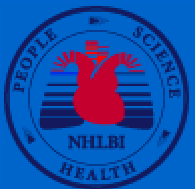


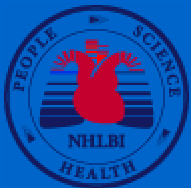
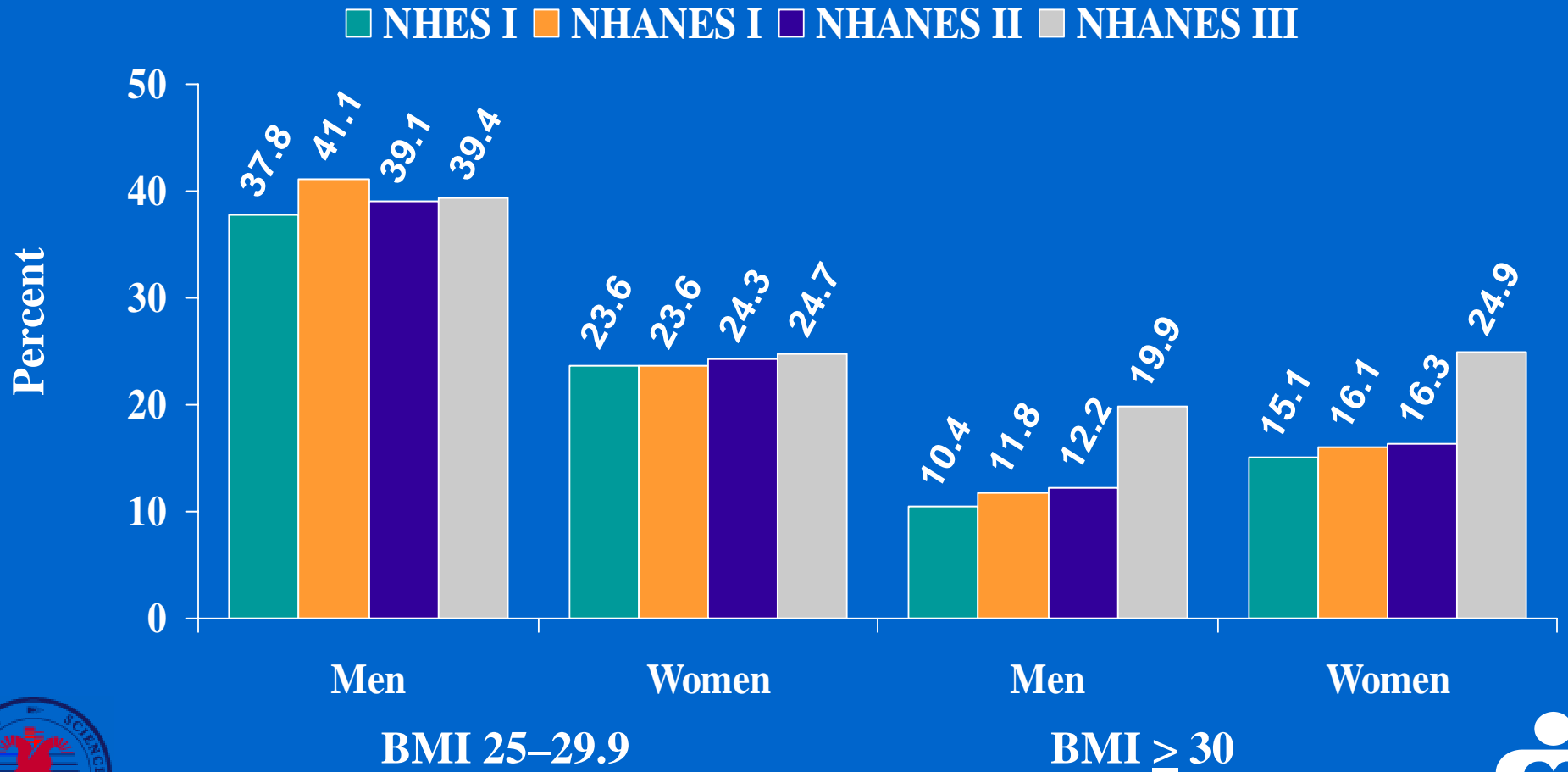
Definitions

Body Mass Index (BMI) describes relative weight for height: $\text{weight (kg)}/\text{height (m}^2\text{)}$

- **Overweight = 25–29.9 BMI**
- **Obesity = ≥ 30 BMI**



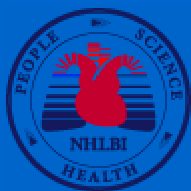
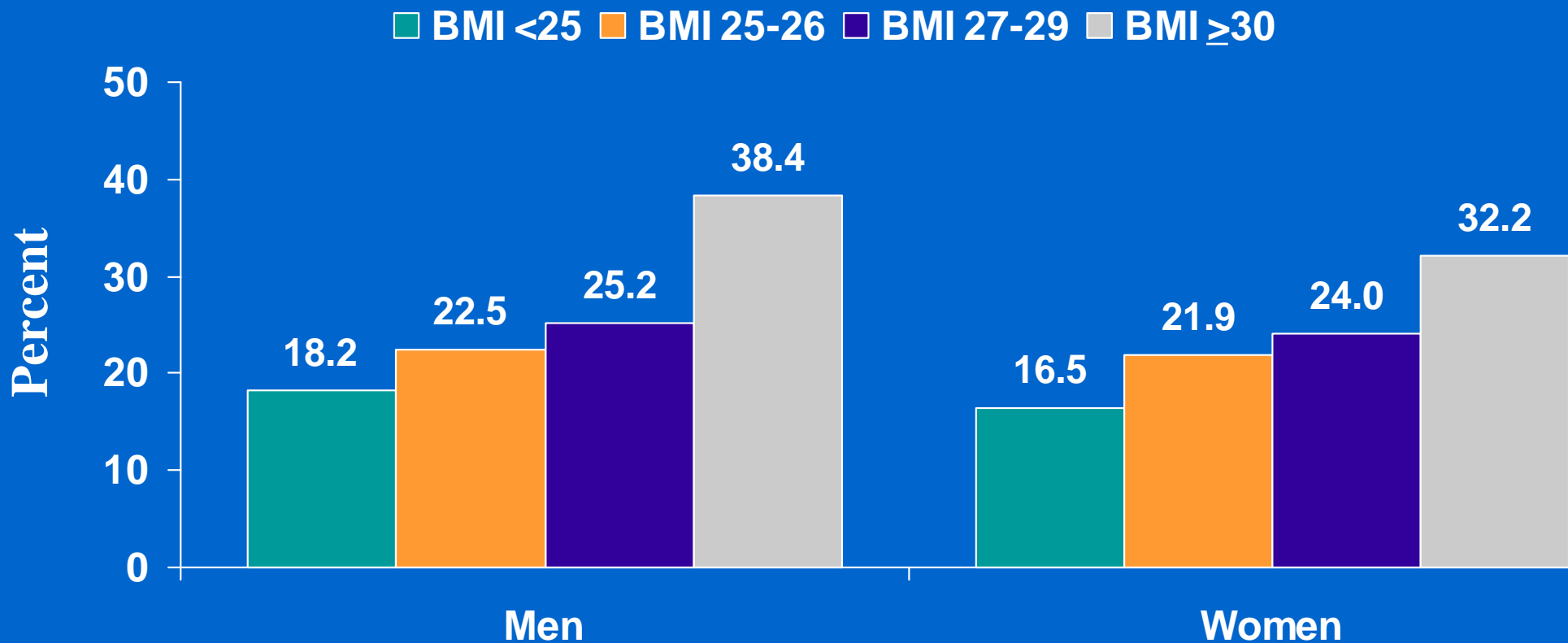
Age-Adjusted Standardized Prevalence of Overweight (BMI 25–29.9) and Obesity (BMI ≥30)



CDC/NCHS, United States, 1960-94, ages 20-74 years



NHANES III Age-Adjusted Prevalence of Hypertension* According to BMI

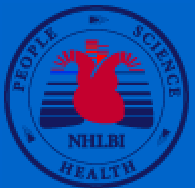
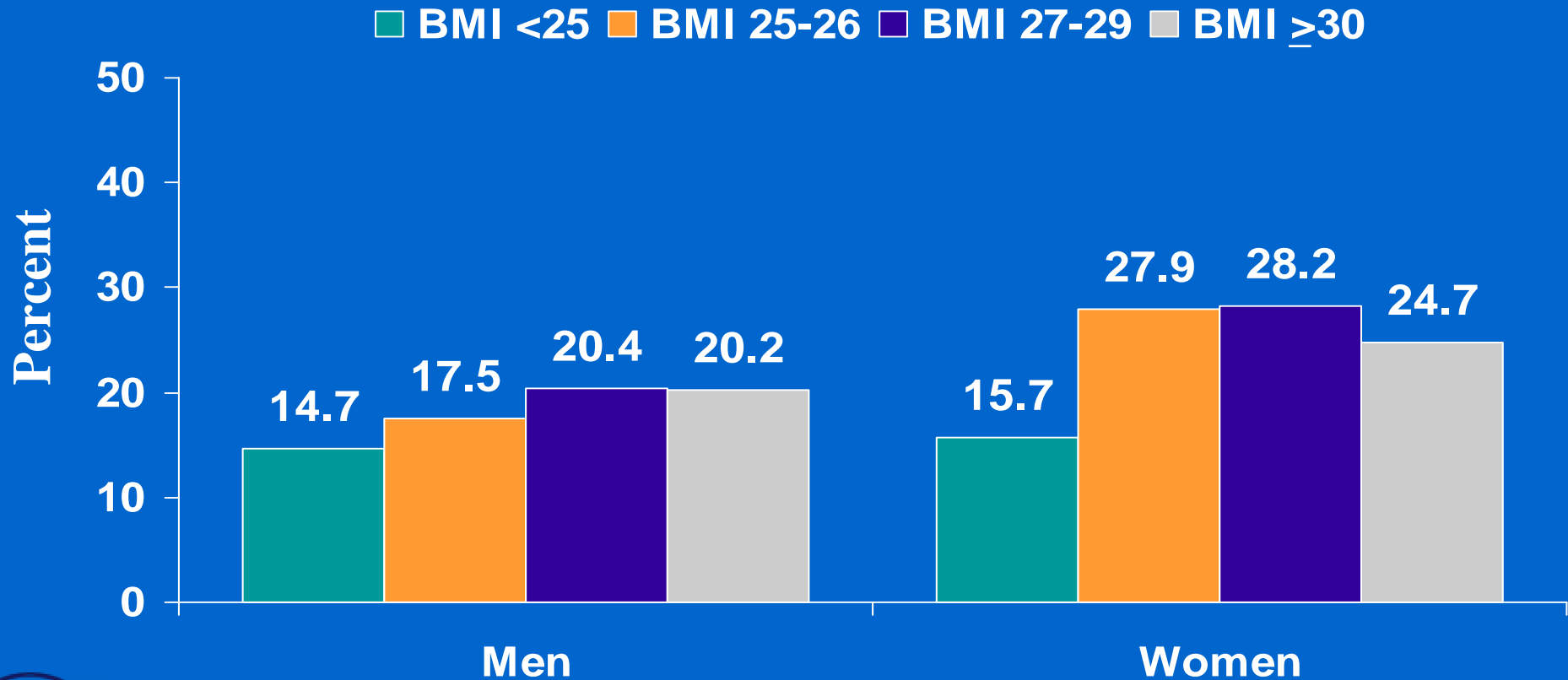


*Defined as mean systolic blood pressure ≥ 140 mm Hg, as mean diastolic ≥ 90 mm Hg, or currently taking antihypertensive medication.

Brown C et al. Body Mass Index and the prevalence of Risk Factors for Cardiovascular Disease (in preparation).



NHANES III Age-Adjusted Prevalence of High Blood Cholesterol* According to BMI

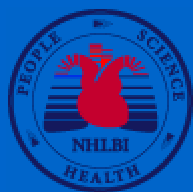
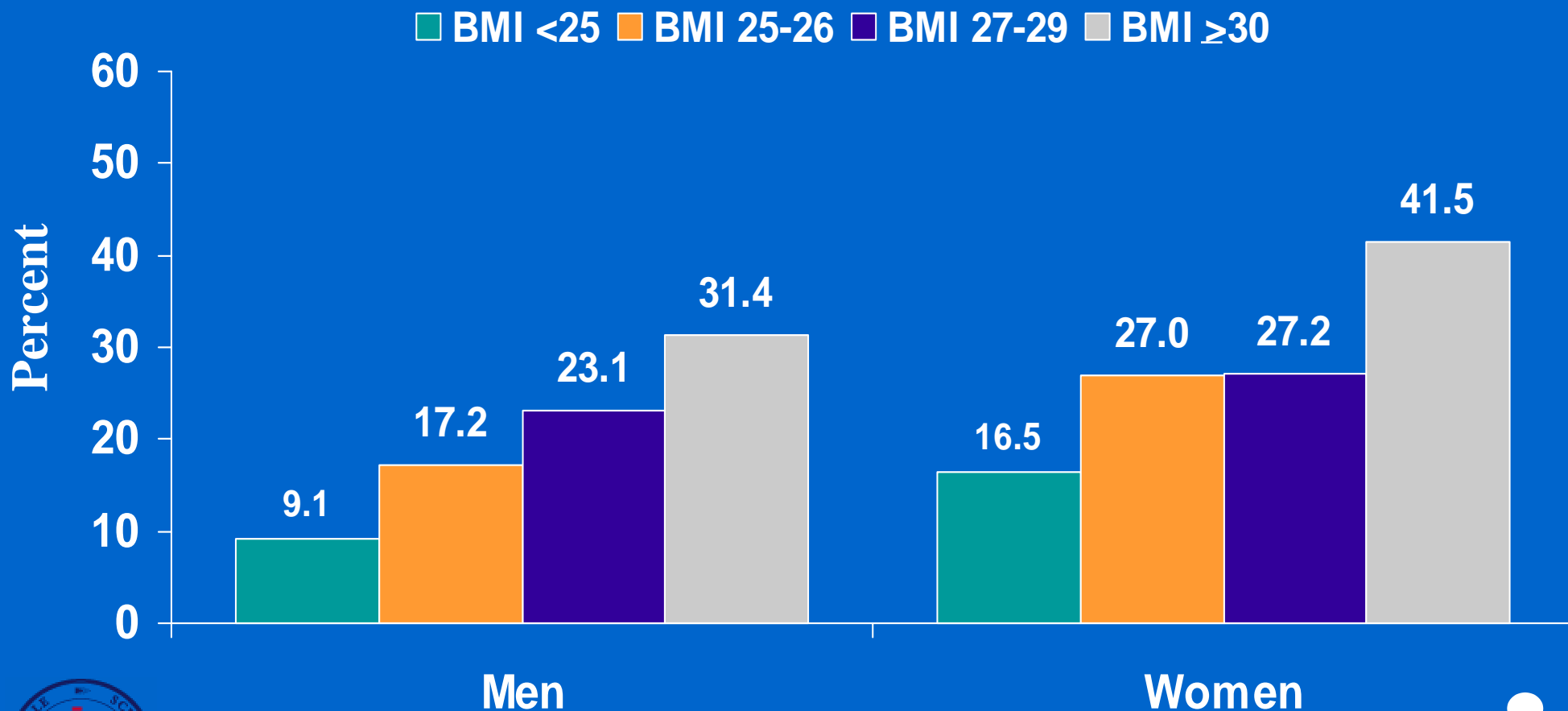


*Defined as ≥ 240 mg/dL.

Brown C et al. Body Mass Index and the Prevalence of Risk Factors for Cardiovascular Disease (in preparation).



NHANES III Age-Adjusted Prevalence of Low HDL-Cholesterol* According to BMI



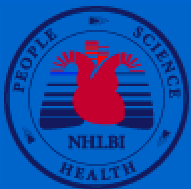
*Defined as <35 mg/dL in men and <45 mg/dL in women.

Brown C et al. Body Mass Index and the Prevalence of Risk Factors for Cardiovascular Disease (in preparation).



Health Benefits of Weight Loss

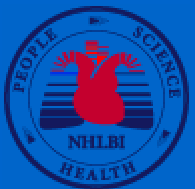
- Decreased cardiovascular risk
- Decreased glucose and insulin levels
- Decreased blood pressure
- Decreased LDL and triglycerides, increased HDL
- Decrease in severity of sleep apnea
- Reduced symptoms of degenerative joint disease
- Improved gynecological conditions



Care of Overweight/Obese Patients

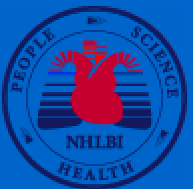
Requires two steps:

- **Assessment**
- **Management**



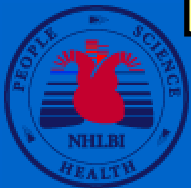
Assessment of Overweight and Obesity

- Body Mass Index
 - Weight (kg)/height (m²)
 - Weight (lb)/height (in²) x 703
 - Table
- Waist Circumference
 - High risk:
 - Men >102 cm (40 in.)
 - Women >88 cm (35 in.)



Classification of Overweight and Obesity by BMI

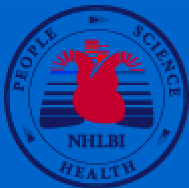
	Obesity Class	BMI kg/m²
Underweight		<18.5
Normal		18.5–24.9
Overweight		25–29.9
Obesity	I	30.0–34.9
	II	35.0–39.9
Extreme Obesity	III	≥ 40.0



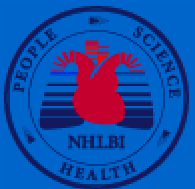
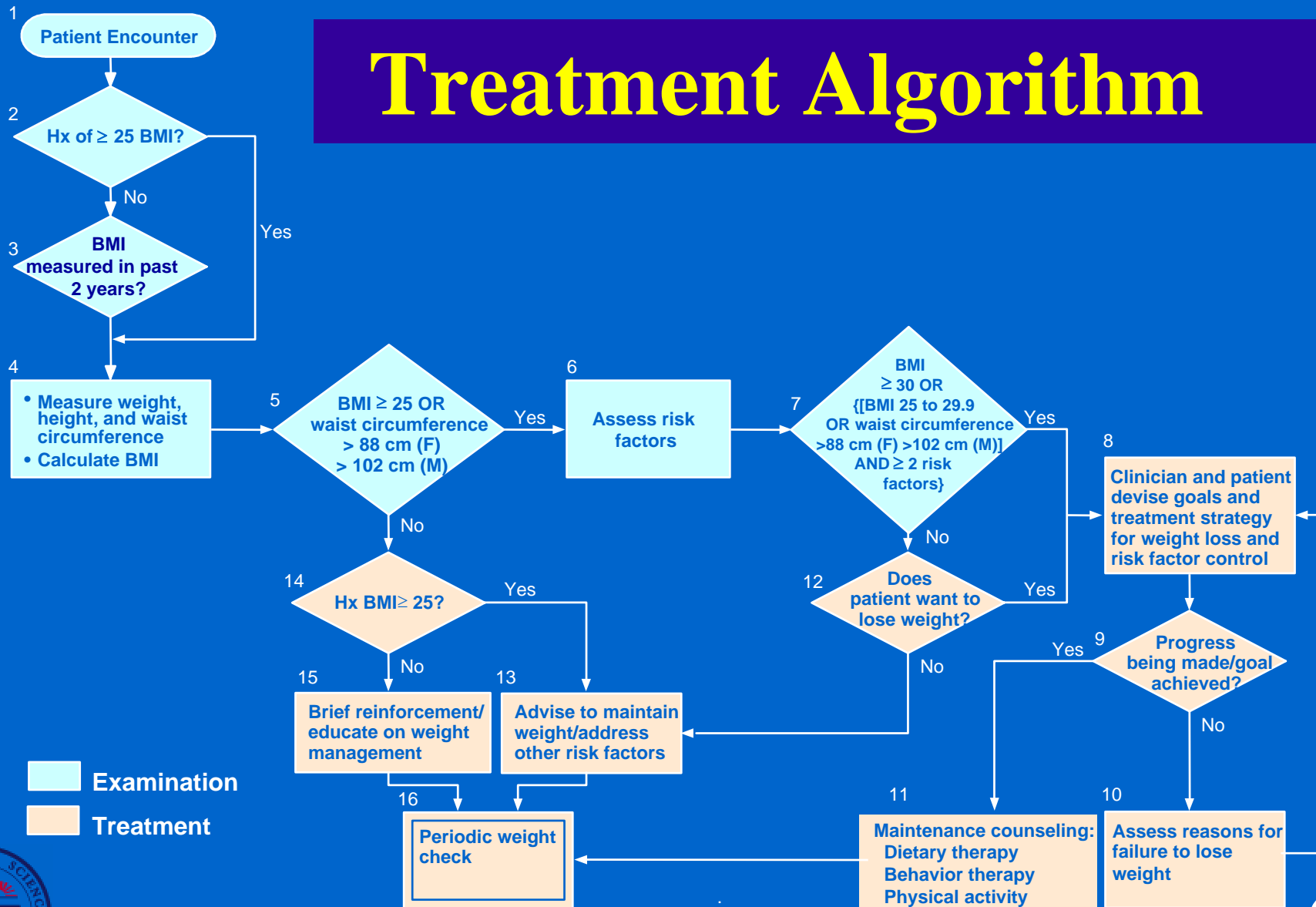
Determine Absolute Risk Status

Evaluate:

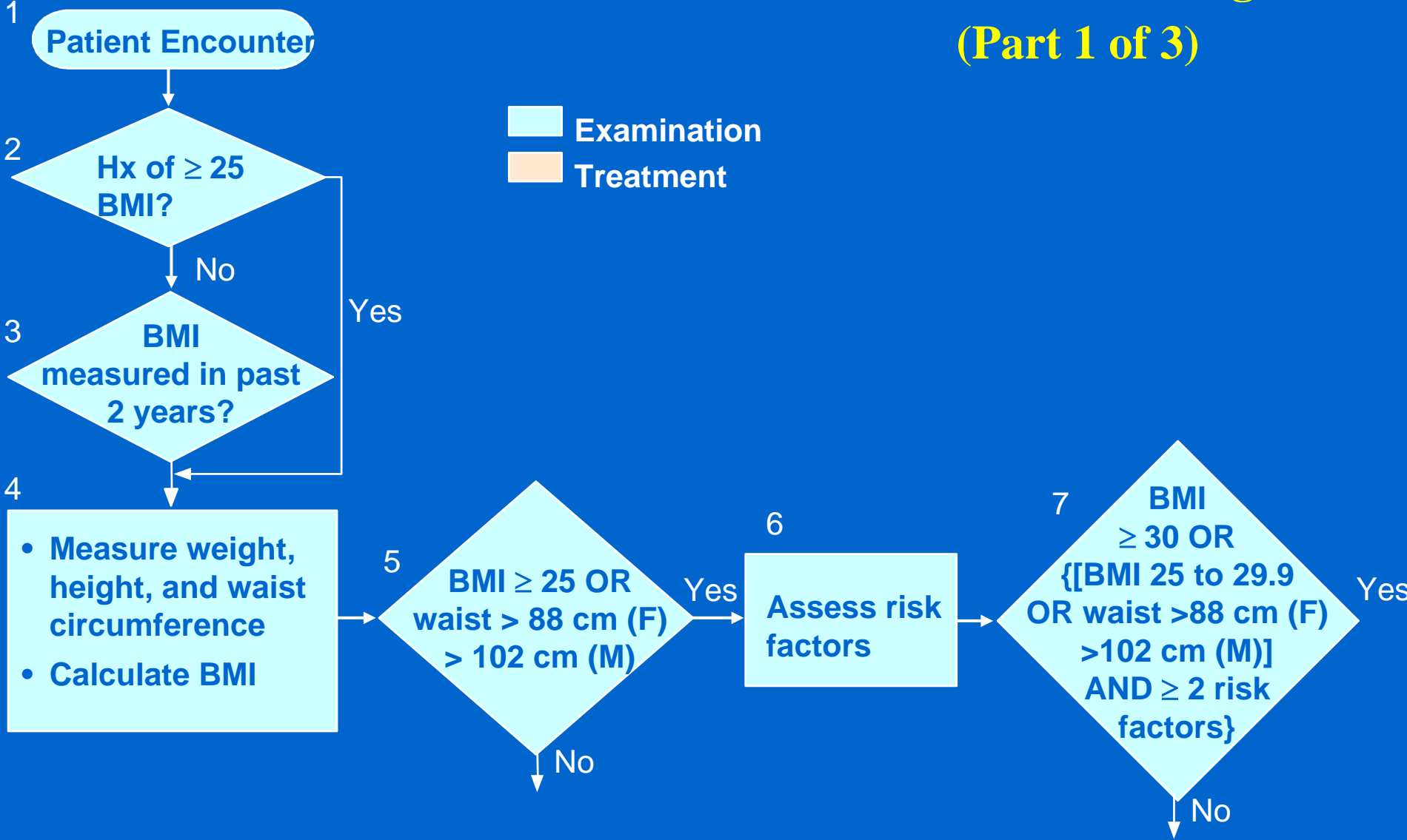
- **Disease conditions** (e.g., CHD, type 2 diabetes, sleep apnea) (+ = very high risk)
- **Other obesity-associated diseases** (e.g., gynecological abnormalities, osteoarthritis)
- **Cardiovascular risk factors:** smoking, hypertension, high LDL, low HDL, IGT, family hx (≥ 3 = high risk)
- **Other risk factors:**
 - Physical inactivity
 - High serum triglycerides (>200 mg/dL)



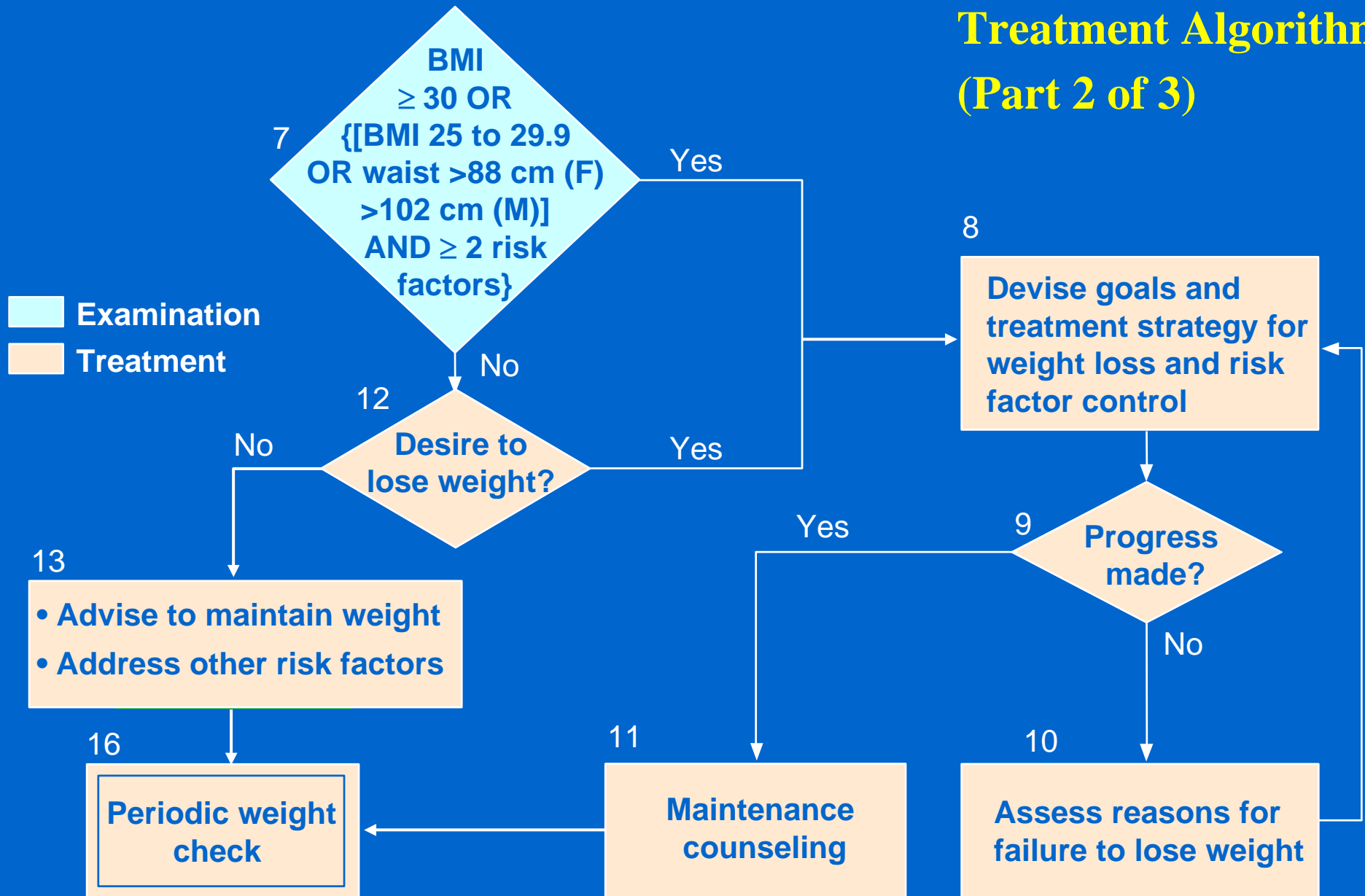
Treatment Algorithm



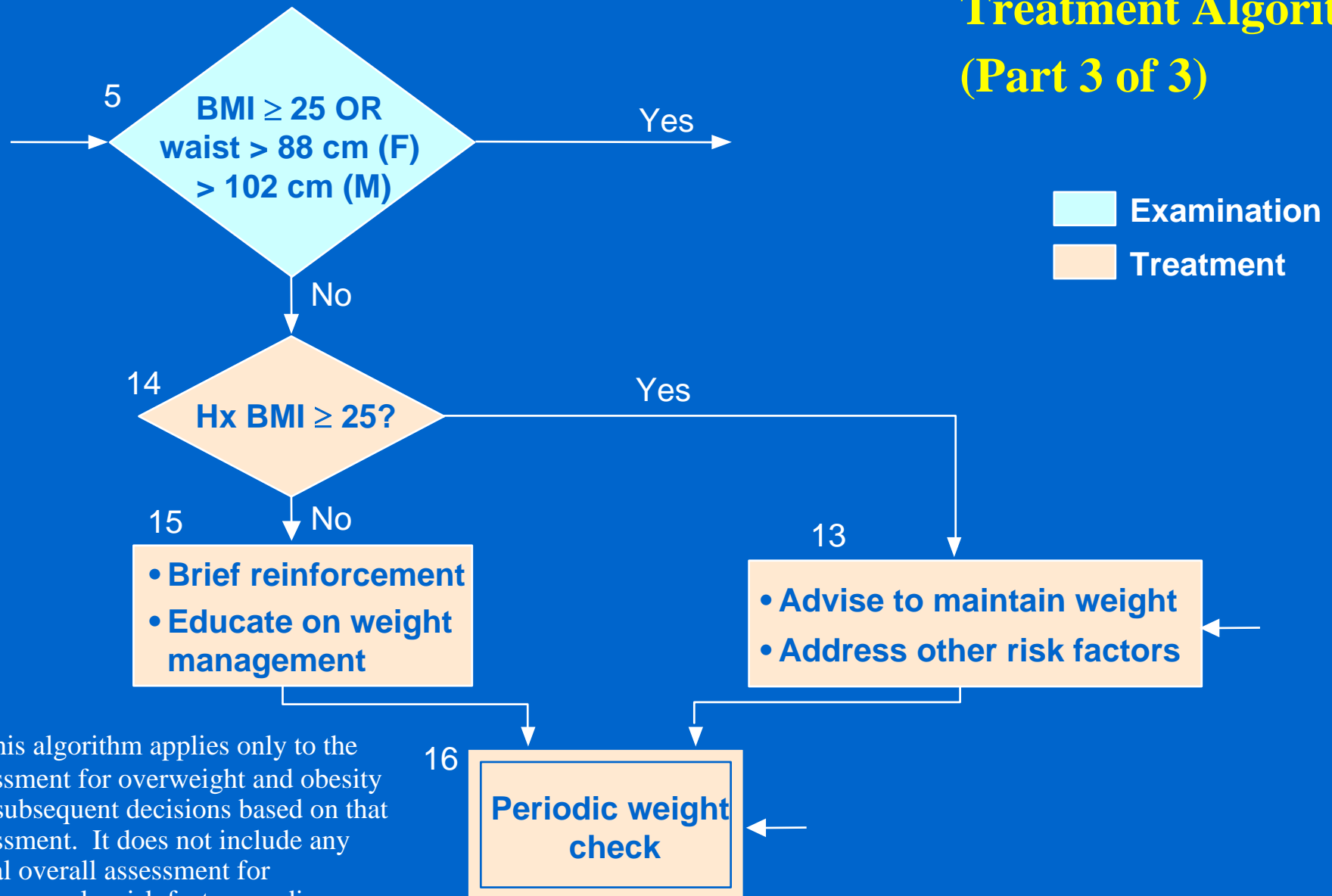
Treatment Algorithm (Part 1 of 3)



Treatment Algorithm (Part 2 of 3)



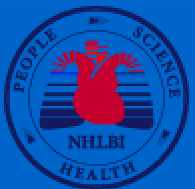
Treatment Algorithm (Part 3 of 3)



* This algorithm applies only to the assessment for overweight and obesity and subsequent decisions based on that assessment. It does not include any initial overall assessment for cardiovascular risk factors or diseases that are indicated.

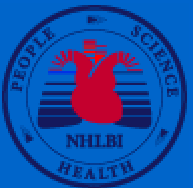
Goals of Weight Management/Treatment

- Prevent further weight gain (minimum goal).
- Reduce body weight.
- Maintain a lower body weight over long term.



Target Weight: Realistic Goals

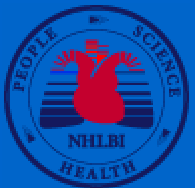
- Substitute “healthier weight” for ideal or landmark weight.
- Accept slow, incremental progress to goal.
 - Short-term goal: 5 to 10 percent loss, 1 to 2 lb per week.
 - Interim goal: Maintenance.
 - Long-term goal: Additional weight loss, if desired, and long-term weight maintenance.



Weight Loss Goals

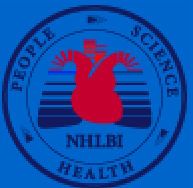
Goal: Decrease body weight by 10 percent from baseline.

- If goal is achieved, further weight loss can be attempted if indicated.
- Reasonable timeline: 6 months of therapy.
 - Moderate caloric deficits
 - Weight loss 1 to 2 lb/week



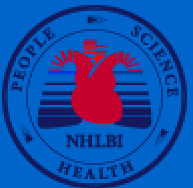
Weight Loss Goals

- Start weight maintenance efforts after 6 months.
 - May need to be continued indefinitely.
- If unable to lose weight, prevent further weight gain.



Strategies for Weight Loss and Maintenance

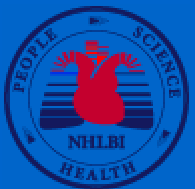
- Dietary therapy
- Physical activity
- Behavior therapy
- “Combined” therapy
- Pharmacotherapy
- Weight loss surgery



Weight Loss Therapy

Whenever possible, weight loss therapy should employ the combination of

- Low-calorie/low-fat diets
- Increased physical activity
- Behavior modification

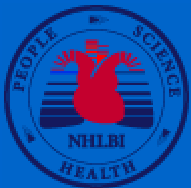


Dietary Therapy (1 of 5)

Low-calorie diets (LCD) are recommended for weight loss in overweight and obese persons.

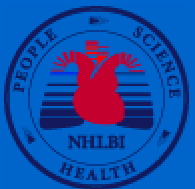
Evidence Category A.

Reducing fat as part of an LCD is a practical way to reduce calories. *Evidence Category A.*



Dietary Therapy (2 of 5)

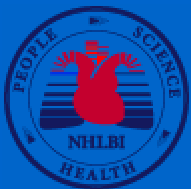
Low-calorie diets can reduce total body weight by an average of 8 percent and help reduce abdominal fat content over a period of 6 months. *Evidence Category A.*



Dietary Therapy (3 of 5)

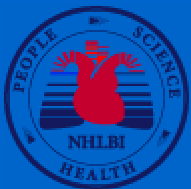
Although lower fat diets without targeted calorie reduction help promote weight loss by producing a reduced calorie intake, lower fat diets coupled with total calorie reduction produce greater weight loss than lower fat diets alone.

Evidence Category A.



Dietary Therapy (4 of 5)

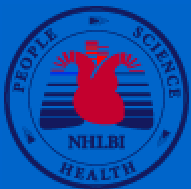
Very low-calorie diets produce greater initial weight loss than low-calorie diets. However, long-term (>1 year) weight loss is not different from an LCD. *Evidence Category A.*



Dietary Therapy (5 of 5)

Very Low-Calorie Diets (less than 800 kcal/day):

- Rapid weight loss
- Deficits are too great
- Nutritional inadequacies
- Greater weight regain
- No change in behavior
- Greater risk of gallstones



Low-Calorie Step I Diet

Nutrient

Recommended Intake

Calories

500 to 1,000 kcal/day reduction

Total Fat

30 percent or less of total calories

SFA

8 to 10 percent of total calories

MUFA

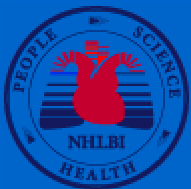
Up to 15 percent of total calories

PUFA

Up to 10 percent of total calories

Cholesterol

<300 mg/day



Low-Calorie Step I Diet (continued)

<u>Nutrient</u>	<u>Recommended Intake</u>
Protein	~ 15 percent of total calories
Carbohydrate	55 percent or more of total calories
Sodium Chloride	No more than 100 mmol/day (~ 2.4 g of sodium or ~ 6 g of sodium chloride)
Calcium	1,000 to 1,500 mg
Fiber	20 to 30 g

