MATERNAL OBESITY: THE BANE OF OBSTETRICS
A BEACON FOR SEA CHANGE

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OBESITY—DEFINITION

- Pre-Pregnancy Body Mass Index (BMI)
  - Underweight: BMI < 18.5 kg/m²
  - Normal Weight: BMI ≥ 18.5 to 24.9 kg/m²
  - Overweight: BMI ≥ 25 to 29.9 kg/m²
  - Obesity: BMI ≥ 30 kg/m²
  - Obesity class I: BMI 30–34.9 kg/m²
  - Obesity class II: BMI 35–39.9 kg/m²
  - Obesity class III: BMI ≥ 40 kg/m² (“severe”; “extreme”; “massive” obesity)
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</table>

My Height: 5 ft 8 in
My Weight: 420 lbs

BMI Scale:
- Underweight: < 18.5
- Normal: 18.5 - 24.9
- Overweight: 25 - 29.9
- Obese: ≥ 30

BMI: 63.9
Status: Obese

You need to lose weight. Talk to your doctor or dietitian about safe and effective ways to lose weight and keep it off.
Adipose tissue is an active endocrine organ, in excess it can have dysregulatory effects on:

- Metabolic pathways
- Vascular pathways
- Inflammatory pathways

- Abnormalities of these pathways effects placental growth and function (eg. Preeclampsia)
OVERALL RISK OF SEVERE MORBIDITY/MORTALITY

- Antepartum hemorrhage/Transfusion
- VTE (PE/DVT)
- Resp: AFE/Pulmonary Edema
- CNS: hemorrhage (subarachnoid; intracerebral; intracranial)
- Eclampsia
- PPH with transfusion
- Acute Renal Failure
- DIC
- Obstetric Shock

- Normal BMI: 143/10,000
- Overweight: 160/10,000 (AOR 1.1)
- Class 1 Obesity: 168/10,000 (AOR 1.1)
- Class 2 Obesity: 178/10,000 (AOR 1.2)
- Class 3 Obesity: 203/10,000 (AOR 1.4)

EARLY PREGNANCY LOSS

- Retrospective Review: 28,538 women
- of spontaneous euploid conceptions, the likelihood for miscarriage:
  - Normal BMI = 10.7%
  - Overweight = 11.8%
  - Obese = 16.6%
- Obese gravida demonstrated increased rate of recurrent miscarriage (OR 3.51)
- {possible abnormal hormonal or inflammatory mechanism}

GESTATIONAL DIABETES

- The increased risk of GDM is related to exaggerated insulin resistance during pregnancy with obesity
- Risk for GDM in the obese gravida >>> normal BMI gravida
- In a systematic review of studies on prepregnancy BMI and GDM risk, the prevalence of GDM increased by 0.92% for every 1 kg/m² increase in BMI
- Early screening for GDM can detect occult Type II DM
- Obese patients with GDM have a significantly increased risk for macrosomia

PREGNANCY-ASSOCIATED HYPERTENSION

• Maternal Weight and BMI are independent risk factors for preeclampsia
• In one systematic review of 13 cohort studies including 1.4 M women, the risk for preeclampsia doubled with each 5–7 kg/m² increase in prepregnancy BMI
• Cohort studies of women with hx of preeclampsia demonstrate reduced recurrence with subsequent pregnancies following weight loss
• Obesity is estimated to be responsible for 40% of preeclampsia world-wide
• Possible mechanisms: insulin resistance, hyperlipidemia, subclinical inflammation

PRETERM BIRTH

• Obesity increases the risk of medically indicated PTB, primarily due to HTN, preeclampsia and diabetes in a dose–response relationship (RR 1.30, 95% CI 1.23–1.37, 5 studies)
• A Swedish population–based cohort study demonstrated that overweight and obese women were at increased risk of spontaneous extremely preterm delivery (22–27 weeks), but not for 28–36 weeks PTD… the authors postulated that inflammation resulted in this increased risk
• PCOS has been associated with spontaneous PTB & cervical insufficiency

MULTIPLE PREGNANCY

• An increased risk for dizygotic twins has been observed among obese gravidas

• In an analysis of 51,783 pregnancies (561 twins⋯1/92) in the Collaborative Perinatal Project, the incidence of dizygotic twins in women with BMI ≥ 30 kg/m² and <25 kg/m² was 1.1 and 0.5%, respectively;

• This is believed to be the result of superovulation secondary to elevated FSH levels in obese women


OBSTRUCTIVE SLEEP APNEA

Repetitive episodes of upper airway obstruction during sleep results in ↓ airflow, hypoxia, sympathetic discharge and recurrent arousals from sleep.

Predisposing pregnancy changes leading to OSA:

- Narrowing of oropharyngeal diameter
- Reduced nasal patency secondary to hyperemia and edema of nasal mucosa
- Increase in progesterone levels leads to ↑ TV and ↑ minute ventilation

- OSA is associated with increased rates of eclampsia (OR 5.4), cardiomyopathy (OR 9.0), pulmonary embolism (OR 4.5) and in-hospital mortality (OR 5.3)


CARPAL TUNNEL SYNDROME

Carpal tunnel syndrome (CTS) refers to paresthesias, hypesthesia, pain, or numbness of the thumb, index, and middle fingers, as a result of compression of the median nerve in the carpal tunnel.

The increased prevalence in pregnant women is thought to be caused by pregnancy-related fluid retention leading to compression of the nerve in the carpal tunnel; hormonal changes affecting the musculoskeletal system may also play a role.


OBESITY: COMPLICATES DELIVERY

• Fetal monitoring is technically challenging
• IV Access is more difficult to obtain and maintain
• Cervical exams are difficult to perform
• The stirrups of the labor bed have weight limits (250#) – nurses need to hold pts legs
• Increases the likelihood of cesarean section
• Cesarean section is technically challenging
• Increase likelihood for future cesareans and morbidly adherent placentation
CESAREAN SECTION

• Obesity is an independent risk factor for both elective and emergency C/S
• Obesity results in increased risk for labor induction, prolonged labor and failed induction
• In one study, each unit increase in prepregnancy BMI translated to a 7% increased risk in C/S
• TOLAC is less likely to result in vaginal delivery for obese gravida than for normal BMI gravida
• The Cesarean “conundrum”—(shoulder dystocia versus wound infection)


POSTPARTUM INFECTION

• The obese gravida is at higher risk for postpartum infection (wound, episiotomy, endometritis), regardless of mode of delivery…despite prophylactic antibiotics

• Poor vascularity of subcutaneous adipose tissue and formation of seromas and hematomas account for increased risk of wound infection


ANESTHESIA DIFFICULTIES

Obese gravidas have higher rates of:

• multiple attempts at placement of a regional anesthetic catheter than normal-BMI gravidas
• inadvertent dural puncture
• failed anesthesia
• hypotension (‘-caine reaction’)
• technical difficulties establishing an airway


VENOUS THROMBOEMBOLIC EVENT

• Obesity, pregnancy and cesarean delivery are independent risk factors for VTE...which is a major etiology for maternal morbidity/mortality.

One review calculated the following risks for postpartum VTE as compared to normal BMI patients:

• Class I obesity: OR 2.5
• Class II obesity: OR 2.9
• Class III obesity: OR 4.6

CONGENITAL ANOMALIES

- Obese women are at increased risk for fetal congenital anomalies:
  - Neural Tube Defects (ONTD) OR 1.87
  - Cardiovascular anomalies OR 1.30; Septal anomalies OR 1.20
  - Cleft palate OR 1.23; Cleft lip and palate OR 1.20
  - Anorectal atresia OR 1.48
  - Limb reduction anomalies OR 1.34
  - [risk for gastroschisis OR 0.17]

CONGENITAL ANOMALIES

• With increasing BMI there is increasing rates of ONTDs and cardiac anomalies
• Congenital anomalies are more difficult to detect with prenatal ultrasound
• Maternal obesity reduces detection of fetal anomalies by at least 20%, as compared to normal BMI gravidas
• Maternal obesity results in serial ultrasounds to attempt to evaluate fetal anatomy
• Maternal obesity results in increased reimbursement at fetal anatomic survey (76811 code)
• Increased equivocal result from NIPT/cfFDNA
• Maternal obesity results in sonographer/sonologist injury


SONOGRAPHER INJURY (WRMSD)

• Approximately 85% of sonographers experience work-related pain
• 90% have experienced work-related pain for more than half their careers
• 1:5 sonographers sustains a career-ending work-related injury
• 5 years: the average time in the profession before a sonographer experiences pain

SONOGRAPHER INJURY (WRMSD)

- Types of work activities known to cause musculoskeletal injury in sonographers:
  - Repetitive motion
  - Forceful exertions or strain when pushing into a patient’s abdomen
  - Awkward postures or unnatural positions
  - Uncomfortable positioning of limbs, such as flexion, extension or deviation of hand
  - Overuse, generally the result of “downsizing” and increasing number of exams done
  - Frequent reaching above shoulder level

SONOGRAPHERS WITH WRMSD SYMPTOMS

10 YEARS: 72%
3 YEARS: 45%
6 MONTHS: 15%

Figure 4. The impact of WRMSDs range from minor discomfort to career-ending injuries.
STILLBIRTH

Risks for birth asphyxia, stillbirth, neonatal death and infant death are all increased in the setting of maternal obesity.

A 2014 systematic review and meta-analysis of cohort studies demonstrated:

RR per 5 unit increase in maternal BMI:
Stillbirth = 1.24
Neonatal Death = 1.15
Infant Death = 1.18

OBESITY: COMPLICATES FETAL TESTING

• Increased risk of Stillbirth leads to antenatal fetal testing
• Fetal monitoring is technically challenging (increased maternal abdominal pannus)
• Mechanism of Stillbirth may not be related to hypoxia
• This leads to increased rates of labor induction and ultimately cesarean section
FETAL MACROSMOMIA

Prepregnancy BMI has a linear relationship with birth weight...so maternal obesity increases the rate of fetal macrosomia.

Macrosomic fetuses are at increased risk for shoulder dystocia and a predisposition to obesity later in life.

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<thead>
<tr>
<th>Prepregnancy Body Mass Index</th>
<th>Total Weight Gain Range (lbs)</th>
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<tr>
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<td>Normal weight 18.5–24.9</td>
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<td>Overweight 25–29.9</td>
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<td>Obese &gt;30</td>
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DELIVERY OF POSTERIOR ARM

SHOULDER DYSTOCIA
SHOULDER DYSTOCIA

CORKSCREW MANEUVER
HOMO ERECTUS

Arose 1.9 M years ago

Brain volume 50% greater than Australopithecus

Brain volume is 60% that of current-day Homo sapiens

Similar limb and torso proportions to H. sapiens

Required more food and energy to survive

Notable for the ability to store fat for times of famine
OBESITY– FETAL EFFECTS

Maternal obesity results in fetal epigenetic changes due to increased exposure to:

• Insulin
• Lipids
• Inflammatory cytokines

• These exposures are believed to change fetal metabolic programming leading to adverse health outcomes in adults…including obesity
OBESITY–FETAL EFFECTS

Maternal BMI influences infant body size, shape and composition.

High maternal BMI and excessive gestational weight gain are risk factors for childhood obesity.

Childhood obesity is a risk factor for adult obesity.


Loos RJ. Genetic determinants of common obesity and their value in prediction. Best Pract Res Clin Endocrinol Metab 2012; 26:211
OBESITY TRENDS 1999–2014:

ADULTS > 19 YEARS

YOUTH 2–19 YEARS

CDC/NCHS
NOTES: For children and adolescents aged 2–19, obesity is defined as a body mass index (BMI) at or above the sex- and age-specific 95th percentile of the CDC growth charts. For adults, obesity is defined as a BMI at or above 30, Grade 1 obesity is a BMI from 30.0 to 34.9, Grade 2 obesity is a BMI from 35.0 to 39.9, and Grade 3 obesity is a BMI greater than or equal to 40.0. Estimates for adults are age-adjusted.

SOURCE: NCHS, Health, United States, 2016, Figure 11. Data from the National Health and Nutrition Examination Survey (NHANES).
Figure 1. Trends in Overweight, Obesity, and Extreme Obesity Among Adults Aged 20 to 74 years: United States, 1960–1962 Through 2009–2010

Note: Age-adjusted by the direct method to the year 2000 U.S. Bureau of the Census using age groups 20–39, 40–59 and 60–74 years. Pregnant females were excluded. Overweight defined as a BMI of 25 or greater but less than 30; obesity is a BMI greater than or equal to 30; extreme obesity is a BMI greater than or equal to 40.

What was the prevalence of obesity among youth aged 2–19 years in 2011–2014?

The prevalence of obesity among U.S. youth was 17.0% in 2011–2014. Overall, the prevalence of obesity among preschool-aged children (2–5 years) (8.9%) was lower than among school-aged children (6–11 years) (17.5%) and adolescents (12–19 years) (20.5%). The same pattern was seen in both males and females (Figure 3).

Figure 3. Prevalence of obesity among youth aged 2–19 years, by sex and age: United States, 2011–2014

*Significantly different from those aged 2–5 years.

CHOICES research predicts long-term risks of obesity in children

December 21, 2017


The study, which is part of the Childhood Obesity Intervention Cost-Effectiveness Study (CHOICES), developed a simulation model to predict growth trajectories. The model pooled five existing U.S. data sets containing 176,720 observations of repeated height and weight information from 41,567 children and adults.

Results show that the majority (57.3%) of current U.S. children aged 2-19 years will be obese at 35 years of age. Furthermore, among obese children, the likelihood of being obese as an adult increases as obese children age. In children that are obese at 2 years, there is a 74.9% probability that they will still be obese at 35; the probability increases to 88.2% if the child is obese at 19 years. The authors suggest the results of this model support the need for increased efforts to develop and implement effective interventions for children who are already obese.
AWARENESS, CARE, AND TREATMENT IN OBESITY MANAGEMENT

Objective: ACTION (Awareness, Care, and Treatment in Obesity maNagement) examined obesity-related perceptions, attitudes, and behaviors among people with obesity (PwO), health care providers (HCPs), and employer representatives (ERs).

Methods: A total of 3,008 adult PwO (BMI ≥ 30 by self-reported height and weight), 606 HCPs, and 153 ERs completed surveys in a cross-sectional design.

ACTION STUDY

ACTION Study identifies five key barriers to obesity care

The ACTION Study explored attitudes, perceptions, and behaviors among all three groups that are preventing effective and comprehensive obesity care.

1. Challenges to maintaining weight loss
People with obesity engage in several serious weight loss attempts, but only a few are able to maintain the achieved weight loss.

2. Reluctance to seek help
Despite recognition of obesity as a disease, most people with obesity consider weight loss to be completely their own responsibility, which may prevent them from seeking help from their health care professional.

3. Inadequate diagnosis
Many people with obesity have not received a formal diagnosis of obesity.

4. Insufficient dialogue and follow-up
The patient-provider dialogue about weight management is insufficient with few follow-up visits.

5. Misaligned perceptions of wellness offerings
Employer wellness programs are not meeting the needs of people with obesity.
Barrier 1: Challenges to maintaining weight loss

People with obesity (PwO) engage in several serious weight loss attempts, but only a few are able to maintain the achieved weight loss. People with obesity reported many serious weight loss attempts, but those who achieved weight loss had difficulty maintaining it.

- Only 10% of people with obesity were able to maintain the weight loss for more than a year.
- Average number of serious weight loss attempts among people with obesity in their adult lifetime: 7
- 23% reported a 10% weight loss during the past 3 years. Of which 44% were able to maintain the weight loss for more than one year (10% of total PwO sample).
Weight Loss Goals

People with obesity (84%) and health care professionals (88%) agree that a 10% weight loss would be beneficial to overall health, a statistic that aligns with scientific literature that states a 5% to 10% weight loss can help improve and reduce the risk of some obesity-related diseases.\textsuperscript{1-8}

However, the average weight loss goal set between people with obesity and their health care professional is reported as 20% weight loss.\textsuperscript{1}
Barrier 2: Reluctance to seek help

Most people with obesity (PwO) view weight loss as solely their responsibility, which may prevent them from seeking help\(^1\)

Most people with obesity and health care professionals believe obesity is a disease, and many view it as serious, or more serious, than many other health conditions, including high blood pressure, diabetes, and depression.

% that believe obesity “is a disease”

- People with obesity: 65%
- Health care professionals: 80%

Despite viewing obesity as a disease, most people with obesity don’t approach it as they would other chronic diseases.
Views on personal responsibility for weight loss

Even though people with obesity consider obesity a disease, most view weight loss to be completely their own responsibility. However, most health care professionals reported that they have a responsibility to actively contribute to their patients’ weight loss.
Differing perspectives: Top reasons why people with obesity don’t seek weight loss help from their health care professional

According to people with obesity:
- Reason #1: Managing my weight is my own responsibility
- Reason #2: Know what is needed to manage my weight

According to health care professionals:
- Reason #1: People with obesity are embarrassed to bring it up
- Reason #2: People with obesity do not feel motivated to lose weight
The impact of weight on future health

People with obesity and health care professionals have different levels of concern when it comes to how a person’s weight affects future health.

- **People with obesity:** 54% worry their weight may affect future health.
- **Health care professionals:** 93% worry their patient’s weight may affect future health.
Barrier 3: Inadequate diagnosis

Many people with obesity (PwO) have not received a formal diagnosis of obesity\(^1\).

Although all ACTION Study participants actually had obesity based on self-reported height and weight, only slightly more than half report having received a formal diagnosis of the disease. When it comes to self-perception, half consider themselves as being overweight while the other half consider themselves as having obesity.

\[\text{People with obesity}\]

- 55% report being diagnosed with obesity
- 2% perceive themselves as having “normal weight”
- 48% perceive themselves as being “overweight”
- 50% perceive themselves as having “obesity” or “extreme obesity”

\(^{*}\text{Among those 71% who have had a weight loss conversation with their HCP in the past 5 years}\)
Conversations about weight are insufficient\(^1\)

- **100%** of the total people with obesity (PwO)
- **71%** spoke with an HCP about their weight in the last five years\(^*\)
- **55%** reported being diagnosed with obesity\(^**\)
- **24%** report that a weight-related follow-up appointment was scheduled\(^**\)

\(^*\) Either “discussed being overweight” (68%) or “discussed losing weight” (64%) with their HCP

\(^**\) Among those 71% who have had a weight loss conversation with their HCP in the past 5 years
Health care professionals inconsistently record diagnosis of obesity\(^1\)

The majority of health care professionals reported that they record “overweight” or “obesity” in the medical record.
Barrier 4: Insufficient dialogue and follow-up

The patient-provider dialogue about weight management is insufficient with few follow-up visits\(^1\)

The majority of people with obesity (PwO) say they have spoken with a health care professional about their weight within the past five years, but only slightly more than a third say they have discussed a weight loss plan with their health care professional within the past six months.
Health care professionals are comfortable discussing weight\(^1\)

Most health care professionals (67\%) say they are very or extremely comfortable discussing weight management with their patients, but they cite hurdles to initiating these conversations.

Hurdles to discussing weight with their patients

- lack of appointment time: 52\%
- more important issues/concerns: 45\%
Limited follow-up appointments\textsuperscript{1}

Among people with obesity who discussed their weight with a health care professional, only 24\% reported that a weight related follow-up appointment was scheduled. More than 95\% of people with obesity have kept or intended to keep the follow-up appointment.

say a follow-up appointment was scheduled\textsuperscript{*}

\textsuperscript{*Out of people with obesity who had a conversation with their health care professional within the past 5 years
Barrier 5: Misaligned perceptions of wellness offerings

Employer wellness programs are not meeting the needs of people with obesity (PwO)

Like people with obesity and health care professionals, the majority of employers (64%) agree that obesity is a disease; however, few employers agree they have at least partial responsibility for employees’ weight loss.

At the same time, employers are motivated to offer wellness programs and more than three quarters (77%) of employers reported providing health and wellness information to employees. Some of these programs include weight management components.
Value in wellness programs perceived differently by employers and people with obesity

The wellness programs offered by employers are not perceived by the majority of people with obesity as helpful.
Insurance coverage for medical treatment of obesity is a source of concern for employers\(^1\)

A small number of people with obesity (13\%) reported that their employer offers insurance coverage for the medical treatment of obesity. Employers cited multiple reasons for their concern around coverage.

- 52\% are concerned about the cost of premiums and/or medical claims when it comes to offering insurance coverage for weight management.
- 27\% highlighted lack of data to demonstrate effectiveness of weight management treatments or programs.
- 27\% highlighted lack of data on costs of providing coverage versus return on investment.
# Key Practice Recommendations

## Recommendations

- Screen all adults for obesity. Offer or refer patients with a body mass index (BMI) of 30 kg/m² or greater to intensive, multicomponent behavioral interventions.¹

- Screen children 6 years and older for obesity, and offer or refer them to comprehensive, intensive behavioral interventions to promote improvement in weight status.²

- A 5% to 10% weight loss can reduce risk of heart disease and diabetes and should be encouraged for all patients who are overweight and obese.³,⁴

- Consider pharmacotherapy in adults who have not been able to lose weight through diet and physical activity alone and who have:
  - BMI of 30 kg/m² or greater
  - BMI of 27 kg/m² or greater, and obesity-related comorbidity³,⁴

- Consider bariatric surgery in adults who have not been able to lose weight through diet and physical activity alone and who have:
  - BMI of 40 kg/m² or greater
  - BMI of 35 kg/m² or greater, and obesity-related comorbidity³

- Regardless of body weight or weight loss, all patients should be encouraged to be physically active for improved health and weight maintenance.³

## Comments

- This recommendation applies to all adults, not just those with known cardiovascular risk factors.

- Regular physical activity is strongly related to maintaining normal weight. Exercise also mitigates health-damaging effects of obesity, even without weight loss.

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⁴ Institute for Clinical Systems Improvement. Obesity, prevention and management of (Mature Adolescents and Adults). www.icsi.org/guidelines_more/catalog_guidelines_and_more/catalog_guidelines/catalog_endocrine_guidelines/obesity/
Comorbid Conditions in Obesity and Evidence for Amelioration With Weight Reduction

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<td>Sleep apnea</td>
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Abbreviation: NAFLD, nonalcoholic fatty liver disease.

Pharmacological Management of Obesity: An Endocrine Society Clinical Practice Guideline

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-500 CALORIES / DAY = -1 POUND / WEEK

DECREASE CALORIES CONSUMED.
PAY ATTENTION TO PORTION SIZES.

Fruits / non-starchy vegetables
50%

Lean protein
30%
(the size of a deck of cards)

Whole grains or starchy veggies
20%

Source: choosemyplate.gov

INCREASE CALORIES BURNED.
BE MORE PHYSICALLY ACTIVE.

150 MINUTES
moderate-intensity activity / week

or

75 MINUTES
vigorous-intensity activity / week

or

a combination of the two throughout the week

LESS JUNK ... MORE FRUITS AND VEGGIES

- Added sugars
- Cake, cookies, white bread
- Fried foods

- Fruits
- Vegetables
(at least 2½ cups daily)

LIMIT SEDENTARY BEHAVIOR.

- On-screen entertainment
- Sitting around
- Lying down

- Playing sports
- Walking or running
- Other physical activities

*** Calculating BMI may not be the most useful method for all body types; consult your physician.\n
### Table I-1: Examples of Moderate* Amounts of Activity [9]

<table>
<thead>
<tr>
<th>Activity</th>
<th>Less Vigorous, More Time**</th>
</tr>
</thead>
<tbody>
<tr>
<td>Washing and waxing a car for 45-60 minutes</td>
<td></td>
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<tr>
<td>Washing windows or floors for 45-60 minutes</td>
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<tr>
<td>Playing volleyball for 45 minutes</td>
<td></td>
</tr>
<tr>
<td>Playing touch football for 30-45 minutes</td>
<td></td>
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<tr>
<td>Gardening for 30-45 minutes</td>
<td></td>
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<tr>
<td>Wheeling self in wheel-chair for 30-40 minutes</td>
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<tr>
<td>Walking 1% miles in 35 minutes (20 min/mile)</td>
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<tr>
<td>Basketball (shooting baskets) for 30 minutes</td>
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<tr>
<td>Bicycling 5 miles in 30 minutes</td>
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<tr>
<td>Dancing fast (social) for 30 minutes</td>
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<tr>
<td>Pushing a stroller 1½ miles in 30 minutes</td>
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<tr>
<td>Raking leaves for 30 minutes</td>
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<tr>
<td>Walking 2 miles in 30 minutes (15 min/mile)</td>
<td></td>
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<tr>
<td>Water aerobics for 30 minutes</td>
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<tr>
<td>Swimming laps for 20 minutes</td>
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<tr>
<td>Wheelchair basketball for 20 minutes</td>
<td></td>
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<tr>
<td>Basketball (playing a game) for 15-20 minutes</td>
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<tr>
<td>Bicycling 4 miles in 15 minutes</td>
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<tr>
<td>Jumping rope for 15 minutes</td>
<td></td>
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<tr>
<td>Running 1½ miles in 15 minutes (10 min/mile)</td>
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</tr>
<tr>
<td>Shoveling snow for 15 minutes</td>
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<tr>
<td>Stair walking for 15 minutes</td>
<td></td>
</tr>
</tbody>
</table>

*A moderate amount of physical activity is roughly equivalent to physical activity that uses approximately 150 calories of dietary energy per day or 1,000 calories per week.

**Some activities can be performed at various intensities; the suggested durations correspond to expected intensity of effort.
...if nothing else, you have to make the diagnosis

“"You are overweight/obese”

“"your BMI is 32 kg/m²”