and a **proper correction** is achieved.

If there are individual problems, counseling and adjustments help to assure that the individual can overcome these problems, no matter what they might be. This is the uniqueness of the correction process itself.

Summary - A review of literature on the subject reveals that the urine-alarm is able to achieve dryness with a high percentage of correction. However, **the alarm alone carries a high relapse rate.** After reviewing Pacific International's case management methods from beginning to end, it is noted that a combination of the alarm and, most importantly, the **case direction** and **motivational techniques make the difference** in achieving and maintaining a **proper correction.**

Pacific puts the emphasis on a **proper correction** as well as a dry bed. The Consultant, the Case Director and, if necessary, the Client Specialist and/or Field Specialist all play a role in achieving this objective. The ability and willingness of **Pacific to revisit the family**, the **individual guidance throughout the program*** until conclusion, **the follow-up with final instructions** to prevent any recurrence or relapse, and the two-year **coverage of any recurrence problem** make the Pacific correction process superior.

*The fact than many interdependent variables may be involved in the etiology of enuresis requires a flexible, multidimensional approach to its treatment. As Graham (1973b) states, "(trying) to treat all cases of enuresis the same way is like a golfer who goes round the course with a single club" (p. 279). Both are inadequate to the needs of the situation (Sorotzkin 1984).

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Dr. Douglas Palmenter is the Medical Director for Pacific International and is a practicing pediatrician in Evansville, Indiana.

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 recessed and had a second course.

Nine children (8 males and 1 female) came back to the Sleep Llab 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.

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.

DESCRIPTION OF OUR TREATMENT PROGRAM

Our approach to treating this health-related problem is comprehensive and includes therapeutic procedures to break through the deep sleep pattern and to develop awareness of bladder-to-brain signal, thus allowing an enuretic to awaken during the night to void or learn to achieve bladder control throughout the night.

The Merck Manual, i.e., Physician's Desk Reference Manual for Diagnosis and Treatment, describes four (4) different modalities of treatment for Nocturnal Enuresis, viz., (1) Motivational Counseling, (2) Bladder Control Exercises, (3) Enuresis Alarms, and (4) Medication, e.g., Tofranil (impramine) and DDAVP. We guarantee correction by incorporating the first three (3) of these modalities of treatment. Therefore, the enuretic is never exposed to the risk of overdose, injury or harm.

Many enuretics seeking our services have pursued other modalities of treatment without results. Once organic or structural etiology has been ruled out we can accept a case and guarantee correction. The alternatives to our treatment program, used by other health care providers, including medical and psychological treatments, are expensive and lengthy, far exceeding our fee and not yielding our successful results. We are a cost-effective approach. We have a ninety-seven (97%) percentum rate of correction for those who comply and carry out the program.

We are available to answer any inquiries you may have.

Eugene B. Draper
President, Center for Enuresis Control

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 <u>declared dry</u>

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

Dr. Douglas Palmenter

Pediatrician

920 South Hebron 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.

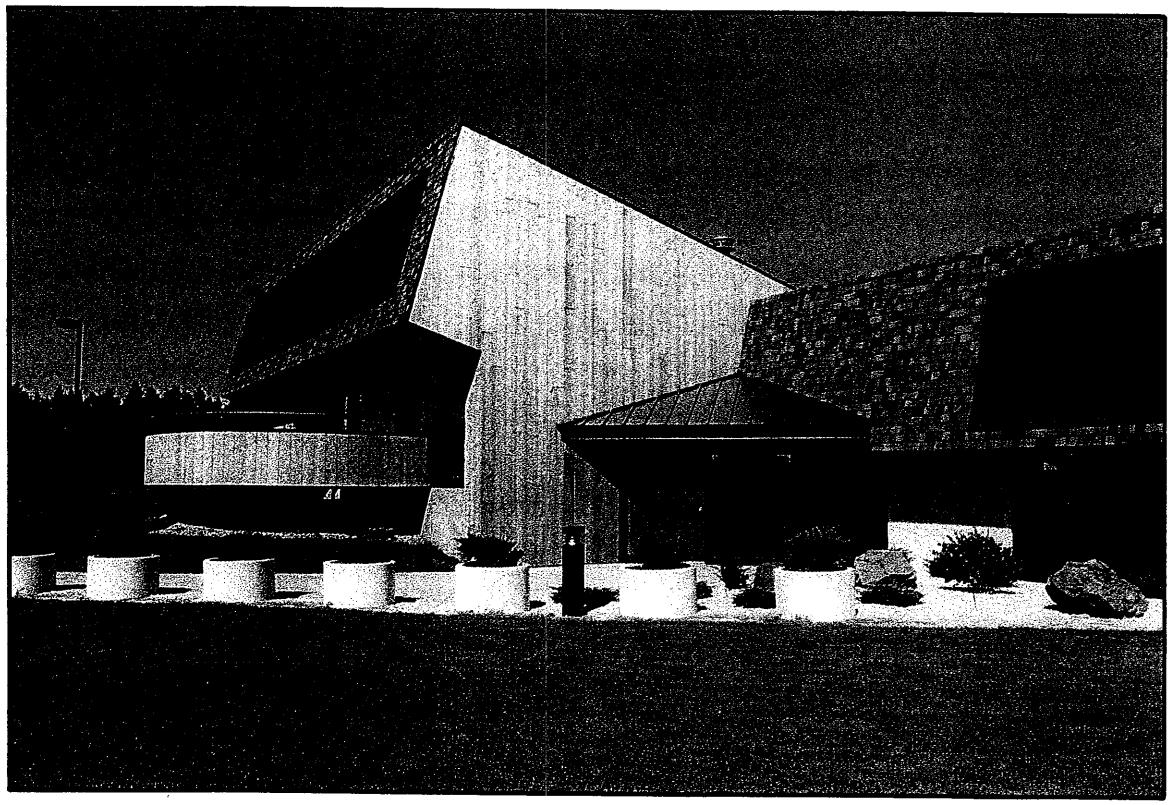
I have examined their proven therapeutic approach to dealing with this parasomnia and have found their management of cases to be superb and thoroughly professional. Pacific International's structure and disciplined approach allows them to correct enuresis in almost any type of case in the absence of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

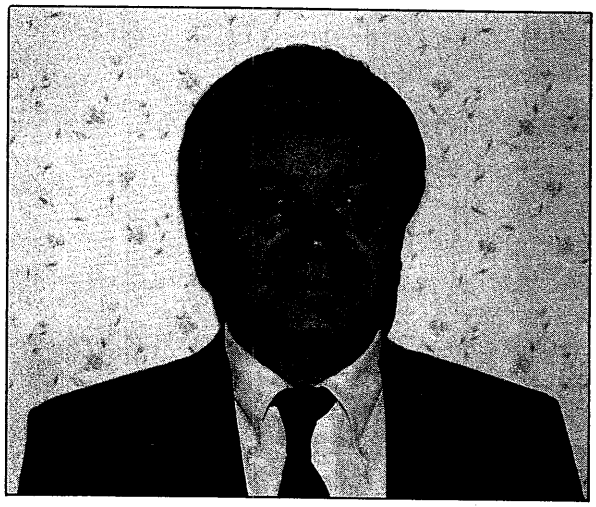
Douglas Palmenter M.D.
Dr. Douglas Palmenter
Pediatrician



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.

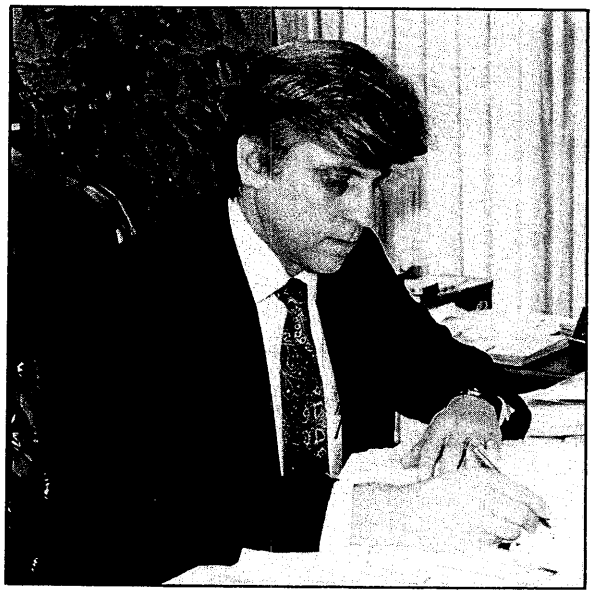
They may be restricted in many ways and be inhibited in their social development.

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:

IDC9 - CM 307.46
IDC9 - 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.

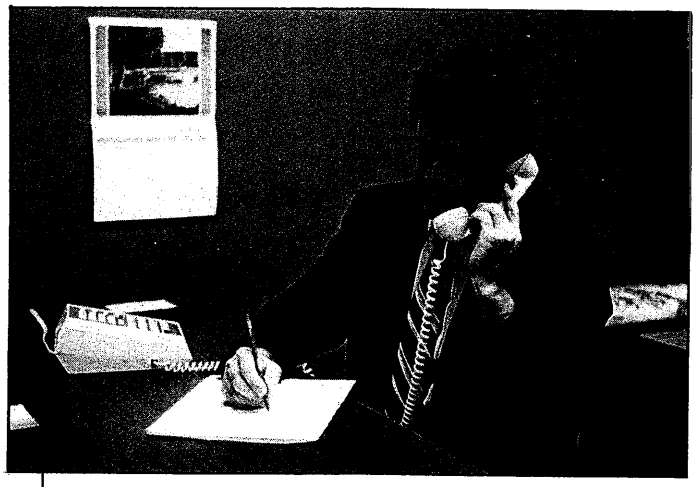
There is a single, one time fee which includes whatever services and equipment are necessary to correct the problem.

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.

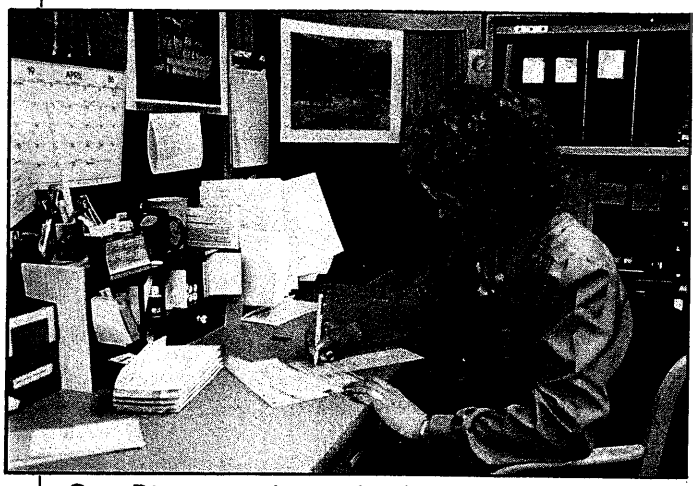
Consultant enrolling family in the program.

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.

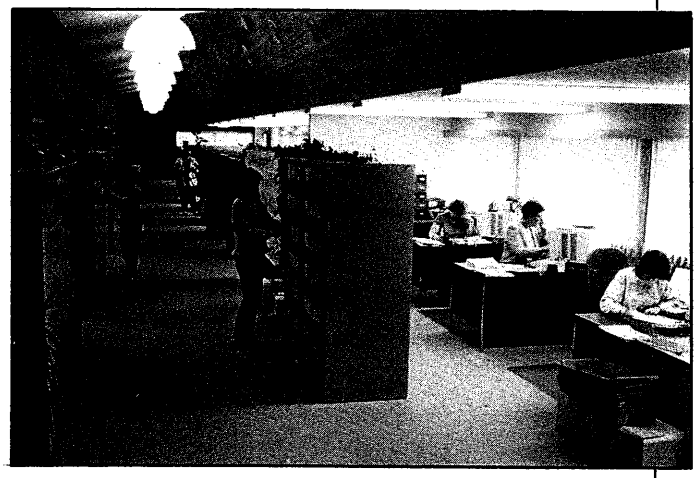


Case Director analyzing client's report card.

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

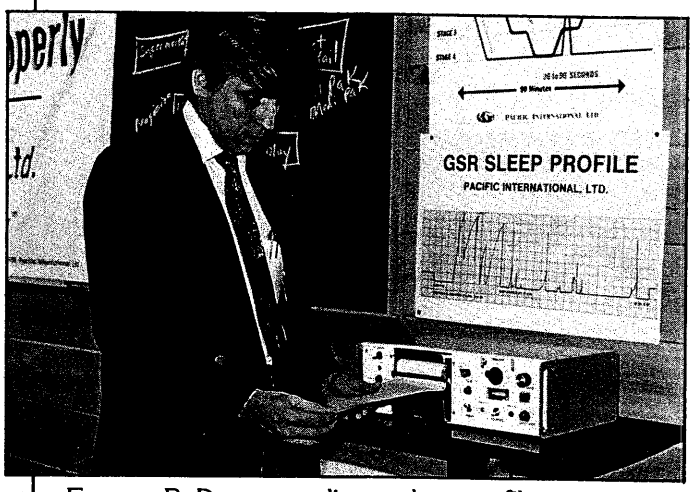
A large number of people suffer from a sleep-related disorder. Although our commitment is to the correction of nocturnal enuresis, we are beginning to research other sleep-related problems.

Sleep deprivation studies, such as those conducted by Dr. William Dement of Stanford Medical Center, show that depriving subjects of REM (Rapids 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.



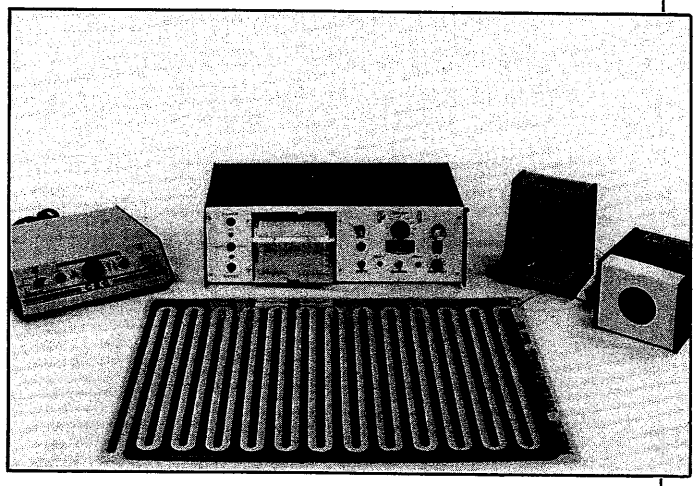
Eugene B. Draper reading a sleep profile.

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.

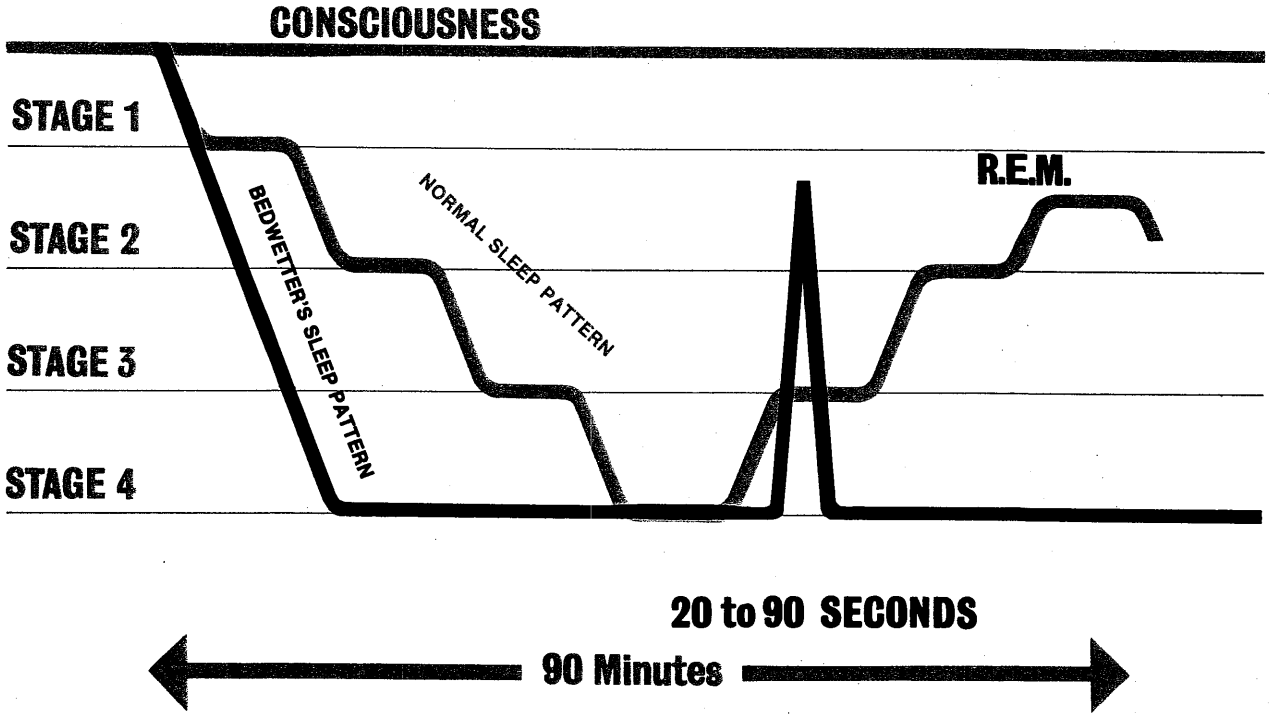
The potential for research studies on enuresis and other parasomnia disorders with the instrumentation designed and developed by Pacific International offers new and exciting methodology in gathering data, as well as empirical information. Now that enuresis has been recognized as a sleep disorder, we 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



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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

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