Guideline Summary NGC-9979

Guideline Title

Obesity prevention and management.

Bibliographic Source(s)

University of Michigan Health System. Obesity prevention and management. Ann Arbor (MI): University of Michigan Health System; 2013 Jul. 14 p. [22 references]

Guideline Status

This is the current release of the guideline.

Scope

Disease/Condition(s)

Overweight and obesity

Guideline Category

Counseling

Diagnosis

Management

Prevention

Risk Assessment

Screening

Treatment

Clinical Specialty

Endocrinology

Family Practice

Internal Medicine

Nutrition

Obstetrics and Gynecology

Pediatrics

Physical Medicine and Rehabilitation

Preventive Medicine

Surgery

Intended Users

Advanced Practice Nurses

Dietitians

Nurses

Physical Therapists

Physician Assistants

Physicians

Psychologists/Non-physician Behavioral Health Clinicians

Social Workers

Guideline Objective(s)

To provide recommendations for prevention of obesity in patients and weight management in overweight and obese patients

Target Population

Patients aged 2 years and older seen in primary care

Interventions and Practices Considered

Screening/Diagnosis/Evaluation/Prevention

1. Classification of weight by measurement of body mass index (BMI)
2. Primary prevention: regular assessment of lifestyle factors (e.g., diet, exercise, sleep)
3. Screening through annual assessment of BMI
4. Addressing topic of overweight/obesity compassionately with a focus on the health benefits of adopting a healthy diet and increasing physical activity
5. Diagnostic work-up:
   - History (weight history and family history of obesity and related conditions)
   - Physical exam focusing on blood pressure and heart rate, and signs of related comorbidities
   - Psychosocial assessment
   - Limited lab panel

Treatment/Management

1. Establishing weight-loss goals
2. Lifestyle counseling
3. Increased physical activity
4. Dietary interventions
5. Ensuring adequate sleep
6. Medications
   - Identification of medications that can contribute to weight gain
   - U.S. Food and Drug Administration (FDA) approved medications for obesity
7. Bariatric surgery
8. Managing comorbid conditions
9. Follow-up and monitoring
10. Referrals for comorbidities, dietitian, multidisciplinary weight-loss clinic, bariatric surgery
11. Considerations for weight gain in pregnancy
12. Patient education and resources

Major Outcomes Considered

- Rates of obesity and overweight
- BMI (body mass index)
- Risk for other conditions

Methodology

Methods Used to Collect/Select the Evidence

Hand-searches of Published Literature (Primary Sources)

Hand-searches of Published Literature (Secondary Sources)

Searches of Electronic Databases

Description of Methods Used to Collect/Select the Evidence

The team began the search of literature by accepting the results of a literature search performed for fairly recent systematic reviews. The search addressed obesity in children and adults in literature through 2007.

To update that search a systematic search of literature on Medline was performed. The major search parameters were: topic of obesity, time frame from 1/1/08–2/14/12; type of publication was guidelines, controlled trials (including meta-

topic of obesity; time frame from 1/1/00-2/14/12; type of publication was guidelines, controlled trials (including meta-analyses), and cohort studies; population was human ages 2 and above (children and adults); and language was English.

Within these parameters individual searches were performed for the following topics: differences by gender, race, age, low socioeconomic status (SES), urban/rural; prevention; screening; history (health risk, risk for comorbidities, medications, prior weight loss attempt); body mass index (BMI) measurement; blood pressure; physical exam, signs; laboratory testing; treatment barriers, change readiness; treatment goals; addressing barriers; education; family involvement; motivational interviewing; dietary interventions; physical activity; medications; monitoring/follow-up; special programs; bariatric surgery; other references not included in any of the preceding individual searches.

Number of Source Documents

Not stated

Methods Used to Assess the Quality and Strength of the Evidence

Weighting According to a Rating Scheme (Scheme Given)

Rating Scheme for the Strength of the Evidence

Levels of Evidence

A. Randomized controlled trials
B. Controlled trials, no randomization
C. Observational trials
D. Opinion of expert panel

Methods Used to Analyze the Evidence

Review of Published Meta-Analyses

Systematic Review

Description of the Methods Used to Analyze the Evidence

Not stated

Methods Used to Formulate the Recommendations

Expert Consensus

Description of Methods Used to Formulate the Recommendations

Not stated

Rating Scheme for the Strength of the Recommendations

Strength of Recommendation

I. Generally should be performed
II. May be reasonable to perform
III. Generally should not be performed

Cost Analysis

A formal cost analysis was not performed and published cost analyses were not reviewed.

Method of Guideline Validation

Internal Peer Review

Description of Method of Guideline Validation

Drafts of this guideline were reviewed in clinical conferences and by distribution for comment within departments and divisions of the University of Michigan Medical School to which the content is most relevant: Family Medicine; General Medicine; General Pediatrics; Metabolism, Endocrinology & Diabetes; Pediatric Medical Surgical Joint Practice Committee, and Mott Executive Committee. The Executive Committee for Clinical Affairs of the University of Michigan Hospitals and Health Centers endorsed the final version.

Recommendations

Major Recommendations

Note from the University of Michigan Health System (UMHS) and the National Guideline Clearinghouse (NGC): The following guidance was current as of July 2013. Because UMHS occasionally releases minor revisions to its guidance based on new information, users may wish to consult the original guideline document for the most current version.

Note from NGC: The following key points summarize the content of the guideline. Refer to the full text for additional information on recommendations for obesity prevention and management

information on recommendations for obesity prevention and management.

The strength of recommendation (I-III) and levels of evidence (A-D) are defined at the end of the "Major Recommendations" field.

Key Points

Problem. One-third or more of American adults, adolescents, and children are obese. Obesity rates have tripled in one generation, resulting in increases in associated medical comorbidities and care costs *[C]*.

Weight classification. Body mass index (BMI) (BMI – weight compared to height, see Table 1 in the original guideline document) is the primary measure of overweight and obesity. A rising BMI helps identify patients at risk of developing obesity.

Primary prevention. Regular assessment of lifestyle factors (e.g., diet, exercise, sleep) identifies patients at risk for excess weight gain *[II C]*. Preventive lifestyle changes are important (see Tables 2-4 in the original guideline document). The most effective approach is to modify unhealthy habits of the entire family *[II B]*.

Screening. Annual assessment of BMI should be recorded and discussed with patients *[I D]*. Identify patients crossing weight or BMI percentiles, indicating increased risk for developing obesity *[I B]*.

General approach. Obesity is a sensitive and stigmatized topic. Address it compassionately with a focus on the health benefits of adopting a healthy diet and increasing physical activity *[I C]*.

Diagnostic work-up. See Table 5 in the original guideline document. For those identified as obese:

History: Weight/BMI trajectory over time, prior attempts to lose weight, medications predisposing to weight gain, psychosocial factors, family history of obesity and related conditions *[I D]*.

Physical exam focusing on: Blood pressure and heart rate, and signs of related comorbidities (acanthosis nigricans, hirsutism in women for example) *[II B]*.

Psychosocial assessment: Identify motivated patients and also barriers to weight management *[II C]*.

Limited lab panel may be considered: Lipid panel, glucose (or glycosylated hemoglobin [HgB A1C] in adults), aspartate aminotransferase (AST) and alanine aminotransferase (ALT) *[II B]*.

Treatment

Goal. For children, decrease rate of weight gain or 1-2 lb/week weight loss is reasonable. For adults, 10% weight loss in 6 months is recommended *[I D]* (see Table 6 in the original guideline document).

Lifestyle counseling. Engage patient and family. Provide education about self-management and provide support, identifying lifestyle changes, and collaboratively set goals *[I A]*.

Physical activity. Incorporate regular physical activity with a goal of 60 minutes 5 days per week. Decrease sedentary time *[I A]* (see Table 3 in the original guideline document).

Dietary interventions. Appropriate portion sizes of whole grains, fruits and vegetables, and lean meats/dairy *[I D]*. Decrease intake of high calorie foods and drinks, including alcohol *[I A]* (see Table 4 in the original guideline document).

Sleep. Inadequate sleep is associated with excess weight gain. Recommendations for sleep duration and how to achieve good quality sleep are in Table 7 in the original guideline document *[II C]*.

Medications. Identify and modify medications that may contribute to weight gain *[I A]*. Three U.S. Food and Drug Administration (FDA) approved medications can have modest weight loss effects in certain obese patients *[II A]* (see Table 8 in the original guideline document).

Bariatric surgery. Consider for motivated obese individuals who are unsuccessful in meeting initial weight loss goals in 6 months *[II B]*.

Managing comorbid conditions. Identify and manage associated comorbid conditions, e.g., coronary artery disease (CAD) *[I B]*. Consider the impact of obesity on radiologic studies, procedures, and pharmacologic doses *[I A]*.

Follow-up and monitoring. See Table 9 in the original guideline document. Base follow-up frequency on risk factors and readiness of patient and family to make lifestyle changes. Consider monthly contact by member of care team *[II D]*.

Referrals. For comorbidities, dietitian, multidisciplinary weight-loss clinic, bariatric surgery *[I A]*.

Pregnancy. Excessive weight gain has maternal and fetal risks and predicts long-term weight gain *[C]*.

Patient education and resources. Website resources listed. See Table 10 in the original guideline document *[I D]*.

Clinical performance. Meaningful Use measures BMI, blood pressure, and diet and activity counseling.

Definitions:

Levels of Evidence

A. Randomized controlled trials
B. Controlled trials, no randomization
C. Observational trials
D. Opinion of expert panel

Strength of Recommendation

I. Generally should be performed
II. May be reasonable to perform
III. Generally should not be performed

Clinical Algorithm(s)

None provided

None provided

Evidence Supporting the Recommendations

Type of Evidence Supporting the Recommendations

The type of supporting evidence is identified and graded for each recommendation (see the "Major Recommendations" field).

Benefits/Harms of Implementing the Guideline Recommendations

Potential Benefits

- Appropriate screening for obesity
- Reduction of obesity rates
- Reduction of obesity related morbidity and mortality
- Reduction in comorbidities, such as heart disease and diabetes mellitus

Potential Harms

Side Effects of Medications

- Phentermine (several brands): Monitor blood pressure closely. Constipation, dry mouth, insomnia
- Orlistat (Alli, Xenical): Gastrointestinal (GI)-related side effects (flatulence, greasy stools) are significant and limit compliance. Risk of vitamin deficiencies and rare cases of liver disease.
- Phentermine + Topiramate (Qsymia): Paraesthesia, dizziness, dysgeusia, insomnia, constipation, dry mouth

Bariatric Surgery

While bariatric surgery results in significantly greater weight loss than conventional treatment for obese adults, surgery is associated with a greater risk of complications.

Contraindications

Contraindications

Contraindications to Medications

Phentermine (Several Brands)

- Contraindicated in pregnancy, patients older than 65 years of age, and patients with a history of drug abuse.
- Relative contraindications are heart disease, high blood pressure, arteriosclerosis, hyperthyroidism, diabetes, glaucoma.
- Use cautiously in patients on selective serotonin re-uptake inhibitors (SSRIs), monoamine oxidase (MAO) inhibitors, tricyclic antidepressants, and stimulants.

Orlistat (Alli, Xenical)

- Contraindicated in pregnancy, patients with malabsorption disorders, reduced gallbladder function.
- Use cautiously in patients with obstructed bile duct, impaired liver function, or pancreatic disease.

Phentermine + Topiramate (Qsymia)

- Contraindicated in pregnancy, patients older than 65 years of age, and patients with a history of drug abuse.
- Relative contraindications are heart disease, high blood pressure, arteriosclerosis, hyperthyroidism, diabetes, glaucoma.
- Use cautiously in patients on SSRIs, MAO inhibitors, tricyclic antidepressants, and stimulants.

Contraindications to Bariatric Surgery

- Absolute contraindications to bariatric surgery include pregnancy, lactation, active substance abuse, end-stage cardiovascular disease, severe or uncontrolled psychiatric disorders, and anorexia nervosa.
- Relative contraindications include unstable medical condition, end-stage renal disease, active binge eating disorder, or bulimia nervosa.

Qualifying Statements

Qualifying Statements

These guidelines should not be construed as including all proper methods of care or excluding other acceptable methods of care reasonably directed to obtaining the same results. The ultimate judgment regarding any specific clinical procedure or treatment must be made by the physician in light of the circumstances presented by the patient.

Implementation of the Guideline

Description of Implementation Strategy

An implementation strategy was not provided.

Implementation Tools

Patient Resources

Staff Training/Competency Material

For information about availability, see the *Availability of Companion Documents* and *Patient Resources* fields below.

Institute of Medicine (IOM) National Healthcare Quality Report Categories

IOM Care Need

Getting Better

Staying Healthy

IOM Domain

Patient-centeredness

Identifying Information and Availability

Bibliographic Source(s)

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Adaptation

Not applicable: The guideline was not adapted from another source.

Date Released

2013 Jul

Guideline Developer(s)

University of Michigan Health System - Academic Institution

Source(s) of Funding

University of Michigan Health System

Guideline Committee

Obesity Guideline Team

Composition of Group That Authored the Guideline

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None of the members of the guideline team have a personal financial relationship with a commercial interest whose products or services are addressed in this guideline.

Guideline Status

This is the current release of the guideline.

Guideline Availability

Electronic copies: Available from the University of Michigan Health System Web site.

Availability of Companion Documents

Continuing Medical Education (CME) information is available from the University of Michigan Health System Web site.

Patient Resources

The following is available:

- Healthy weight: tips for parents. Ann Arbor (MI): University of Michigan Health System; 2013. 6 p. Electronic copies: Available in Portable Document Format (PDF) from the University of Michigan Health System Web site.

Please note: This patient information is intended to provide health professionals with information to share with their patients to help them better understand their health and their diagnosed disorders. By providing access to this patient information, it is not the intention of NGC to provide specific medical advice for particular patients. Rather we urge patients and their representatives to review this material and then to consult with a licensed health professional for evaluation of treatment options suitable for them as well as for diagnosis and answers to their personal medical questions. This patient information has been derived and prepared from a guideline for health care professionals included on NGC by the authors or publishers of that original guideline. The patient information is not reviewed by NGC to establish whether or not it accurately reflects the original guideline's content.

NGC Status

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