**Findings**

Both hamsters showed confusion when they woke during the night and saw bright light. They would back up into their lair and curl up for a few minutes before carrying on to their routine activities such as the wheel. They also showed reluctance to return to their lair when the cage was dark during the day. They would shift restlessly from the lair to the wheel before finally settling in the lair. Both hamsters showed as well an extra active period on a rainy night while the lights were in reverse. Because of the possibility that each hamster has its own rhythm, the datas collected from each hamster was compared to the hamster they were taken off. Under normal lighting, the active hours of Hammy ranged from 12:00 AM to 5:00 AM with 1:00 AM being the most likely to be active, and another range from 3:00 PM to 6:00 PM with 4:00 PM being the peak. The data collected from the reversed lighting seemed to suggest that active hours did not leave the ranges but were were about an hour later than the peak hours. For example, instead of being most active about 4:00 PM, the active time shifted to 5:00 PM, and 2:00 AM instead of 1:00 AM. There was also an active period about 3:00 AM during a rainy night which under normal lighting conditions, did not exist. The active hours for Sammy under normal lighting conditions were about the same as with those of Hammy's--from 12:00 AM to 6:00 AM and from 2:00 PM to 7:00 PM. However, the results from the reversed lighting seemed to suggest little change in the times most likely to be active. 12:00 AM and 3:00 AM were the peaks in the 12:00 AM to 6:00 AM range, and 5:00 PM peaked in the 2:00 PM to 7:00 PM range. However, there was also another active period about 4:00 AM which did not exist under the normal lighting conditions but this happened during a rainy night.

Normal Lighting

|  |  |  |
| --- | --- | --- |
| Hours | Hammy | Sammy |
| 12:00 AM | 5.41% | 150.38% |
| 1:00 AM | 10.81% | 7.69% |
| 2:00 AM | 2.70% | 3.85% |
| 3:00 AM | 0.00% | 11.54% |
| 4:00 AM | 2.70% | 0.00% |
| 5:00 AM | 5.41% | 3.85% |
| 6:00 AM | 0.00% | 3.85% |
| 7:00 AM | 0.00% | 0.00% |
| 8:00 AM | 0.00% | 0.00% |
| 9:00 AM | 0.00% | 0.00% |
| 10:00 AM | 0.00% | 0.00% |
| 11:00 AM | 2.70% | 3.85% |
| 12:00 PM | 0.00% | 0.00% |
| 1:00 PM | 0.00% | 0.00% |
| 2:00 PM | 2.70% | 3.85% |
| 3:00 PM | 10.81% | 7.69% |
| 4:00 PM | 27.03% | 11.54% |
| 5:00 PM | 8.11% | 11.54% |
| 6:00PM | 8.11% | 11.54% |
| 7:00 PM | 5.41% | 7.69% |
| 8:00 PM | 0.00% | 0.00% |
| 9:00 PM | 2.70% | 0.00% |
| 10:00 PM | 2.70% | 0.00% |
| 11:00 PM | 8.11% | 3.85% |

Reversed Lighting

|  |  |  |
| --- | --- | --- |
| Hours | Hammy | Sammy |
| 12:00 AM | 33.33 | 0.00 |
| 1:00 AM | 0.00 | 0.00 |
| 2:00 AM | 0.00 | 40.00 |
| 3:00 AM | 33.33 | 40.00 |
| 4:00 AM | 16.67 | 0.00 |
| 5:00 AM | 0.00 | 0.00 |
| 6:00 AM | 0.00 | 0.00 |
| 7:00 AM | 0.00 | 0.00 |
| 8:00 AM | 0.00 | 0.00 |
| 9:00 AM | 0.00 | 0.00 |
| 10:00 AM | 0.00 | 0.00 |
| 11:00 AM | 0.00 | 0.00 |
| 12:00 PM | 0.00 | 0.00 |
| 1:00 PM | 0.00 | 0.00 |
| 2:00 PM | 0.00 | 0.00 |
| 3:00 PM | 0.00 | 0.00 |
| 4:00 PM | 0.00 | 0.00 |
| 5:00 PM | 16.67 | 20.00 |
| 6:00 PM | 0.00 | 0.00 |
| 7:00 PM | 0.00 | 0.00 |
| 8:00 PM | 0.00 | 0.00 |
| 9:00 PM | 0.00 | 0.00 |
| 10:00 PM | 0.00 | 0.00 |
| 11:00 PM | 0.00 | 0.00 |

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