Hypertension and Obesity at the Health Fairs
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What is Screening? (vs. Diagnosis)

*Identification* of an unrecognized disease or risk factor in a seemingly *healthy, asymptomatic population*

- Early intervention
- Decrease morbidity and mortality
Criteria for a Screening

Disease with
- High prevalence
- High impact on morbidity and mortality
- Effective early treatment

Test is
- Simple, safe, acceptable to patients
- Cost-effective
- Highly sensitive → diseased will test positive
- Highly specific → healthy will test negative
Vitals Station
Hypertension

<table>
<thead>
<tr>
<th>Classification</th>
<th>SBP (mm Hg)</th>
<th>DBP (mm Hg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal</td>
<td>&lt;120</td>
<td>AND</td>
</tr>
<tr>
<td>Pre-HTN</td>
<td>120-139</td>
<td>AND</td>
</tr>
<tr>
<td>Stage 1</td>
<td>140-159</td>
<td>OR</td>
</tr>
<tr>
<td>Stage 2</td>
<td>&gt;160</td>
<td>OR</td>
</tr>
</tbody>
</table>

- Highly prevalent
- Most people are asymptomatic
- Complications: CV, Ophtho, Neuro, Renal
- Early interventions work!
  - **Lifestyle modifications**
    - DASH diet/reduced salt intake, exercise/weight loss, reduced EtOH
  - **Pharmacologic**
    - Thiazides, βblockers, Ca-channel blockers, ACEi/ARB
Hypertension Screening

Screen for HTN with BP Measurement

- Safe, cheap
- Highly sensitive
- Specific, albeit less – random fluctuations

OVERALL: USPSTF Grade A for adults
Screening at the health fair

- Sitting in the chair, supported back, feet on the floor, arm supported at heart level
- Appropriate sized blood pressure cuff
- Take blood pressure in both arms

- SBP is the point at which the first of two or more sounds is heard
- DBP is the point before the disappearance of the sounds
# HTN at the Health Fair

**REMEMBER: Screening vs. Diagnosis**

<table>
<thead>
<tr>
<th>Classification</th>
<th>DOCS Rec</th>
<th>General Rx</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal</td>
<td>No referral</td>
<td>None</td>
</tr>
<tr>
<td>Pre-HTN</td>
<td>Counsel and referral</td>
<td>Lifestyle modifications</td>
</tr>
<tr>
<td>Stage 1</td>
<td>Counsel and referral</td>
<td>Lifestyle mod + pharm</td>
</tr>
<tr>
<td>Stage 2</td>
<td>High risk Referral</td>
<td>Lifestyle mod + pharm x2</td>
</tr>
<tr>
<td>Stage 2 + symptomatic</td>
<td>Physician consult</td>
<td></td>
</tr>
</tbody>
</table>
Counseling

- **Lifestyle Modifications**
  - Weight reduction
  - DASH eating plan
  - Dietary sodium reduction
  - Physical activity
  - Moderation of alcohol consumption
Hypertension diagnosis

- Diagnosis of HTN is based on the average of two properly taken blood pressure measurements at two or more office visits.
Obesity and BMI

- **Obesity** - An excessive amount of body fat, which increases the risk of medical illness and premature death.

- **BMI** - A measurement of the relative composition of lean body mass and body fat; calculated as weight in kilograms/(height in meters)\(^2\)
  - Used as a quick and easy measure of overweight and obesity.
## Obesity

<table>
<thead>
<tr>
<th>Classification</th>
<th>BMI kg/m²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Underweight</td>
<td>&lt;18.5</td>
</tr>
<tr>
<td>Normal</td>
<td>18.5-24.9</td>
</tr>
<tr>
<td>Overweight</td>
<td>25-29.9</td>
</tr>
<tr>
<td>Obesity</td>
<td>30-39.9</td>
</tr>
<tr>
<td>Morbid Obesity</td>
<td>&gt;40</td>
</tr>
</tbody>
</table>

• Highly prevalent
  • 33.3% adult men, 35.3% adult women, 16% 2 to 19 year olds

• Early intervention works!!
  Dietary restriction + Exercise + Behavior therapy

### Common Complications of Obesity

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>CAD</td>
<td>CVA</td>
</tr>
<tr>
<td>Cholelithiasis</td>
<td>Degen. Joint</td>
</tr>
<tr>
<td>Eating disorder</td>
<td>Hyperlipidemia</td>
</tr>
<tr>
<td>HTN</td>
<td>Infertility</td>
</tr>
<tr>
<td>Malignancies</td>
<td>Irregular menses</td>
</tr>
<tr>
<td>Mood disorder</td>
<td>PCOS</td>
</tr>
<tr>
<td>OSA</td>
<td>DM2</td>
</tr>
</tbody>
</table>
Obesity & The Metabolic Syndrome

Definition: state of insulin resistance characterized by abdominal obesity, dyslipidemia, elevated BP, impaired fasting glucose

Present in:
- 5% of normal weight
- 22% of overweight
- 60% of obese

At least 3 of the following for Dx

- Waist circumf: M >40”, F >35”
- TG >150 mg/dL
- HDL: M <40 mg/dL, F <50 mg/dL
- BP > 130/85 mm Hg
- Fasting blood glucose > 110 mg/dL

REMEMBER: Screening vs. Diagnosis
Obesity Screening at the Health Fair

\[ \text{BMI} = \frac{\text{weight (kg)}}{\text{height}^2 \ (m^2)} \]

- Safe, cheap
- Sensitive, specific

**DOCS rec for overweight/obese:**
- Educate/Counsel on diet and exercise
- Refer to PCP
Sources

- Case Files: Family Medicine
- Step-Up To Medicine
- Joint National Committee on Prevention, Detection, Evaluation and Treatment of High Blood Pressure

Thank you!
Have Fun at Little Haiti!