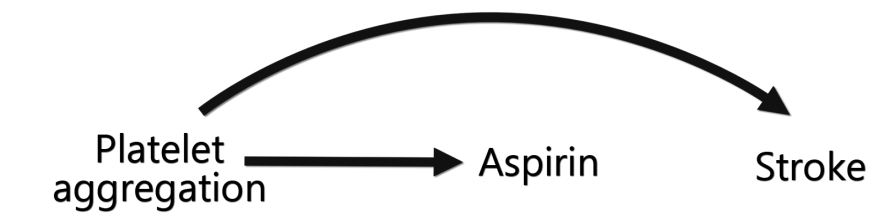
Questions

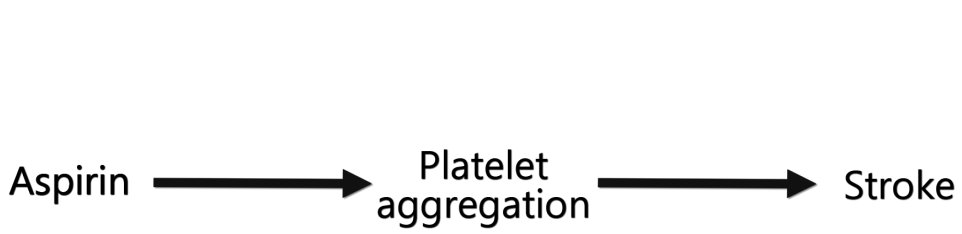
For the following questions, consider the question: Does aspirin use impact the risk of stroke?

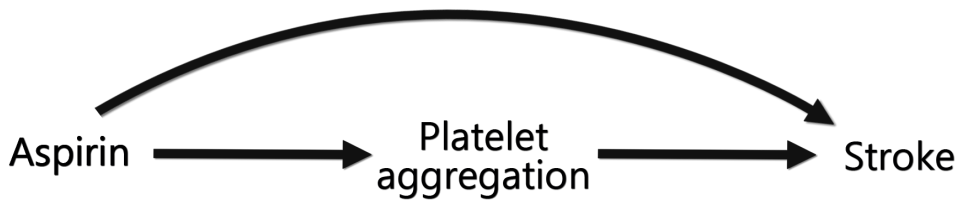
#1

1/1 point (graded)

You believe that aspirin can only reduce the risk of stroke through the reduction of platelet aggregation. Select the causal DAG that represents your belief.







None of the above

Explanation

We can eliminate DAG (a) and DAG (c) because the direct arrow from aspirin to stroke represents an effect of aspirin that is not through platelet aggregation. In contrast, in DAG (b), the only effect of aspirin on stroke is mediated by platelet aggregation.

Submit You have used 1 of 3 attempts

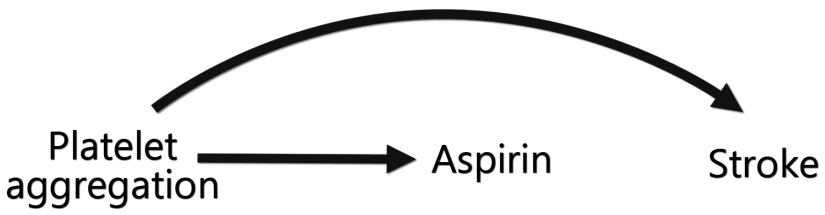
Answers are displayed within the problem

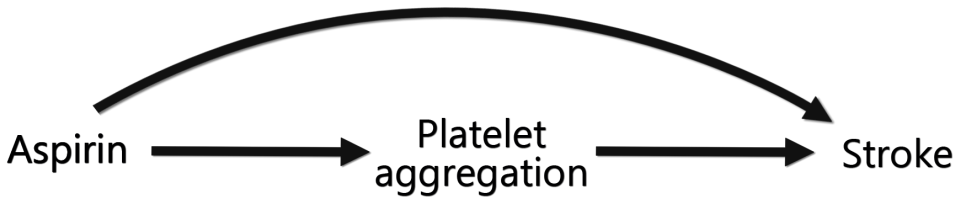
#2

1/1 point (graded)

Suppose you find in your data that aspirin is associated with stroke, conditionally on platelet aggregation. Select the causal DAG that is consistent with this finding.

即使conditional了也有效应





none of the three DAGs

✔

Explanation
In DAG (a), if we condition on platelet aggregation, then the path from aspirin to platelet aggregation to stroke is blocked. Therefore, there is no association between aspirin and stroke. In DAG (b), again, conditioning on platelet aggregation will block the path from aspirin to platelet aggregation to stroke, resulting in no association between aspirin and stroke. In DAG (c), even if we condition on platelet aggregation, there is still a path from aspirin to stroke, indicated by the direct arrow from aspirin to stroke. Therefore, aspirin and stroke are still associated, conditionally on platelet aggregation.

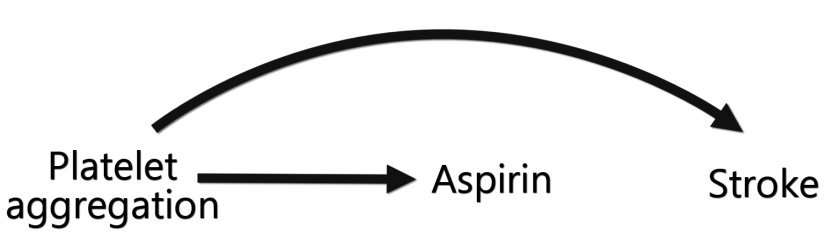
Submit You have used 2 of 3 attempts

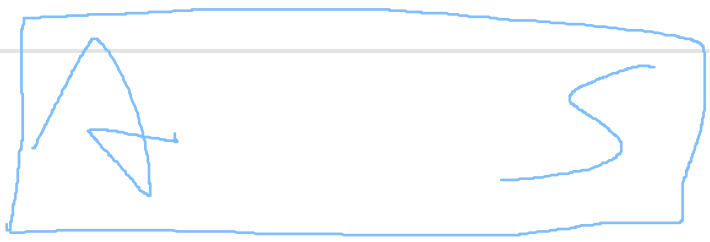
Answers are displayed within the problem

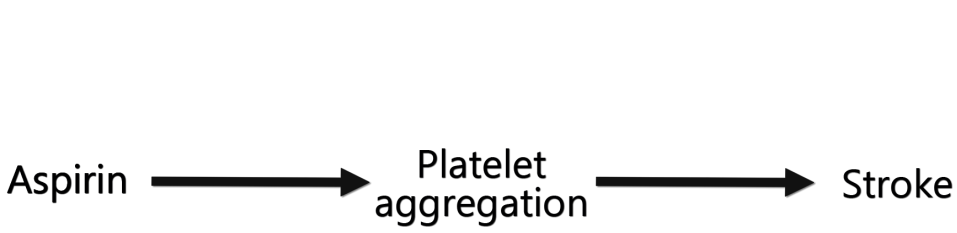
#3

1/1 point (graded)
Suppose you find in your data that aspirin is not associated with stroke (unconditionally). Select the causal DAG that is consistent with this finding.

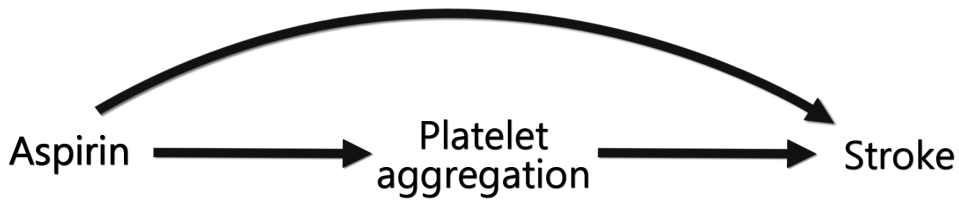
一点关系都没有







aspirin is not associated with stroke conditionally
aspirin is associated with stroke unconditionally



aspirin is associated with stroke conditionally

none of the three DAGs

Explanation
In DAG (a), aspirin and stroke are associated due to a common cause. In other words, association flows from aspirin to platelet aggregation to stroke. In DAG (b), aspirin and stroke are associated because the effect is mediated by platelet aggregation. In other words, association flows from aspirin to platelet aggregation to stroke. In DAG (c), aspirin and stroke are associated because there is a direct effect of aspirin on stroke (i.e. an arrow from aspirin to stroke) and because there is an effect that is mediated through platelet aggregation (i.e. from aspirin to platelet aggregation to stroke).

Submit You have used 2 of 3 attempts

Answers are displayed within the problem