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Questions

#1

1/1 point (graded)

In a causal DAG with nodes L, A, and Y (in that temporal order), the absence of an arrow from node A to node Y means:

- ☒ There is no effect of A on Y
- ☐ There is no effect of Y on A
- ☐ There is no association between A and Y
- ☐ There is an association between A and Y

**Explanation**

On a causal DAG, an arrow from node A to node Y indicates that A has an effect on Y for at least on individual. Therefore, the absence of an arrow represents no effect of A on Y for every individual.

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You have used 1 of 3 attempts

i Answers are displayed within the problem

#2

1/1 point (graded)

A DAG is causal if the causes shared by any pair of variables on the graph are also on the DAG.

- ☒ True
- ☐ False

**Explanation**

All common causes, even if unmeasured, of any pair of variables on the graph must be included on a causal DAG.

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#3

1/1 point (graded)

If our expert knowledge is insufficient for us to rule out a direct effect of variable D on variable E, we should draw an arrow from D to E on the causal DAG.

☒ True

☐ False



Explanation

The absence of an arrow on a DAG means that we believe there is no relationship between D and E for each individual person in the population. Therefore, it is a stronger assumption to not have an arrow on a DAG, than to have one. As such, if we cannot rule out a direct effect of D on E, we should draw an arrow.

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#4

1/1 point (graded)
Lifestyle (e.g., smoking) influences whether a woman takes oral contraceptives (OC) and, independently, her risk of breast cancer. Select the causal DAG that represents this scenario.

☒

☐

☐

☐ None of the Above



Explanation

The first part of the statement in the question stem, "Lifestyle influences whether a woman takes oral contraceptives (OC)", indicates an arrow from lifestyle to OC use. The second part of the statement, "...and independently, her risk of breast cancer", indicates an arrow from lifestyle to breast cancer.

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