J.G. ID 64  
HAP 290

**Causal Analysis of Reducing Junk Food in Diet**

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**Causes & Constraints**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Date Added** | **Cause or Constraint** | | **Description** | **Is an event?** | **In next 2 weeks, is always present?** | **Precedes effect?** | **If causes absent, then no effect?** | **Mechanism  clear?** | **Modifiable by the person?** |
| 6/29 | Social interruption | Constraint. Grandparents buy junk food, going out with friends, influence from others, etc. | | Yes | no | Yes, there must be an interruption in order to have the effect afterwards. | Yes, if there was no interruption I may have been more likely to eat healthy foods instead of junk. | Yes, chain of events leads to the effect. | Yes |
| 6/30 | Made healthy meal | Cause. | | Yes | no | Yes, meal is cooked first, and then I eat it. (instead of something unhealthy) | Yes, if no healthy meal was cooked, then I may have eaten something unhealthy. | Yes, chain of events leads to the effect. | Yes |
| 7/1 | hunger | Constraint. | | Yes | no | Yes, hunger precedes eating. | Yes, if I am not hunger I will not eat. | Yes, chain of events leads to the effect. | Yes |
| 7/4 | Slept early | Cause. | | Yes | no | Yes, I have to wake up before I eat. | If I hadn’t gone to sleep early, I would be less likely to get up early and eat breakfast. | Yes, chain of events leads to the effect. | Yes, can find ways that make me more likely to sleep earlier. |
| 7/5 | Special occasion | Constraint. Family reunions, birthdays, etc. | | Yes | no | Yes, I have to be at a special event before I eat junk food | If I hadn’t gone, I would not have had access to all of the food | Yes, chain of events leads to the effect. | Yes |
| 7/6 | vacation | Constraint. Busch gardens | | yes | no | Yes, I go on vacation before eating junk food | If I hadn’t gone, I would not have access to the food | Yes, chain of events leads to the effect | Yes |
| 7/10 | Did not buy junk food at grocery store | Cause. Cannot eat junk food at home if there is none there. | | yes | no | Yes, when I don’t buy junk, I can’t eat any at home. | Yes, because there is no junk food in my home, I will not eat any. If there was, I would. | Yes, chain of events leads to the effect | Yes |

**Causal Model**

**Thought Experiments**

|  |  |  |
| --- | --- | --- |
| **Type of Test** | **Relationships observed  in the causal model** | **True statements that support  the assumptions in my model** |
| **Root causes are irrelevant in predicting no junk food given direct causes** | **Vacation** is a root cause of failing to reduce junk food through **cooking healthy meals** | If all is ready for cooking a healthy meal, do I also need to know if I am on vacation? No. |
| **Social interruptions** are a root cause of failing to reduce junk food through **cooking healthy meals** | If all is ready for cooking a healthy meal, do I also need to know if there is a social interruption? No. |
| **Social interruptions** are a root cause of failing to reduce junk food through **sleeping early**. | If all is ready for sleeping early, do I also need to know if there is a social interruption? No. |
| **TV/PC** is a root cause of failing to reduce junk food through **sleeping early.** | If all is ready for sleeping early, do I also need to know if there is a social interruption? No. |
| **Hunger** is a root cause of failing to reduce junk food through **buying only healthy foods while grocery shopping** | If all is ready to buy healthy foods at the grocery store, do I also need to know if I am hungry? No. |
| **Common causes make independent effects conditionally dependent on each other** | **Cook healthy meal, sleep early, no junk food** 🡪 **success in reducing junk food** | 1. On days of success, if you did not cook healthy meal, is it reasonable to think you’re more likely than before to have slept early? Yes, they are conditionally independent.  2. On days of success, if you did not cook healthy meal, is it reasonable to think you’re more likely than before to have avoided buying junk food at the grocery store? Yes, they are conditionally independent.  3. On days of success, if you did not sleep early, is it reasonable to think you’re more likely than before to have avoided buying junk food at the grocery store? Yes, they are conditionally independent. |
| **Special Occasions, vacation, social interruptions** 🡪 **cook healthy meal** | 1. On days of failure, if there were no special occasion, is it reasonable to think you’re more likely than before to have been on vacation? Yes, they are conditionally independent.  2. On days of failure, if there were no special occasion, is it reasonable to think you’re more likely than before to have had a social interruption? Yes, they are conditionally independent.  3. On days of failure, if you were not on vacation, is it reasonable to think it’s more likely than before to have had a social interruption? Yes, they are conditionally independent. |
| **Social interruptions, TV/PC 🡪 sleep early** | 1. On days of failure, if there were no social interruption; is it reasonable to think you’re more likely than before to stay up watching TV/PC? Yes, these are conditionally independent.  2. On days of failure, if you did not stay up watching TV/PC, is it reasonable to think you’re more likely than before to have had a social interruption? Yes, these are conditionally independent. |
| **Vacation, Special Occasions, hunger** 🡪 **no junk food shopping** | 1.  On days of failure, if you were not on vacation, is it reasonable to think it’s more likely than before to have been a special occasion? Yes, they are conditionally independent.  2. On days of failure, if you were not on vacation, is it reasonable to think you’re more likely than before to have been hungry? Yes, they are conditionally independent.  3. On days of failure, if there were no special occasion, is it reasonable to think that you’re more likely than before to have been hungry? Yes, they are conditionally independent. |
| **Multiple causes are dependent on each other when the effect is given** | **Vacation** 🡪 **cook healthy meal** 🡪 **not buy junk food at grocery store** | 1.  Both are effected by going on vacation – unlikely to have an accessible kitchen, food options are limited depending on location  2. If I am on vacation, neither of these will work. |
| **Social Interruptions** 🡪 **cook healthy meal** 🡪 **sleep early** | 1. Both are effected by social interruptions – going out with friends may cause you to sleep later, often consists of eating out, being exposed to foods you otherwise would not eat at home  2. If there is a social interruption, neither will work. |
| **Special Occasions** 🡪 **cook healthy meal** 🡪 **not buy junk food at grocery store** | 1. Both are affected by special occasions/family events. Food is not bought or prepared by you. Snacks and desserts are often present.  2. If there is a special occasion, neither will work. |
| **Counterfactual** | I would have **cooked a healthy meal** if it wasn’t a **special occasion.** | For example, large amounts of food and desserts are served buffet style at my family reunion. I would not have access to all of that food if I were at home. |
| I would have **cooked a healthy meal** if I wasn’t on **vacation.** | Average cost hotel rooms do not have full kitchens, so it would be difficult to cook a healthy meal while on vacation. |
| I would have **slept early** if there were no **social interruptions.** | When I go out with friends we often stay out late and I don’t go to bed until late. |
| If I weren’t on **vacation**, I would have succeeded due to the **absence of junk food in my home.** | While on vacation, we mostly eat out because we don’t have the means to cook healthy meals and access to healthy foods is lower (depending on where you are staying). |
| If I weren’t at a **special event**, I would have succeeded due to the **absence of junk food in my home.** | Most food served at special occasions (such as family reunions) would not normally be found in my home. |
| I would have **cooked a healthy meal** if there were no **social interruptions.** | Influence of others around me eating unhealthy foods makes me more likely to also eat those foods. |
| If I weren’t **hungry**, I would **not have bought junk food at the grocery store.** | Going to the grocery store while hungry makes me more likely to give into my cravings and buy junk food. |

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**Causal Diary**

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Day** | **Junk food?** | **Sleep early** | **Social interruption** | **TV/PC** | **Healthy meal** | **Social Interruption** | **Special Occasion** | **Vacation** | **No junk @ grocery** | **Vacation** | **hunger** | **Special Occasion** |
| 1 | Yes | X | C:\Program Files\Microsoft Office\MEDIA\OFFICE12\Bullets\BD21301_.gif | X | X | C:\Program Files\Microsoft Office\MEDIA\OFFICE12\Bullets\BD21301_.gif | X | X | X | X | X | X |
| 2 | Yes | X | X | C:\Program Files\Microsoft Office\MEDIA\OFFICE12\Bullets\BD21301_.gif | X | X | X | X | X | X | X | X |
| 3 | Yes | X | C:\Program Files\Microsoft Office\MEDIA\OFFICE12\Bullets\BD21301_.gif | X | X | X | X | X | X | X | X | X |
| 4 | No | C:\Program Files\Microsoft Office\MEDIA\OFFICE12\Bullets\BD21301_.gif | X | X | C:\Program Files\Microsoft Office\MEDIA\OFFICE12\Bullets\BD21301_.gif | X | X | X | X | X | X | X |
| 5 | Yes | X | X | C:\Program Files\Microsoft Office\MEDIA\OFFICE12\Bullets\BD21301_.gif | X | X | X | X | X | X | C:\Program Files\Microsoft Office\MEDIA\OFFICE12\Bullets\BD21301_.gif | X |
| 6 | No | X | X | C:\Program Files\Microsoft Office\MEDIA\OFFICE12\Bullets\BD21301_.gif | C:\Program Files\Microsoft Office\MEDIA\OFFICE12\Bullets\BD21301_.gif | X | X | X | X | X | X | X |
| 7 | No | X | X | C:\Program Files\Microsoft Office\MEDIA\OFFICE12\Bullets\BD21301_.gif | C:\Program Files\Microsoft Office\MEDIA\OFFICE12\Bullets\BD21301_.gif | X | X | X | C:\Program Files\Microsoft Office\MEDIA\OFFICE12\Bullets\BD21301_.gif | X | X | X |
| 8 | No | C:\Program Files\Microsoft Office\MEDIA\OFFICE12\Bullets\BD21301_.gif | X | X | C:\Program Files\Microsoft Office\MEDIA\OFFICE12\Bullets\BD21301_.gif | X | X | X | C:\Program Files\Microsoft Office\MEDIA\OFFICE12\Bullets\BD21301_.gif | X | X | X |
| 9 | Yes | C:\Program Files\Microsoft Office\MEDIA\OFFICE12\Bullets\BD21301_.gif | X | X | X | X | C:\Program Files\Microsoft Office\MEDIA\OFFICE12\Bullets\BD21301_.gif | X | X | X | X | C:\Program Files\Microsoft Office\MEDIA\OFFICE12\Bullets\BD21301_.gif |
| 10 | Yes | C:\Program Files\Microsoft Office\MEDIA\OFFICE12\Bullets\BD21301_.gif | X | X | X | X | X | C:\Program Files\Microsoft Office\MEDIA\OFFICE12\Bullets\BD21301_.gif | X | C:\Program Files\Microsoft Office\MEDIA\OFFICE12\Bullets\BD21301_.gif | X | X |
| 11 | Yes | C:\Program Files\Microsoft Office\MEDIA\OFFICE12\Bullets\BD21301_.gif | X | X | X | X | X | C:\Program Files\Microsoft Office\MEDIA\OFFICE12\Bullets\BD21301_.gif | X | C:\Program Files\Microsoft Office\MEDIA\OFFICE12\Bullets\BD21301_.gif | X | X |
| 12 | No | C:\Program Files\Microsoft Office\MEDIA\OFFICE12\Bullets\BD21301_.gif | X | X | C:\Program Files\Microsoft Office\MEDIA\OFFICE12\Bullets\BD21301_.gif | X | X | X | C:\Program Files\Microsoft Office\MEDIA\OFFICE12\Bullets\BD21301_.gif | X | X | X |
| 13 | No | C:\Program Files\Microsoft Office\MEDIA\OFFICE12\Bullets\BD21301_.gif | X | X | C:\Program Files\Microsoft Office\MEDIA\OFFICE12\Bullets\BD21301_.gif | X | X | X | C:\Program Files\Microsoft Office\MEDIA\OFFICE12\Bullets\BD21301_.gif | X | X | X |
| 14 | Yes | X | C:\Program Files\Microsoft Office\MEDIA\OFFICE12\Bullets\BD21301_.gif | C:\Program Files\Microsoft Office\MEDIA\OFFICE12\Bullets\BD21301_.gif | X | C:\Program Files\Microsoft Office\MEDIA\OFFICE12\Bullets\BD21301_.gif | X | X | X | X | X | X |
| 15 | No | C:\Program Files\Microsoft Office\MEDIA\OFFICE12\Bullets\BD21301_.gif | X | X | C:\Program Files\Microsoft Office\MEDIA\OFFICE12\Bullets\BD21301_.gif | X | X | X | C:\Program Files\Microsoft Office\MEDIA\OFFICE12\Bullets\BD21301_.gif | X | X | X |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Day** | **Junk food?** | **Sleep early** | **Social Interruption** | **TV/PC** | **Healthy Meal** | **Social Interruption** | **Special Occasion** | **Vacation** | **No junk @ grocery** | **Vacation** | **Hunger** | **Special Occasion** |
| 16 | No | C:\Program Files\Microsoft Office\MEDIA\OFFICE12\Bullets\BD21301_.gif | X | X | C:\Program Files\Microsoft Office\MEDIA\OFFICE12\Bullets\BD21301_.gif | X | X | X | C:\Program Files\Microsoft Office\MEDIA\OFFICE12\Bullets\BD21301_.gif | X | X | X |
| 17 | Yes | C:\Program Files\Microsoft Office\MEDIA\OFFICE12\Bullets\BD21301_.gif | X | X | X | X | C:\Program Files\Microsoft Office\MEDIA\OFFICE12\Bullets\BD21301_.gif | X | X | X | X | C:\Program Files\Microsoft Office\MEDIA\OFFICE12\Bullets\BD21301_.gif |
| 18 | No | X | X | C:\Program Files\Microsoft Office\MEDIA\OFFICE12\Bullets\BD21301_.gif | C:\Program Files\Microsoft Office\MEDIA\OFFICE12\Bullets\BD21301_.gif | X | X | X | C:\Program Files\Microsoft Office\MEDIA\OFFICE12\Bullets\BD21301_.gif | X | X | X |
| 19 | No | C:\Program Files\Microsoft Office\MEDIA\OFFICE12\Bullets\BD21301_.gif | X | X | C:\Program Files\Microsoft Office\MEDIA\OFFICE12\Bullets\BD21301_.gif | X | X | X | C:\Program Files\Microsoft Office\MEDIA\OFFICE12\Bullets\BD21301_.gif | X | X | X |
| 20 | No | X | C:\Program Files\Microsoft Office\MEDIA\OFFICE12\Bullets\BD21301_.gif | X | C:\Program Files\Microsoft Office\MEDIA\OFFICE12\Bullets\BD21301_.gif | X | X | X | C:\Program Files\Microsoft Office\MEDIA\OFFICE12\Bullets\BD21301_.gif | X | X | X |
| 21 | No | X | C:\Program Files\Microsoft Office\MEDIA\OFFICE12\Bullets\BD21301_.gif | X | C:\Program Files\Microsoft Office\MEDIA\OFFICE12\Bullets\BD21301_.gif | X | X | X | C:\Program Files\Microsoft Office\MEDIA\OFFICE12\Bullets\BD21301_.gif | X | X | X |
| 22 | Yes | X | C:\Program Files\Microsoft Office\MEDIA\OFFICE12\Bullets\BD21301_.gif | X | X | C:\Program Files\Microsoft Office\MEDIA\OFFICE12\Bullets\BD21301_.gif | X | X | C:\Program Files\Microsoft Office\MEDIA\OFFICE12\Bullets\BD21301_.gif | X | X | X |
| 23 | No | X | C:\Program Files\Microsoft Office\MEDIA\OFFICE12\Bullets\BD21301_.gif | X | C:\Program Files\Microsoft Office\MEDIA\OFFICE12\Bullets\BD21301_.gif | X | X | X | C:\Program Files\Microsoft Office\MEDIA\OFFICE12\Bullets\BD21301_.gif | X | X | X |

**Analysis of Diary**

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| **Causes** | **Probability of Success  Given the Cause** | |
| **Minimum** | **Maximum** |
| Sleep early | 0/4 = 0 | 7/11 = .63 |
| Make healthy meal | 1/1 = 1 | 13/13 = 1 |
| No junk food bought @ store (none in home) | 0/1 = 0 | 11/12 = .92 |

**Report of Actions Taken**

* From the information gathered, my sleeping habits do not predict my eating habits as well as the more direct causes. I can use this information in the future by focusing on those causes that are most direct in controlling my eating behaviors rather than those that are less so.

**Introspection**

* Making a causal diary and analysis is very useful to understanding why I behave in certain ways.
* Understanding why we behave the way we do is very important in order to modify ourselves and change for the better.
* I learned that there are many more causes to my behavior that I had originally thought. I always seemed to focus on my willpower and effort. After doing this project, I have realized that the environment around me plays a large part in what and when I eat.