# Breakout Room Discussion of Session 8 Exercises

In each of your groups, you’ll be discussing the Session 8 exercise questions.

First, decide which roles each group member will fill:

## Roles:

**Moderator** - helps facilitate the conversation and encourages equitable participation

**Timekeeper** - keeps the group on track

**Note Taker** - takes record of the group’s discussion in this Google doc (see below).

**Active Participant** –engages and contributes to the discussion.

**Reporter** - presents the group’s solution to the whole class when we regroup.

## Before you begin to answer the exercise questions:

1. Introduce yourselves briefly.
2. Assign roles and record them below. Try to take a different role than last time.
3. Discuss the question(s) assigned to your group and note your answer.
4. Next, discuss other questions from Session 8. You won’t need to present these to the class but can use this time to compare answers to the other Session 8 questions.

## 

## Breakout Room (n=5 per room)

|  |  |
| --- | --- |
| **Breakout Room** | **Assigned Exercise Questions (see next page)** |
| **1** | **1** |
| **2** | **2a** |
| **3** | **2b** |
| **4** | **2c** |
| **5** | **2d** |
| **6** | **3** |
| **7** | **1** |
| **8** | **2a** |
| **9** | **2b** |
| **10** | **2c** |
| **11** | **2d** |
| **12** | **3** |

Roles:

* Moderator -
* Timekeeper -
* Note Taker -
* Reporter -
* Active Participant -

Question(s) discussed:

Solution to assigned question:

Any question you want the whole class to discuss/answer?

A different question discussed:

Notes:

**Session 8 Exercises**

1. Compute χ2 and the estimated OR for the AMI paired binary data dataset.

|  |  |  |  |
| --- | --- | --- | --- |
|  | Carrier | Noncarrier | Total |
| AMI | 96 | 117 | 213 |
| No AMI | 87 | 126 | 213 |
| Total | 183 | 243 | 426 |

1. In each case, decide whether this is an example of confounding or effect modification
   1. Two hospitals are compared with respect to the rate death following a particular type of surgery. Here are the data … is risk group a confounder or effect modifier?

|  |  |  |  |
| --- | --- | --- | --- |
|  | | Death rate | |
| **High risk** | |  | |
| Hospital | A | 57/1500 | (3.8%) |
| B | 8/200 | (4%) |
|  | | | |
| **Low risk** | |  | |
| Hospital | A | 6/600 | (1%) |
| B | 8/600 | (1.3%) |

* 1. Two hospitals are compared with respect to the rate death following a particular type of surgery. Here are the data … is risk group a confounder or effect modifier?

|  |  |  |  |
| --- | --- | --- | --- |
|  | Mean HDL | | |
|  | Women | Men | All |
| New Drug | 38.9 | 45.2 | 40.2 |
| Placebo | 39.2 | 39.1 | 39.2 |

* 1. “Researchers at the International Agency for Research on Cancer in France found that women infected with both HPV and HSV-2 were nearly three times more likely to get cervical cancer compared to women with only HPV infection.” Does HSV-2 confound or modify the effect of HPV on cervical cancer?
  2. “If the mother took antidepressant medication during the first trimester, without accounting for other possible influences, children had roughly twice the risk of having autism. The researchers then compared siblings in families where the mother used antidepressants in one pregnancy but not the other. This helped account for all of the factors that make siblings similar — their shared genetics and environment. In the sibling matchup, the children had essentially the same risk for autism, ADHD and poor fetal growth whether they were exposed to antidepressants in the womb or not.” Do genetic factors confound or modify the effect of antidepressants on autism?

1. Based on the abundance of specific bacterial genera, the human gut microbiota can be divided into two relatively stable groups (enterotypes) that might play a role in personalized nutrition. We studied these simplified enterotypes as prognostic markers for successful body fat loss on two different diets. A total of 62 participants with increased waist circumference were randomly assigned to receive a New Nordic Diet (NND) high in fiber/wholegrain or an Average Danish Diet (ADD) for 26 weeks. At enrollment, participants were grouped into two discrete enterotypes by their relative abundance of Prevotella spp. divided by Bacteroides spp. (P/B ratio) obtained by quantitative PCR analysis. Among individuals with high P/B the NND resulted in a 3.15 kg larger body fat loss compared to ADD whereas virtually no difference (0.88 kg) was observed among individuals with low P/B. Consequently, a 2.27 kg difference in responsiveness to the diets were found between the high and low P/B groups. In summary, subjects with high P/B-ratio appeared more susceptible to lose body fat on diets high in fiber and wholegrain than subjects with a low P/B-ratio.
   1. Which of the following best describes the design of this study?

Cross-sectional survey

Case-control study

Prospective cohort

* 1. Identify the role of diet, weight loss, and P/B ratio using one of the following terms – Outcome, Exposure, Effect modifier, Confounder