



Speaking to a patient in the clinic's lobby, Dr. Notelovitz emphasizes the importance of prevention.

## Climacteric Medicine: Preserving Health in the Mid-Life Years

By William Check, Ph.D.

**A**s increasing numbers of women are living beyond the ages of 60 and 70, health care for women must begin to anticipate this longer life expectancy. For women to remain healthy enough to enjoy their added years, physicians should institute preventive medicine for female patients beginning in their mid-30's, contends Dr. Morris Notelovitz, gynecologist and physiologist.

The Climacteric Clinic, Inc.—A Midlife Health Center is the result of Dr. Notelovitz's belief in the unique importance of the climacteric years to women's present and future well-being. "Traditional health care for women in their 20's and early 30's is fine," Dr. Notelovitz says. "But as they enter the menopausal years, their risk factors

change. The potential health problems they face are much different, so the examination we do should change. But in most cases it doesn't."

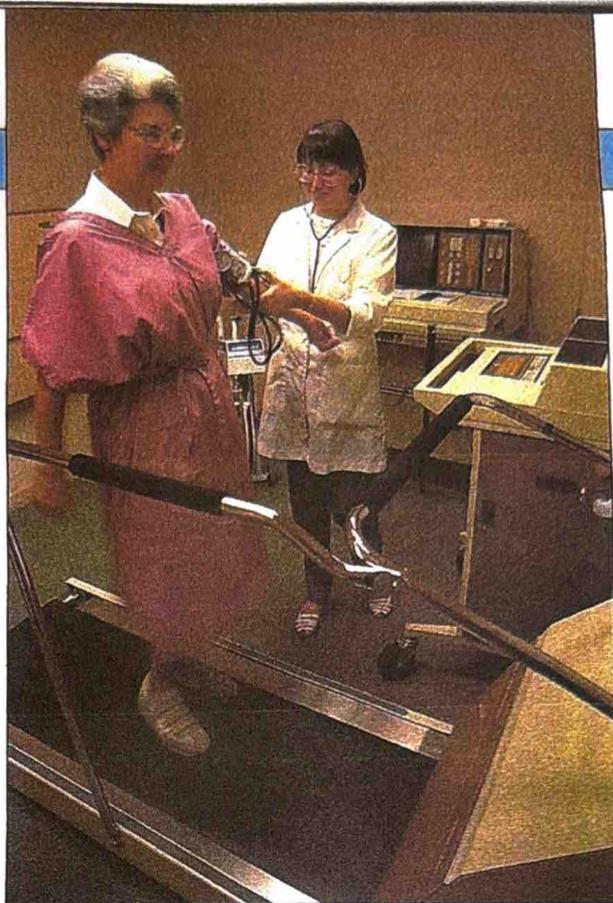
Dr. Notelovitz developed an interest in menopausal medicine in his native South Africa, from which he emigrated in 1975. At the University of Florida in Gainesville he established a research institute, the Center for the Study of the Climacteric. "The menopause in its true clinical sense lasts only a few days," he points out. "The climacteric lasts about 30 years, from about age 35 to 65." During that period the gradual hormonal and organ changes occur that accompany a woman's passage through mid-life.

In December of last year Dr. Notelovitz left his university faculty position to set up The Climac-

Credit: Paul Gerding, Photographic Group



A patient undergoes single-photon absorptiometry (above), a screening procedure to detect loss of bone mass; a treadmill with ECG (right) is used to determine a patient's cardiac fitness level before an exercise program is recommended.



teric Clinic, a private practice of climacteric medicine. "What we're doing is preventive medicine," he says, explaining the reason for his move. "Prevention is not the usual focus of a medical school. Universities concentrate on care of acute illness." At the same time, Dr. Notelovitz continues research at the climacteric center with private funding; that research helps guide his clinical recommendations.

### **Changing Physiology, Changing Health Needs**

The health problems of younger and older women tend to be quite different, Dr. Notelovitz emphasizes. As the climacteric progresses, there is a great decrease in the problems that are common to the childbearing years. These include pelvic infections, contraception-related problems and menstruation-related problems. Major health problems that arise during the menopausal period are cardiovascular disease, osteoporosis and breast cancer.

Preventing the onset and progress of these and other illnesses defines the primary agenda of The Climacteric Clinic. To accomplish this goal, Dr. Notelovitz feels he must begin seeing women by age 40. "We need to provide screening, advice and therapy to prevent trouble later on in life."

### **Marketing Mid-Life Prevention**

Dr. Notelovitz knows that he faces an uphill challenge getting younger, healthy women to come for preventive care. He engages in regular

local speaking engagements to reach women in the community. "It's important to do this because you have to get the correct message out," he says. The second step in Dr. Notelovitz's marketing of preventive medicine is to create an inviting office atmosphere. At this, he more than succeeds. Indeed, the pastel walls, leisure furniture and skylights make the reception area feel more like an upscale hotel lounge than a physician's office.

In fact, the clinic building, layout and decoration were designed by a company formed by Dr. Notelovitz, Midlife Centers of America. The furniture was designed by the company's decorator, and custom-built. Dr. Notelovitz plans to consult with other physicians who want to set up climacteric medicine clinics modeled on his Gainesville prototype. He hopes to offer personnel selection and training services eventually.

Part of the inviting atmosphere of the clinic is the opportunity offered for patient learning. Off to one side of the reception area is a well-furnished room with a large television set and a videocassette player. The receptionist asks a waiting patient if she would like to see a tape on osteoporosis. The educational program, sponsored by the National Dairy Board, features an interview of Dr. Notelovitz by Edwin Newman. The patient education room also contains a library of books, including "Love, Sex and Aging" from Consumers Union, "Women Coming of Age" by Jane Fonda, "The Complete Guide to Women's Health" by

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Shephard and Shephard, and Notelovitz's 1982 book, "Stand Tall: The Informed Woman's Guide to Preventing Osteoporosis," which has sold about 250,000 copies and will soon come out in a second edition.

### Complete Facilities

To provide total health care for the mid-life years, The Climacteric Clinic utilizes a team approach. A dietitian, an exercise specialist, a psychologist and a sex counselor all contribute their skills to the facility's operation. Co-leaders of this team are Dr. Notelovitz and Sandra Larsen, PA-C. Ms. Larsen coordinates many of the patient services and performs some of the examinations. With its complete group of health professionals, the clinic offers a wide range of medical services. One example is a breast screening service. The screen includes mammography, of course. But it also includes a breast examination by Ms. Larsen and the teaching of breast self-examination. This teaching is done both by video and by personal instruction.

Another of the special services offered by The Climacteric Clinic is a team approach to the treatment of premenstrual syndrome. "PMS is a climacteric problem," Dr. Notelovitz says. "Its highest incidence is in women in their early to late 40's." PMS appears to be due to a change in the hormonal milieu, but it is not known precisely what change is responsible.

"Because PMS is a syndrome, there is no single solution," Dr. Notelovitz says. Therefore, a team approach was thought best for maximizing the chances for success for each patient with this disorder. The PMS team, headed by Ms. Larsen, also includes the psychologist, nutritionist and exercise physiologist. Initial evaluation consists of a physical examination, a psychological evaluation and a fitness test. "It's important, first, to rule out any pelvic pathology," Ms. Larsen notes. "Probably the condition most commonly confused with PMS is endometriosis."

Treatment of the syndrome consists of an exercise regimen, a healthy diet, techniques for stress reduction and symptom control. Such common symptoms of PMS as fluid retention, breast tenderness and headache are selectively treated. The goal of the treatment plan is "generally improved health," Dr. Notelovitz says.

Further evaluation may, in some cases, require serum hormone measurements, but these should be used very selectively, Dr. Notelovitz believes. "It is easy to abuse those tests," he says. Depending on the results of the hormone measurements, hormone therapy may be used.

Stress incontinence is another problem with which The Climacteric Clinic is well equipped to deal. One suite contains instruments for urodynamic testing that provide a capability for urine flow testing, cystometry and a urethral pressure profile. The main purpose of this part of the clinic's program, Ms. Larsen explains, is to distinguish neurologic causes of urinary incontinence from anatomic problems. "Most true stress incontinence results from anatomic abnormalities," she notes. "But neurologic problems such as multiple sclerosis can masquerade as stress incontinence." The thorough testing available at the center can help to avert needless surgery.

Sexual counseling, another service of the center, is one that is not offered in most private gynecologic practices—and one that can be especially important to a woman going through major physiologic changes. "Physicians now recognize the continuing importance of sex throughout life," Dr. Notelovitz says. "But a majority of us have been inadequately trained in how to handle sexual problems. So they tend not to be brought up by the doctor. This type of counseling is not offered freely enough in traditional women's health-care groups." Dr. Notelovitz's solution is to have a health educator who specializes in sex counseling. "When climacteric and older women are told this service is available, a sizable proportion of them take advantage of it."

### Forestalling Heart Attacks

A major aspect of climacteric health care stressed at the center is the prevention of heart attacks. This problem is often underplayed by

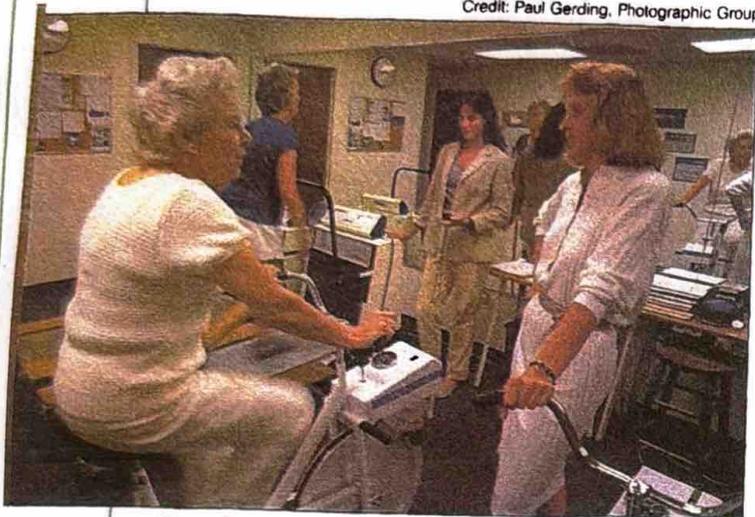


Credit: Paul Gerding, Photographic Group

Mammography is included as one aspect of the breast screening service offered by this Gainesville, Florida health center.

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Credit: Paul Gerding, Photographic Group



The effects of working out on a bicycle ergometer are assessed as part of an ongoing research project.

physicians who focus on the threats of breast cancer and osteoporosis to older women. "Breast cancer and osteoporosis are *not* the greatest threats to women in this age group," Dr. Notelovitz says. "Ten times as many women die each year from cardiovascular disease as from breast cancer." The Framingham Study demonstrated a "dramatic" increase in cardiovascular disease in postmenopausal women, Dr. Notelovitz notes. This is probably due to loss of protection from estrogen.

To help women avoid the onset of the heart disease from which they have been relatively immune for the first four decades of their lives, Dr. Notelovitz stresses exercise. "I gave the same prescription to the last two elderly patients I saw this morning," he says. "I told them to get a comfortable pair of walking shoes. Exercise should become a lifetime habit."

Strenuous exercise is not necessary to keep the cardiovascular system in good shape. Dr. Notelovitz prescribes brisk walking three times each week for about 20 minutes each time. In postmenopausal women, this regimen improves cardiovascular fitness between 15 and 20 percent, according to his research. "A woman is never too old to start exercising," Dr. Notelovitz emphasizes.

Another important step in preventing the onset of coronary artery disease is to monitor blood lipids. Up until age 50, women have lower total serum cholesterol than do men. At age 50 this ranking changes, and women's cholesterol concentrations rise suddenly to surpass male values. Ratios of high-density lipoprotein (HDL) chole-

sterol to low-density lipoprotein cholesterol also deteriorate during the climacteric.

Nothing can be done about these changes in an individual woman unless her serum cholesterol is monitored. That's why, Dr. Notelovitz asserts, "HDL measurement in a woman after age 50 is as important as a Pap smear."

### Preventing Osteoporosis, Detecting Osteopenia

Osteoporosis, a more publicized health problem of climacteric women, is also dealt with at the Florida center. A woman's bone mass peaks at about age 35, Dr. Notelovitz points out. Thereafter, women tend to lose bone density, probably due to the decline in estrogen levels. The same walking regimen that improves cardiovascular fitness also maintains bone mass for at least one year, based on an ongoing study at Dr. Notelovitz's facilities. Other weight-bearing exercises, such as bicycling, are also helpful (swimming is *not* a weight-bearing activity).

It is important for women to build up bone mass before the menopause because the probability of osteoporosis is related to a woman's bone density at menopause. An adequate intake of calcium can help to maintain bone density.

"The Recommended Daily Allowance of calcium is 800 mg/day," Dr. Notelovitz says. "But this is probably inadequate. A woman's true needs are closer to 1,000 mg before menopause, 1,200 in the perimenopausal period and 1,400 mg after a normal menopause."

Another phase of prevention is early identification of those women who are starting to lose bone mass. "Our primary challenge is not the management of osteoporosis," says Dr. Notelovitz, "but the screening and identification of osteopenia. This is a condition in which there is a deficiency of bone mineral, but not yet outright fracturing."

To identify osteopenia in time to halt its progression, Dr. Notelovitz recommends two-step screening. The instrument of choice for the first step is single-photon absorptiometry (SPA), according to the Florida physician. "It is very sensitive for isolating abnormalities of bone mineral content," he finds. It is also the least expensive method, at about \$50 for an examination. "An abnormality on single-photon scanning, which we define as 80 percent or less of the age-normal bone density, is a flag to evaluate further." Subsequent testing employs double-photon absorptiometry of the spinal column. This technique directly detects a deficiency of the bone that is most clinically vulnerable.

If the screening procedure uncovers bone

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loss, Dr. Notelovitz does more than recommend exercise and calcium supplements. He also prescribes estrogen/progestogen replacement therapy. "I can state quite categorically that, when used under a physician's guidance, estrogen combined with progestogen is a very safe and effective means of managing osteopenia and preventing osteoporosis."

Regarding the new estrogen patches, Dr. Notelovitz sees both pluses and minuses. "An advantage is that they are absorbed directly into the systemic circulation—but that is also their disadvantage. Because they do not pass through the liver, they do not raise HDL levels, as the oral preparations do." In addition, since unopposed estrogen presents health hazards, the patient must still take an oral progestogen. Dr. Notelovitz concludes, "There will be a place for both types of delivery."

Because of the importance of exercise during the climacteric, the clinic emphasizes this aspect of preventive care. To establish an appropriate exercise program for each woman, an individual fitness level is first determined. One suite, the cardiovascular room, is dedicated to this task. Testing is usually done with a bicycle ergometer. A more demanding procedure available is a treadmill with ECG. For special circumstances, metabolic equipment yields  $VO_2$ max.

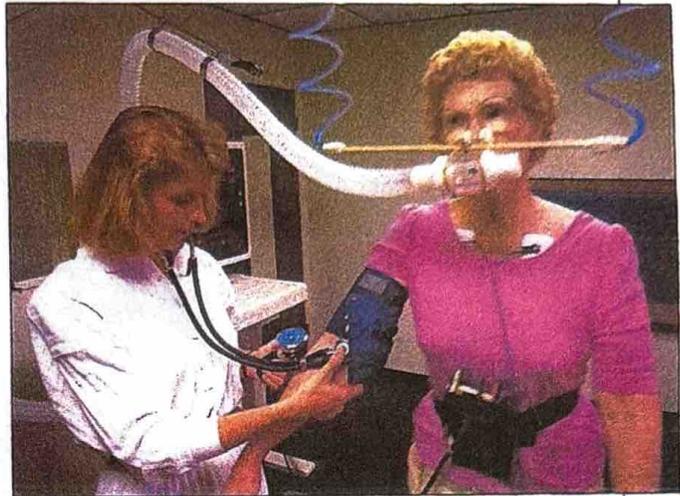
### Research: The Basis For Clinical Advice

Complementing The Climacteric Clinic is the Research Center. Study director Carol Fields, an exercise physiologist, describes one of the major ongoing research projects—a study of the effects of various types of exercise on bone density and the cardiovascular system.

Funded by the Nautilus company, the study involves more than 100 women, aged 30 to 75, who have had either a natural or surgical menopause. The women are divided into five groups: One group is taking hormone replacement therapy; one group serves as a control; and three groups perform a designated type of exercise (either working out on a bicycle ergometer, walking briskly on a treadmill or using a Nautilus machine).

The study is still in progress, but preliminary conclusions can be drawn, Ms. Fields says. Based on measurements of the forearm and spine bone density, there is some bone loss in all subjects—but much less loss in the exercising patients. Results like this support Dr. Notelovitz's advice to his patients to take up regular brisk walking. Data from the hormone replacement group have not yet been analyzed.

Credit: Paul Gerding, Photographic Group



In the Research Center, exercise physiologist Carol Fields administers a maximal oxygen uptake test to measure cardiorespiratory fitness.

Not surprisingly, the treadmill and ergometer groups made big gains in cardiovascular fitness. The Nautilus group did not. "That's not new," says Ms. Fields. "We know that you do not improve aerobic capacity with resistance training."

What is equally as important as the formal study results is the demonstration that a group of older women, including some in their 70's, can engage in vigorous exercise with no problems. For entry into the study, subjects perform maximal stress testing. Subsequent sessions are at 70 to 85 percent of observed maximum. "You don't have to treat these women as fragile," Ms. Fields emphasizes. "You just start them out more slowly. Then they respond beautifully."

Linda McKenzie, who is study director of several other commercially funded research projects at the center, expresses the philosophy that guides both The Climacteric Clinic and the Research Center: "Women going through the climacteric are not a very well-studied group," she notes. "There is more known about the obstetrics of the reproductive years and about geriatrics. We are pursuing a holistic approach to women's health in the middle years." The patients seen at this institute may be too old to have children and too young for grandchildren, but they are just the right age to have a medical center dedicated to their health needs.

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