Discussion notes will be found in the reader from now on. Pg. R-3 for reference.
Check flowchart on R-40. ♦ diamonds represent decision points

- Treatment variable (x): enriched (T) or control (C)
- Response variable (y): cortex weight (mg)

Subjects: 120 rats

Controlled experiment: experimenters have control over which subjects are in T, C
Observational study: subjects decide T or C

### 4a

<table>
<thead>
<tr>
<th>Person #</th>
<th>Conventional</th>
<th>Acupuncture</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>0%</td>
<td>30/31 = 97%</td>
</tr>
</tbody>
</table>

Population: other (not these 31 people) future spinal puncture patients
Sample: these 31

Is this sample representative of this pop?

(discussed placebo effect, no notes because we'll talk more about it in class tonight)

Bias = systematic tendency to produce the wrong answer

### 4b

CABG - referred to as "cabbage patients"
Biased on the high side

### 5

T: eating cottage cheese
Response: weight gain
Observational study

\[ X: \text{cottage cheese} \]
\[ Y: \text{fat} \]

Can't conclude the direction of causation.
y outcome
x treatment
z potential confounding factors (PCFs)
(4 screws up the way we think y & x are related)

Z is a PCF if...
1 y, z may plausibly be associated with each other
2 x, z may plausibly be associated with each other

(ex: contraception pills - observational exp. pill caused increase in blood pressure)
  \[ x = \text{treatment}, \quad y = \text{blood pressure}, \quad z = \text{age} \]