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Menopause and Andropause

By Jeffrey S. Life, M.D., Ph. D. & Alan P. Mintz, M.D

“Making the Rest of Our life the Best of Our life”

The average American women’s life expectancy currently exceeds 81 years of age so most women can expect to live more than one third of their lives well beyond their childbearing years. Today menopause is no longer the hush-hush topic of our grandmothers’ generation. Both the non-medical and medical communities throughout our country now openly address the implications of menopause. Billions of dollars are spent each year by advertising targeted at the 44 million-plus baby boomer women that are near or in the menopausal category.

Likewise, whether it is referred to as a condition or phenomenon, most men begin to experience changes in their bodies somewhere between the ages of 30 and 55. Formerly attributed to “growing old,” a great deal of data now indicates that, like women, hormone imbalance is the root cause of the male menopause – the Andropause.

While menopause comes on rather abruptly, the symptoms of Andropause tend to come on slowly and gradually, creeping up over a period of as long as 20 years. Hardly noticeable at first, it eventually cuts to the very core of a man when he realizes that he has lost much of his sexual function and finds it harder and harder to keep himself mentally sharp and focused. If left untreated, the Andropause can have as severe long-term consequences as those of menopause.

Whether you are a man or a woman in the –pre-, peri-, or post-menopausal or Andropause stages of your life, the following information can help you determine what steps you need to take for your own personal wellbeing.

What is Menopause?

Menopause refers to that time in every woman’s life when menstruation ceases completely. The ovaries’ decrease their output of estrogen and progesterone and women begin experiencing the effects of suboptimal levels of these hormones. In addition to signifying the end of a woman’s ability to have children, declines in these female hormones affect the entire endocrine system. This is a process that takes approximately 3 to 5 years to complete. The early phase or transitional phase is referred to as the climacteric, or peri-menopause. Menopause is considered complete

when a woman has had no period for a full year. Although timing varies from woman to woman, menopause is generally completed by the time they reach their early 50's.

What to Expect at Menopause and Beyond

Every woman is an individual, of course, but there are a number of side effects that can generally be anticipated. Though some side effects may be considered temporary nuisances to be "toughed out," the reality is that the decline of a woman's hormonal levels results in changes that can seriously affect her physical and mental health as well as her prospects for longevity.

Hot Flashes

The most common side effect associated with menopause are hot flashes, a sudden sensation of intense heat. Some women break out with red blotches on their chest, back and/or arms, some sweat profusely, some also experience cold and shivering until their bodies readjust. While many women never experience hot flashes, others can endure them for up to 30 minutes at a time. Hot flashes are generally considered to be a direct result of decreasing estrogen levels and they can linger for years.

Vaginal/Urinary Tract Changes

As hormone levels decrease, the walls of the vagina become thinner, dryer, less elastic and more susceptible to infection. This condition can also make intercourse uncomfortable. Tissues in the urinary tract also change with the decrease of hormonal levels and can cause incontinence and an increased susceptibility to urinary tract infections.

Loss of Libido

Rarely discussed, the loss of sex drive is another by-product of the menopausal experience. Women generally have 1/10th to 1/20th of the testosterone levels that men have. The waning of pre-menopausal levels of testosterone can be a contributing factor to a woman's loss of desire for sexual intercourse.

Emotional Changes

For some women, menopause heralds a period of enormous freedom. For others it is a roller coaster ride with emotional peaks and valleys, and for many, depression becomes an all-too-frequent companion. There is no consensus as to just how much lifestyle, alteration of family roles, changing social networks, and emptying of the nest contribute to the emotional changes of post-menopausal women. It is clear, however, that hormonal decline is a major contributor to this emotional instability.

Osteoporosis

Osteoporosis is definitely not just a woman's disease. More men get it than prostate disease, according to Miriam Nelson, Ph.D., author of **Strong Women, Strong Bones**. However, it is more common in women and it is now estimated that one out of every two post-menopausal women will suffer some degree of osteoporosis. Those with a history of osteoporosis and those who are thin and fair skinned seem to be more at risk, but osteoporosis is a manifestation of estrogen insufficiency. It is a gradual, yet debilitating, condition in which bones become fragile, thin and more prone to fracture. Building up bone density prior to menopause is the best strategy for osteoporosis prevention, but once menopause has occurred, the most effective therapy is hormone modulation. The National Institute on Aging has said "Remarkably, estrogen saves more bone tissue than even very large daily doses of calcium."

Cardiovascular Disease

Heart disease is the number one killer of American women. It is responsible for over half the deaths of women over age 50. After menopause the incidence of cardiovascular disease increases. Smoking and a family history of heart disease give women a higher chance of developing cardiovascular disease (as well as other serious diseases), but when these are coupled with low estrogen levels, the risk is much higher than either one alone. As a direct result of estrogen deficiency, LDL cholesterol increases and HDL decreases. As LDL levels rise, fat tends to accumulate on artery walls eventually clogging them, and the falling levels of protective HDL (high-density lipoproteins) make it impossible to remove these fat deposits. Early recognition, lifestyle changes and hormone modulation have been shown to be very effective in reducing the incidence and severity of cardiovascular disease in post-menopausal women.

In addition to diminished levels of estrogen and progesterone, testosterone (also produced in the ovaries) and growth hormone (produced in the brain) are also reduced during menopause. As the levels of all of these key hormones diminish, profound changes begin occurring with growth and metabolism that affect the breasts, vagina, bones, blood vessels, gastrointestinal tract, urinary tract, cardiovascular system, skin, brain, and energy levels.

Hormone Modulation Can Help

Hormone therapy began in the 1940s and has been refined considerably over the past 60 years. While there are still contraindications for some women (e.g., those with history of breast disease and uterine cancer), many physicians feel that the benefits far outweigh the risks. Much of the medical field agrees that hormone therapy:

- Reduces the risk of osteoporosis
- Relieves hot flashes
- Reduces the risk of cardiovascular disease
- Improves mood and psychological well-being

- Results in a firmer body and a more youthful appearance
- Improves mental alertness, focus and concentration
- Increases energy and vitality
- Improves desire for sex
- Increases physical stamina and muscle strength
- Reduces body fat

Each woman, whether pre-, peri or post-menopausal, can be prescribed a tailor-made program, based upon a thorough and comprehensive diagnostic analysis, including family history, personal medical history, lifestyle analysis, blood tests, physical examination and other diagnostic tests. With a program that synergistically combines hormone modulation, optimal nutrition (including nutritional supplements), and regular exercise women simply need not suffer the debilitating physical, emotional and mental consequences of menopause any longer.

How Safe is Hormone Replacement Therapy?

There has been recent controversy about the use of estrogen and progestin in healthy postmenopausal women. This controversy is a result of an article published in the July 17, 2002 issue of the *Journal of the American Medical Association* that reported on the results of the Woman's Health Initiative Trial. The results of this trial linked the use of Premarin and progestin to the development of health risks that, in the opinion of the authors, exceeded benefits.

Many authorities believe this study was poorly designed and has many flaws. One of the major concerns is that Premarin and Provera, the drugs used in the study, are not bio-identical forms of human estrogen and progestin. Premarin, in fact, is obtained from horse urine and contains nearly three-dozen horse estrogen compounds, only three of which are found in humans. Another concern is that during the course of the study, all subjects received the same dose of hormones with no consideration given to adjusting dosing based on blood levels. It is reasonable to conclude that many of the subjects had hormone levels that greatly exceeded normal physiologic ranges—ranges we would consider to be unsafe. Finally, we could also argue that there was a sex bias in the study. A similar study of men and testosterone replacement therapy based on the administration of non-bioidentical hormones (obtained from ground-up horse testicles for example) would be quickly dismissed and viewed with great suspicion by the medical community, but the same circumstance was allowed for thousands of women in the WHI study and recommendations are now being made based on that study.

We believe bio-identical estrogen and progestin replacement therapy that is performed in a controlled clinical setting where therapeutic levels are closely monitored and dosing is adjusted accordingly will dramatically improve a woman's quality of life. While there are still contraindications for some women (e.g., those with history of breast disease and uterine cancer), many physicians now feel that the benefits far outweigh the risks.

Andropause

Symptoms of Male Menopause

Physical Appearance

- Body fat gain, particularly abdominal weight gain
- Loss of lean muscle tissue
- Bone deterioration
- Loss of hair
- Wrinkling and drying of the skin

Bodily Functions

- Fatigue
- Decreased libido
- Possible erectile dysfunction (ED) – reduced potency and/or penile size, decreased ejaculatory force and volume
- Hot flashes, blushing and sweating
- Aches and pains

Mental Functions

- Poor sleep quality or insomnia
- Nervousness, anxiety and irritability
- Memory lapses
- Depression
- Reduced motivation/apathy

Mental and emotional changes resulting from the andropause can cause increased negativity, loss of focus, loss of drive at play and work, and a questioning of one's values, accomplishments, goals and directions in life. Physical changes can include loss of strength, muscle atrophy, loss of energy, and stiffness and aching of muscles and joints.

While life's stresses can often exacerbate these physical and emotional changes, stress is no longer universally accepted as the cause of the loss of male vitality and virility. The signs and symptoms of the male menopause need not be accepted as an inevitable consequence of the aging process. A large body of data collected since the first study appeared in the **Journal of the American Medical Association** (1944; d126 [8]:472-7) indicates a direct connection between the variety of symptoms described and an imbalance of hormones.

Too little? Too Much?

Simply stated, the imbalance is one of too little testosterone and too much estrogen but this is far from a simple matter and it needs to be noted that testosterone is much more than a sex hormone. With receptor sites in the brain and heart, and in fact throughout the entire body, testosterone is critical in maintaining healthy bone density, lean muscle, red blood cell production, and safeguarding the immune system. It is also

vital for proper cardiac output and neurological function. There is a body of literature that supports the thesis that testosterone helps control blood sugar, regulates proper cholesterol levels, and control blood pressure.

As men age, the testosterone they produce diminishes and is increasingly converted to estrogen. The most dangerous effect of too much estrogen and too little testosterone is the increased risk of heart attack or stroke. Estrogen (estradiol) is actually made from testosterone in the cells of every male's body but when there is too much, no matter what the level of testosterone, they will suffer negative consequences. Furthermore, when a male is experiencing high estradiol levels, he is also producing more sex hormone binding globulin (SHBG), a protein that binds to testosterone and prevents it from doing its work. Since typically about 98 percent of the testosterone in the male's bloodstream is bound to proteins, only approximately 1 to 2.7 percent is free and available for assimilation into the cells of the body. As SHBG increases the amount of testosterone freely available to act on cells diminishes.

There are a number of factors that can cause the testosterone-estrogen imbalance in men. These include excess "aromatase" enzyme (the enzyme that converts testosterone into estradiol), impaired liver function (often caused by excessive alcohol or certain drug interactions), obesity (which increase aromatase enzyme), and zinc deficiency (zinc is a natural aromatase enzyme inhibitor). To complicate matters even more, there is a wide range of "normality" in the testosterone/estradiol reference range that requires expert interpretation.

In addition to declining levels of testosterone, growth hormone and DHEA levels are also falling during andropause. As these levels decline, profound changes begin to occur with growth and metabolism that affect men both physically and mentally.

Available Help

The good news is that male hormone imbalance is correctable, and a youthful hormone balance can be safely restored. An evaluation to determine free and total testosterone levels, estradiol (estrogen), DHEA, dihydrotestosterone (DHT), growth hormone levels, along with a PSA blood test are required to establish deficiencies and imbalances. If therapies are indicated, a personalized Andropause Program can be developed.

Conclusion

Hormonal health plays a large part in determining one's overall well-being. Today both menopause and andropause, along with the symptoms that accompany them, can be treated successfully. Men and women and their loved ones need not suffer the consequences of a mid-life crisis. There is definitely hope. **It is within our power to make the rest of our life the best of our life!**

Alan P. Mintz, MD Chief Medical Officer, Chief Executive Officer
Dr. Mintz's dynamic vision and commitment to excellence have set the tone for

Cenegenics®. He proudly serves as chief medical officer, chief executive officer and co-founder, offering his esteemed experience and passion in age management. Dr. Mintz has completed the AMA PRA Physician Training in Age Management Medicine jointly sponsored by the Cenegenics Medical Institute and The Foundation for Care Management.

A University of Chicago graduate, Dr. Mintz earned the Degree of Doctor of Medicine from the University of Illinois - School of Medicine. He went on to serve as a physician with the United States Navy, prior to postgraduate training in radiology. Dr. Mintz is a Diplomate of the American Board of Radiology, including nuclear medicine and radiation therapy.

Throughout his career, Dr. Mintz was appointed chairman of the Department of Radiology for several Chicago-area hospitals and remains an adjunct professor for the Center for Cardiovascular Research, at Northeastern Illinois University. He is no stranger to business success, previously holding the positions of chief executive officer, president and co-founder at the world's largest radiology management company.

Thanks to his professional expertise and guidance, Cenegenics Medical Institute (with the joint sponsorship of Foundation for Care Management) has been recognized by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education to physicians. Dr. Mintz also has been a driving force behind implementing the Institute's university-affiliated research.

Complementing his outstanding career as a physician and businessman, Dr. Mintz has attained international recognition as a lecturer and published author in such prestigious publications as the *Journal of Age Management Medicine* and *Total Health*.

Dr. Mintz is an avid athlete with a zeal for skiing. He has served as medical advisor for the National Ski Patrol and is a member of the Steinmetz Academy for Wellness and Sports Science Board of Directors. At age 58, Dr. Mintz further demonstrated his personal commitment to health and wellness, earning the title of 1996 AAU Mr. Illinois, in the Grand Masters Division.

A Word from Dr. Alan Mintz

America's current medical care system is based on the treatment of disease. It's about having something negative happen and then trying to fix it after the fact.

Cenegenics Medical Institute focuses on optimal health. By regaining and maintaining metabolic and endocrine functions at the upper end of the normal range adjusted for age, we have the best opportunity for a healthy and vigorous life.

Good health is not an accident. It requires each individual's active participation. We do have the power to control the future of our health. The Executive Health Evaluation is the critical step in understanding the unique needs of each individual.

With factual information, a program can be structured to give you the best opportunity—not only for short-term benefit, but for continuing a high quality of life and to live well longer

Jeffrey S. Life, MD, PhD. Institute Physician

Dr. Life is a Diplomate of the American Board of Family Practice and a Fellow of the American Academy of Family Physicians. In addition, Dr. Life has completed the AMA PRA Physician Training in Age Management Medicine jointly sponsored by the Cenegenics Medical Institute and The Foundation for Care Management.

After receiving his medical degree from University of Iowa, Dr. Life completed his residency in family medicine and internal medicine at West Virginia University. He also attained a PhD in environmental sciences and health.

Prior to joining Cenegenics, Dr. Life was a full-time family physician and a part-time assistant professor at Marywood University in Pennsylvania, teaching graduate courses in nutritional science and exercise physiology. He is currently completing a Masters of Science program in sports nutrition and exercise science, while working on an upcoming book.

In 1998, after reaching a lifetime high in body weight, percentage of body fat and level of deconditioning, Dr. Life decided to enter EAS National Body-for-LIFE Challenge, at age 60. He won the contest and became a Grand Champion, losing 35 pounds of body fat and gaining 15 pounds of muscle as a direct result of improving his nutrition and starting an exercise program. He continues to live a lifestyle promoting health and fitness and has written a chapter on “Exercise, Fitness and Lifestyle” for a popular medical textbook, published 2002.

Dr. Life joins the team at Cenegenics Medical Institute with a fervent desire to share with our patients the same lifestyle changes and knowledge that have made a positive impact on his life.

Cenegenics is the largest and most experienced Age Management Medicine Practice in the world with patients from every state and several countries, 25% of whom are physicians and their families. The Cenegenics Medical Institute consistently receives regional, national, and international media exposure and has been the featured expert in the media, including *USA Today*, *Wall Street Journal*, ABC's *20/20*, and CBS's *48 Hours*.

Through the joint sponsorship of The Cenegenics Medical Institute and the Foundation for Care Management, Cenegenics provides American Medical Association PRA Classification Tutorial Training in Age Management Medicine for physicians with a maximum of 50 Category 1 Continuing Medical Education (CME) Credits. Cenegenics also sponsors a Research Protocol for Age Management Medicine with University Affiliation. In addition, Cenegenics has the highest rating for a privately held entity with Dun & Bradstreet, Inc. because of our business ethics. For further background information, including biographies of our Physicians, Management Team, and Medical Advisory Board, please visit www.Cenegenics.com.

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