Dr. Miguel Ángel María Tablado.
Family and Community Medicine Physician.
Centro de Salud de Canillejas, Madrid (Spain).
Member of the SED Women and Diabetes Working Group.

Menopause and Diabetes

DEFINITION OF MENOPAUSE

Menopause is defined as the complete absence of menstruation for more than 12 months, and it reflects a natural physiological process in women that generally occurs around age 45. The term climacteric refers to the period extending from perimenopause to the end of a woman's life.

This article aims to highlight the be- »

» havior and implications of living with diabetes mellitus during this phase of life. To define the stages of menopause and the climacteric period, we use the STRAW criteria ***(Table 1)***.

SYMPTOMS

In a study conducted by the Spanish Association for the Study of Menopause (AEEM) in 2021, the most common symptoms reported by women during the transition and menopausal period—with or without diabetes—were identified ***(Figure 1)***.

These symptoms vary with age and the number of years without menstruation, with vasomotor symptoms decreasing and genitourinary, sexual, and mental health symptoms increasing. When analyzed separately, women with diabetes during this phase of life express a greater need for support, guidance, and information regarding how their diabetes behaves at this time. They express interest in understanding their hormonal status (hormonal fluctuations associated with poor glycemic control), true pregnancy risk, the impact of weight gain, how to adjust insulin, and how to differentiate hot flashes, palpitations, and night sweats from hypoglycemia symptoms. They also report frequent concerns about mental health and sexual health issues.

MENOPAUSE IN WOMEN WITH DIABETES

Menopause and its accompanying symptoms primarily affect quality of life. There are several methods to assess this. The AEEM recommends the short version of the Cervantes Scale (Table 2), which evaluates symptoms including the impact on sexual health and partner relationships. It may be useful to add two additional items for women with diabetes to assess the specific impact of the climacteric on their condition. Using such scales may be essential to better understand our female patients with diabetes during the climacteric.

Below is a practical review of the main menopausal symptoms and how to manage them in women with diabetes:

Menstrual Irregularities

Estrogen fluctuations cause changes in cycles and bleeding patterns, eventually leading to amenorrhea. Many women are concerned about potential pregnancy. Tho- »

WHEN STUDIED SEPARATELY, WOMEN WITH DIABETES DURING THIS STAGE OF LIFE EXPRESS A GREATER NEED FOR SUPPORT, GUIDANCE, AND INFORMATION ON HOW THEIR DIABETES BEHAVES AT THIS TIME IN THEIR LIVES

<table>
<tr><th></th><th>-5</th><th>-4</th><th>-3</th><th>-2</th><th>-1</th><th>+1</th><th>+2</th></tr>
<tr><td rowspan="3">Phase</td><td colspan="3">Reproductive Period</td><td colspan="2">Menopausal Transition</td><td colspan="2">Postmenopause</td></tr>
<tr><td>Early</td><td>Optimal</td><td>Late</td><td>Early</td><td>Late</td><td>Early</td><td>Late</td></tr>
<tr><td></td><td></td><td></td><td colspan="3">Perimenopause</td><td></td></tr>
<tr><td>Duration</td><td colspan="3">Variable</td><td colspan="2">Variable</td><td>1 year</td><td>4 years</td><td>Until old age (senescence)</td></tr>
<tr><td>Cycles</td><td>Variable or regular</td><td colspan="2">Regular</td><td>Variable cycle some >7 days</td><td>Several cycles >60 days</td><td colspan="2">Amenorrhea 12 months</td><td>Absence</td></tr>
<tr><td>Hormones</td><td colspan="3">Normal FSH
Normal estrogens</td><td colspan="5">Increased FSH
Estrogens fluctuating toward very low levels</td></tr>
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TABLE 1. STRAW classification criteria

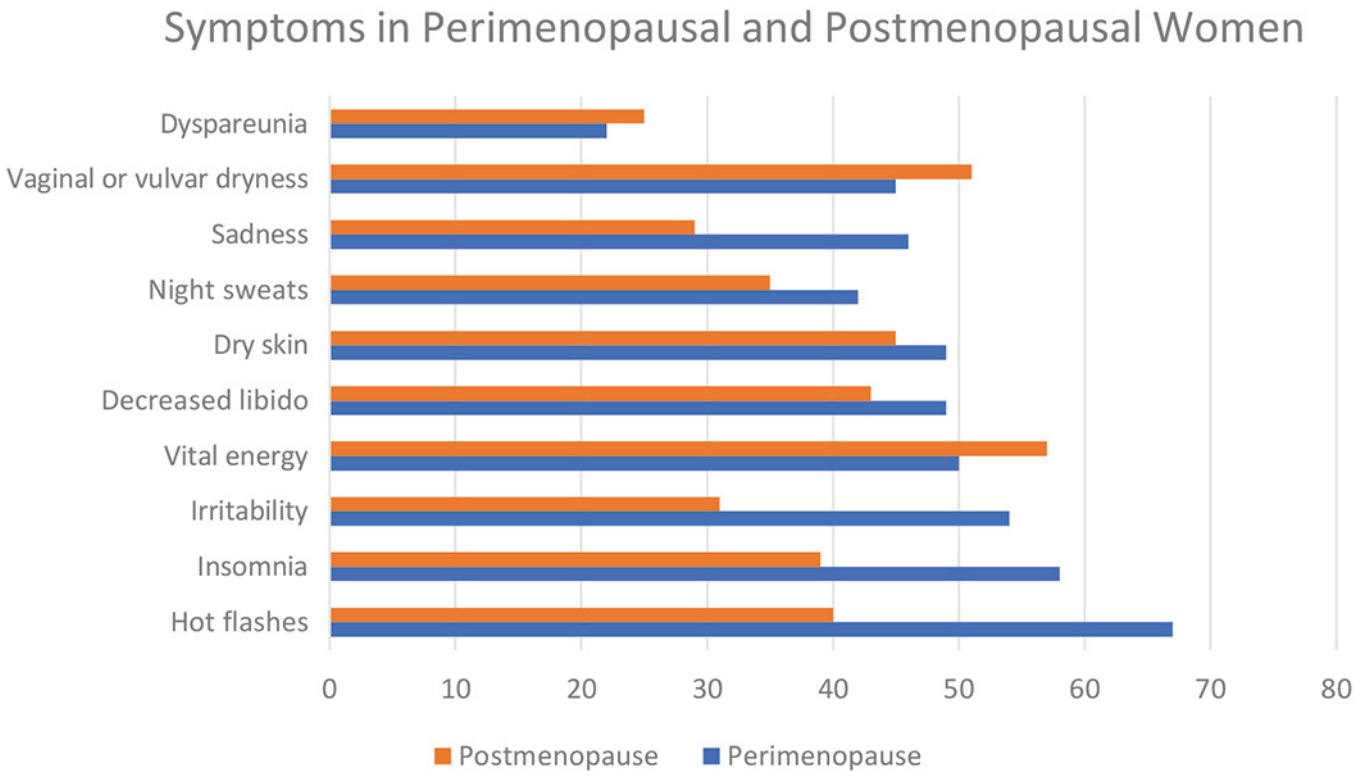


FIGURE 1. Most common symptoms during the climacteric (AEEM, 2021).

DIABETES IS ASSOCIATED WITH DEPRESSION, WHICH CAN MORE EASILY EMERGE DURING THIS STAGE OF LIFE, SOMETIMES LINKED TO LACK OF DISEASE CONTROL

» se using contraceptive methods, including IUDs, should continue using them. Hormone replacement therapy (HRT), including phytotherapy, is not recommended in the presence of bleeding. Estrogen dips may be associated with glycemic alterations or reduced insulin requirements, and continuous glucose monitoring (CGM) is recommended for women with an indication.

Hot Flashes and Night Sweats (Vasomotor Symptoms)

These are sudden sensations of heat, often with redness of the face, neck, and head, and are frequently accompanied by sweating and palpitations. Triggers include heat, closed environments, alcohol, large meals, hot drinks, smoking, stress, physical activity, and sexual activity. These are more common in obese women and in those who have undergone surgical menopause. In women on active diabetes treatment, especially insulin, symptoms may be confused with hypoglycemia; CGM is advised.

Tachycardia / Palpitations

These are relatively frequent, short in duration, and can be identified on ECGs or wearable devices. They usually do not require treatment. In diabetes, if palpitations are prolonged or associated with chest pain, medical evaluation is necessary.

Sleep Disturbances

Not all are due to hormonal changes—melatonin levels may decline, and mental or social factors often contribute. In diabetes, hyperor hypoglycemia must be ruled out. In overweight or obese women, sleep apnea should be considered.

Skin Dryness and Hair Loss

Hair may become thinner and more sparse and body hair distribution may change. The skin becomes drier, requiring special care in diabetic women to prevent ulcers, especially on the feet, and to maintain healthy nails. »

		0	1	2	3	4	5	
I suddenly start sweating without physical effort	Never							Constantly
I feel hot flashes	Never							All the time
As the day goes on, my headache worsens	Never							Every day
I sleep but do not feel rested	Never happens to me							Constantly
I experience palpitations	Not at all							A lot
I have tingling in hands or feet	Not at all							Unbearable
I leak urine when making an effort	Not at all							A lot
My health affects my daily life	Not at all							Constantly
I have dry skin	No, as always							Yes, much more
I feel very nervous	Never							Constantly
Everything bores me	Not true							True
I feel tired all day	Nothing							Completely
In my life, sex is...	Not important							Very important
I am satisfied with my sexual activity	Not at all							Completely
I consider myself happy with my partner	Not at all							Very much
My role in the relationship is...	Not important							Very important
Diabetes influences the above	Not at all							Influences a lot
I manage my diabetes as before	As always							I do not manage it at all

TABLE 2. Cervantes Scale (If more than 25 points are scored in the first 15 items, some type of intervention should be considered.)

» *Irritability, Mood Changes, Fatigue*

Self-esteem may decline, body image is altered, and irritability, anxiety, sadness, or depression can occur. Fatigue and daily tiredness are common. Diabetes is associated with depression, which may appear more easily during this stage, often due to poor disease control.

Weight Gain

Although not always a primary complaint, it affects quality of life and self-image. Lower energy expenditure leads to reduced caloric needs and insulin requirements. There is a loss of lean mass and gain of visceral fat, increasing the risk of diabetic complications. Insulin and medication needs may initially decrease »

IN WOMEN WITH T2DM, IT HAS BEEN CLEARLY SHOWN THAT THERE IS NO INCREASED RISK AFTER MENOPAUSE, EXCEPT FOR THAT WHICH MAY BE RELATED TO WEIGHT GAIN. THEREFORE, HORMONE THERAPY —UNLESS THERE IS A PRESENT VASCULAR EVENT— SHOULD BE THE BEST AVAILABLE OPTION

» but may rise again during the climacteric if weight increases. Current diabetes and obesity treatments can be effective in preventing complications.

Genitourinary Changes (Genitourinary Syndrome of Menopause)

Decreased estrogen affects the vagina, vulva, urinary tract, and pelvic floor. Common symptoms include dryness, irritation, burning, lack of lubrication, dyspareunia (pain during intercourse), dysuria, urinary urgency, and infections (urinary or Candida). These may be worsened in diabetic women due to bladder dysfunction or increased infection risk. Local hormonal therapy is indicated if systemic estrogen (patches or pills) is not being used.

Sexual Dysfunction

The most common complaint is low libido. Orgasm and arousal may also be affected, especially if pain is present. Vaginal lubricants and moisturizers are effective treatments.

Gynecological Cancer

There is no observed increase in the incidence of gynecological cancers (breast, ovary, endometrium, cervix) in menopausal women with diabetes. Regular screenings (mammography, Pap smear, vaginal ultrasound) should continue. HRT use in this population is similar to the general population.

Premature Ovarian Failure

This is more common in T1DM, possibly due to microvascular damage to ovarian follicles. However, it may also occur in T2DM. Early menopause implies earlier onset of symptoms and usually indicates the need »

» for HRT. In women with diabetes, HRT is not contraindicated unless there is a history of vascular events (stroke, infarction, kidney damage).

Osteoporosis

The drop in estrogen disrupts bone remodeling, increasing the risk of osteoporosis and complications (hip or vertebral fractures). Women with diabetes—especially type 2—have a higher fracture risk. This may not be due to osteoporosis per se, but to more frequent falls, balance disorders, muscle weakness, or diabetes-related visual impairment. Calcium and vitamin D supplementation, as well as bone density testing, should follow the same recommendations as in the general population.

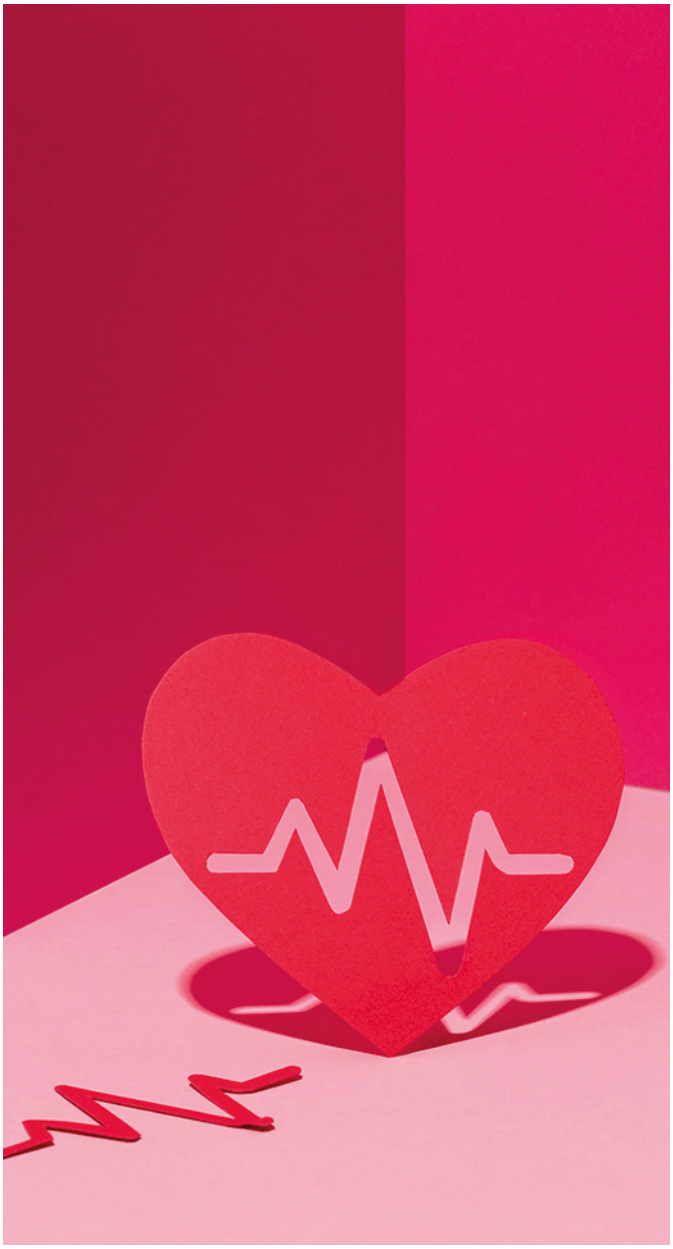
Cardiovascular Risk

The cardiovascular risk and premature aging attributed to type 1 diabetes is still under study and may be lower than previously believed. In women with type 2 diabetes, there is clearly no increased risk after menopause, except that related to weight gain. Therefore, hormonal therapy should be the best available option, unless a vascular event is present. Some question whether diabetes diagnoses truly increase during the climacteric, possibly due to increased insulin resistance. D

CONCLUSIONS

We should use quality-of-life scales to identify symptoms and assess well-being during the climacteric, while also checking diabetes control.

The climacteric experience in women with diabetes is not different from that of other women, so we must offer the best possible treatment to alleviate symptoms.



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