

# Preventing Obesity in Midlife Women: A Recommendation From the Women's Preventive Services Initiative

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**Description:** The Women's Preventive Services Initiative (WPSI), a national coalition of women's health professional organizations and patient advocacy representatives, developed a recommendation for counseling midlife women aged 40 to 60 years with normal or overweight body mass index (BMI; 18.5 to 29.9 kg/m<sup>2</sup>) to maintain weight or limit weight gain to prevent obesity with the long-term goals of optimizing health, function, and well-being. This recommendation is intended to guide clinical practice and coverage of clinical preventive health services for the Health Resources and Services Administration and other stakeholders. Clinicians providing preventive health care to women in primary care settings are the target audience for this recommendation.

**Methods:** The WPSI developed this recommendation after evaluating results of a systematic review of the effectiveness and harms of interventions to prevent weight gain and obesity in women aged 40 to 60 years without obesity. Seven

randomized clinical trials including 51 638 participants and using various counseling and behavioral interventions were included. Trials indicated favorable weight changes with interventions that were statistically significantly different from control groups in 4 of 5 trials of counseling, but not in 2 trials of exercise. Few harms were reported.

**Recommendation:** The WPSI recommends counseling midlife women aged 40 to 60 years with normal or overweight BMI (18.5 to 29.9 kg/m<sup>2</sup>) to maintain weight or limit weight gain to prevent obesity. Counseling may include individualized discussion of healthy eating and physical activity.

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For author, article, and disclosure information, see end of text.

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\* For members of the Women's Preventive Services Initiative who contributed to this work, see the [Appendix](#) (available at Annals.org).

This executive summary includes the rationale and recommendation statement of the Women's Preventive Services Initiative (WPSI) about prevention of obesity in midlife women. Obesity is a common health condition for women experiencing physiologic and lifestyle changes related to menopause and aging at midlife. In the United States during 2017 to 2018, the prevalence of obesity (body mass index [BMI]  $\geq 30.0$  kg/m<sup>2</sup>) was 43.3% among women aged 40 to 59 years (1). The prevalence of severe obesity (BMI  $\geq 40.0$  kg/m<sup>2</sup>) was highest in this age group at 11.5% (1). Midlife women gain weight at an average of approximately 1.5 pounds per year (2), which increases their risk for transitioning from normal or overweight to obese BMI. Obesity increases the risk for many chronic conditions including hypertension, dyslipidemia, type 2 diabetes, coronary artery disease, stroke, and all-cause mortality, and is causally related to cancer at 13 different anatomical sites including the endometrium, ovary, and breast (3, 4). Other clinical recommendations do not specifically address obesity prevention in this population (5-9) (Table).

## RECOMMENDATION STATEMENT

Given the prevalence and burden of obesity in women, the increased risk for weight gain during midlife, the potential to prevent many chronic health conditions, and supportive evidence of benefit of behavioral interventions to prevent weight gain with minimal harms, the WPSI developed the following recommendation: *The WPSI recommends counseling midlife women aged 40*

*to 60 years with normal or overweight BMI (18.5 to 29.9 kg/m<sup>2</sup>) to maintain weight or limit weight gain to prevent obesity and its associated health conditions. Counseling may include individualized discussion of healthy eating and physical activity (10).*

## WOMEN'S PREVENTIVE SERVICES INITIATIVE

The WPSI is a national coalition of more than 21 health professional organizations and patient representatives that develops, reviews, updates, and disseminates evidence-based clinical recommendations for women's preventive health care services in the United States (11). The WPSI considers conditions that are unique, are more common, or differ in women. The WPSI is supported by the U.S. Department of Health & Human Services Health Resources and Services Administration (HRSA) and is led by the American College of Obstetricians and Gynecologists (ACOG) under a cooperative agreement. Methods and processes of the WPSI and persons involved are detailed on a website and in previous publications (12-14).

The WPSI focuses on gaps in current preventive service recommendations for women aged 13 years and older. These include services that the U.S. Preventive Services Task Force (USPSTF) recommends be selectively

### See also:

Related article  
Summary for Patients

**Table.** Recommendations for Obesity Screening and Prevention Included Under the Preventive Services Mandate of the ACA

Population	Recommendation	Guideline Group	Normal Weight: BMI, 18.5-24.9 kg/m <sup>2</sup>	Overweight: BMI, 25.0-29.9 kg/m <sup>2</sup>	Obese: BMI ≥30.0 kg/m <sup>2</sup>
Adolescents	Screen for obesity, offer or refer those with obesity to comprehensive, intensive behavioral interventions to promote improvements in weight status (8)	USPSTF	X	X	X
Adults, all ages	Offer or refer to intensive, multicomponent behavioral interventions (6)	USPSTF	–	–	X
Pregnant adolescents and adults	Offer effective behavioral counseling interventions to promote healthy weight gain and prevent excess gestational weight gain in pregnancy (9)	USPSTF	X	X	X
Midlife women, aged 40-60 y	Counseling to maintain weight or limit weight gain to prevent obesity (10)	WPSI	X	X	–

– = not applicable; ACA = Affordable Care Act of 2010; BMI = body mass index; USPSTF = U.S. Preventive Services Task Force; WPSI = Women's Preventive Services Initiative.

offered (“C recommendation”) and recommendations with insufficient evidence (“I statement”) or those with narrow scopes; areas with new research; and topics not addressed by the USPSTF, Bright Futures, or previous Institute of Medicine (now National Academy of Medicine) recommendations on preventive services for women (11, 13). Recommendations from the WPSI highlight specific services and screenings that could supplement current preventive services for women based on the prevalence or burden of disease, federal priorities, evidence of effectiveness of the service, or evidence of practices or guidelines that support the service (12, 15). Nongrandfathered plans and issuers are required to cover these recommendations without cost sharing in the plan or policy year that starts 1 year after the recommendation has been adopted or accepted (16). Covered benefits apply to most group health plans and issuers of group and individual health insurance coverage, as well as to persons who qualify for Medicaid on the basis of Medicaid expansion under the Patient Protection and Affordable Care Act. The terms “woman,” “women,” “her,” and “she” in the WPSI are inclusive and apply broadly to persons with biological and other types of associations to the terms (17).

## GUIDELINE DEVELOPMENT AND REVIEW PROCESS

The WPSI methodology is designed to align with the Institute of Medicine's *Clinical Practice Guidelines We Can Trust* (12-14), and is described on the WPSI website (12). Public comment is solicited for topic selection, key questions for systematic reviews, and recommendation statements before submission to the U.S. Department of Health & Human Services. The WPSI develops recommendations based on evidence of benefits and harms of an intervention or service and an assessment of the balance between them (12). Cost is not considered in the assessment of a service. The WPSI recognizes that many of the most important clinical questions about effective use of prevention services are not addressed by research studies. In the absence of direct evidence, the WPSI considers compelling indirect evidence to determine benefits and harms (12), comparable to the USPSTF process (18). The WPSI recommendation statement

articulates a clinical recommendation to inform coverage. Implementation considerations address the clinical and practical applications of the recommendation, may address feasibility, and introduce practical considerations outside the scope of the evidence review.

## SUPPORTING RATIONALE

A systematic review to inform the WPSI recommendation is summarized in a technical report and accompanying article (19, 20). Seven randomized controlled trials of the effectiveness of interventions to maintain or reduce weight in midlife women reported favorable weight changes that were statistically significantly different from control participants in 4 of 5 trials of counseling, but not in 2 trials of exercise. The magnitude of mean differences in weight change in the 4 trials of behavioral counseling ranged from –0.87 kg to –2.5 kg for the intervention versus control groups. Interventions varied in intensity, approach, frequency, and interval. Optimal counseling methods or anticipated duration of effectiveness could not be determined from the trials. Differences in quality-of-life measures were inconclusive in 2 trials, and no additional or long-term health outcomes were evaluated. No adverse psychological effects with counseling interventions were found in 1 trial reporting symptoms of depression and stress, but increased self-reported falls and injuries were higher with an intervention to increase physical activity in another trial. Based on results of the systematic review, the strength of evidence was moderate for the effectiveness of interventions on weight outcomes and low for harms.

Trials of the effectiveness of behavioral interventions in maintaining or reducing weight in midlife women were limited by demonstrating small magnitudes of effect. Most trials were of short duration and specific recommendations could not be made about optimal interventions. For the recommendation, the WPSI also considered the minimal reported harms of the interventions, the well-established importance of healthy eating and regular exercise to overall health, and existing national guidelines that outline standards for physical activity and diet in the United States (21, 22). Given that the associations of obesity with many chronic health conditions are important and well known (3, 4, 23, 24), the WPSI determined that the balance of

benefits and harms was favorable due to the high prevalence of obesity in this age group; the substantial effect of obesity on chronic disease, mortality, function, and quality of life; the potential effectiveness of interventions to reduce weight gain; current national guidelines for diet and physical activity; and the risk for adverse effects of behavioral interventions being low, even when counseling may be ineffective. The WPSI specified individual counseling in its recommendation statement based on its effectiveness in trials to reduce or limit weight and its applicability in primary care settings (20, 25).

## IMPLEMENTATION CONSIDERATIONS

Implementation considerations focus on the type of counseling to deliver to patients and ways to minimize potential harms. Based on the limited time available at wellness visits, the success of brief interventions for other preventive services, and the likely limited harms of brief interventions, the WPSI recommends assessment of diet and exercise habits, with individualized counseling for patients with overweight BMI and for patients with unhealthy diet or exercise habits. Counseling can occur during well-woman visits (26). More intensive interventions can be used, when available, and may include referrals. The WPSI recognizes that there are many contributing factors to obesity, additional considerations, and potential for harm. Factors such as chronic stress, trauma, and socioeconomic conditions should be considered when counseling, and counseling should be sensitive to weight stigma, cultural considerations of body image, individual variability in body composition, accessibility to safe spaces for physical activity, financial resources, childcare, leisure time, and availability of healthy foods.

## DISCUSSION

The WPSI recommends counseling midlife women with normal or overweight BMI to maintain weight or limit weight gain to prevent obesity. This recommendation was based on the balance of benefits and harms as determined by a systematic review of trials of interventions to prevent weight gain in midlife women, the prevalence of obesity in this age group, the known harms of obesity, and the minimal anticipated harms of counseling. Although the optimal approach could not be discerned from existing trials, a range of interventions of varying duration, frequency, and intensity showed benefit with potential clinical significance. The WPSI's recommendation fills a gap in current recommendations by targeting a specific risk group and specifying individual counseling based on its effectiveness and applicability in primary care settings. Normalizing counseling about healthy diet and physical activity by providing it to all midlife women may also mitigate concerns about weight stigma resulting from only counseling women with obesity.

Prevention of obesity in midlife women is a new recommendation and extends the current USPSTF C-level recommendation for adults without obesity or cardiovascular disease risk factors (7) from individualizing the decision to provide or refer a patient to behavioral counseling to a

recommendation to provide counseling to all eligible women. This recommendation does not include pregnant or postpartum women for whom there are existing recommendations (9). The U.S. Department of Health & Human Resources provides general guidance for healthy diet and exercise (21, 22). Additional resources for clinicians and patients include those from the Centers for Disease Control and Prevention on diet (27) and physical activity (28). The Office of Disease Prevention and Health Promotion also offers tools for clinicians (29).

Several limitations were acknowledged in developing this recommendation. Although the systematic review included intervention trials showing reduced weight gain over various counseling interventions, the optimal approach could not be determined, the effectiveness of brief interventions has not been widely evaluated, and the clinical significance of the amount and duration of weight gain prevented in these trials is unclear. Health outcomes, such as effect on mortality or incidence of obesity-related diseases, were not reported by the trials. However, levels of weight loss reported in these trials are similar to trials supporting the USPSTF recommendations (30, 31), and even modest weight loss (3% to 5%) is associated with clinically meaningful health benefits (32). Thus, the WPSI recommendation used an indirect chain of evidence in the absence of studies showing direct evidence of improvements in mortality or health outcomes.

Further research is needed to identify optimal behavioral interventions that are effective, feasible, and sustainable, and can be implemented in primary care settings among diverse populations. Gaps include improving the training of clinicians and educators providing counseling (for example, clinical staff, nurses, physicians, dietitians); evaluating the role of technology; tailoring interventions to specific populations; understanding the interaction of social determinants of health; delineating the appropriate body composition measures for different populations; determining harms; and obtaining direct evidence of long-term health outcomes.

Although existing recommendations address general recommendations for diet and exercise as well as counseling for adults with obesity or cardiovascular risk factors, recommendations for prevention of obesity in midlife women with normal or overweight BMI have been lacking. The WPSI recommendation fills this gap to help prevent obesity and improve health in midlife women.

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