Evidence Model for Treatment of Overweight and Obesity

Overweight Individual

↓ High Blood Pressure
↓ Dyslipidemia
↓ Glucose Intolerance

↓ Abdominal Fat
↓ Weight
↑ Fitness

Assess

(↑ Kcal Out) Treat (↓ Kcal In)
Critical review status sheet
database and 394 RCT articles sent
to San Antonio Cochrane Center
2,440 abstracts marked as possibly relevant for article retrieval
8,040 abstracts screened (two rounds)
Print titles of ProCite database (25,410 records) two rounds of screening
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MEDLINE literature search assesses each relationship in EVIDENCE MODEL
Evidence Model defines ~39 relationships
ProCite reference database marked for duplicates (18,217 dupes)
19,596 records not relevant
Expert Panel member literature search merged into ProCite database (2,226 abstracts)
5,600 abstracts not relevant
MEDLINE literature search assesses each relationship in Evidence Model
Literature search merged into ProCite reference database (43,627 records)
Critical review status sheet database and 394 RCT articles sent to San Antonio Cochrane Center
Evidence Collection Schema (continued)

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Evidence Collection Schema (continued)
## Evidence Table

<table>
<thead>
<tr>
<th>Ref #</th>
<th>Subjects</th>
<th>Design</th>
<th>Intervention</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>28499</td>
<td>Wood NEJM</td>
<td>N:155</td>
<td>RCT 52 Wks</td>
<td>Weight (kg)</td>
</tr>
<tr>
<td></td>
<td>F:0</td>
<td>Age: 44</td>
<td></td>
<td>1. Control</td>
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<td></td>
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<td>3. 94.1</td>
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</tbody>
</table>

|                       | Body Fat |
|                       | 1. 27.2  |
|                       | 2. 25.5  |
|                       | 3. 25.5  |

|                       | Cholesterol |
|                       | 1. 5.7      |
|                       | 2. 5.7      |
|                       | 3. 5.64     |
Inclusion and Exclusion Criteria

- Timeframe of the study—at least 4 months.
- For long-term maintenance—1 year or more.
- Excluded studies with self-reported weights, patients not overweight, dropout rate >35%, or no appropriate control group.
Criteria To Evaluate the Evidence

- **A**—Strong evidence: Evidence from well-designed randomized controlled trials (or trials that depart only minimally from randomization) that provides a consistent pattern of findings.

- **B**—Suggestive evidence (from randomized studies): Evidence as in A, but involving a smaller number of studies and/or a less consistent pattern of findings.
Criteria To Evaluate the Evidence (continued)

- **C**—Suggestive evidence (from nonrandomized studies): Evidence from the panel’s interpretation of uncontrolled or observational studies.

- **D**—Expert judgment: Evidence from clinical experience or experimental research.
Evidence Model for Treatment of Overweight and Obesity

- Overweight Individual
- Cardiovascular Disease
  - Cardiovascular Mortality and Morbidity
  - Noncardiovascular Mortality and Morbidity
- Dyslipidemia
- Glucose Intolerance
- High Blood Pressure
- Abdominal Fat
- Weight
- Fitness

Assess

\[ \text{Kcal Out} \rightarrow \text{Kcal In} \]
Evidence Model for Treatment of Overweight and Obesity

- Overweight Individual
- High Blood Pressure
- Dyslipidemia
- Glucose Intolerance
- Abdominal Fat
- Weight
- Fitness

Assess: (+ Kcal Out) Treat: (- Kcal In)
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  - 1. 27.2
  - 2. 25.5
  - 3. 25.5

- **Cholesterol**
  - 1. 5.7
  - 2. 5.7
  - 3. 5.64
The panel used several criteria to determine whether a study should be accepted and included in the guidelines:

- The study’s timeframe had to be at least 4 months, i.e., the minimum amount of time that must pass before the outcome measure is made.
- For considering long-term maintenance, studies had to have data collected after 1 year or more.

Studies were excluded from the guidelines if they:

- Used self-reported weights.
- Had dropout rates greater than 35 percent.
- Had no control group.
The panel determined specific criteria to evaluate the evidence. The criteria ranged from A to D level and were used to rank each evidence statement and recommendation provided in the guidelines:

A. **Strong evidence**: Evidence from well-designed RCTs (or trials that depart only minimally from randomization) which provides a consistent pattern of findings. Category A therefore includes a substantial number of studies involving a substantial number of participants.

B. **Suggestive evidence**: Some evidence from RCTs supports the recommendation, but the scientific support is not optimal. For instance, either few randomized trials exist, they are small in size, they are somewhat inconsistent, or they were undertaken in a population which differs from the target population of the recommendation.
Criteria To Evaluate the Evidence (continued)

• **C**—Suggestive evidence (from nonrandomized studies): Evidence from the panel’s interpretation of uncontrolled or observational studies.

• **D**—Expert judgment: Evidence from clinical experience or experimental research.

C. **Suggestive Evidence**: Evidence from nonrandomized studies or evidence from uncontrolled or observational studies.

D. **Expert Judgment**: Derived from the consensus of panel members on the basis of knowledge that does not meet the other criteria. This category was used only in cases where the provision of some guidance was deemed necessary but adequately compelling empirical literature addressing the subject of the recommendation did not yet exist.