

Energy/Virus System

Energy is the player's health.

The player has an energy bar that indicates the amount of energy and virus it holds. The player's energy and virus are a closely related resource. Virus is calculated as a percentage of the player's current energy, and if the player either hits 0% energy, or 100% virus they will die.

Whenever the player is attacked, depending on the enemy that is attacking them, either their energy level can be depleted, their virus level can be increased, or their energy can be overloaded to a state beyond full charge which will stun and disable the payer for a short time depending on the magnitude of overloaded charge.

- The player starts with [100%] energy total.
- The player starts with [0%] virus infection.
- If the player charges their battery from a clean energy source, they will gain energy, and their virus percentage will be diluted by the clean energy, effectively decreasing virus percentage.
- While using the wire to overload an enemy, energy would be consumed at [--/second]; and the enemy's energy increases at the same speed. The player transfers both energy and virus to the enemy. The amount of virus transferred is dependent on the player's virus percentage when they use overload.
- While using the wire to drain an enemy, the player would gain energy at [--/second]; and the enemy loses energy at the same speed. The enemy transfers both energy and virus to the player. The amount of virus transferred is dependent on the enemies virus percentage when the player uses drain.
 - The increment depends on both the player's infection level and the enemy's infection level. If the difference between infection levels is large, the player's infection level may be increased more. For example when draining:
 - If the enemy is at 0% infection, the player's virus will not increase.
 - The player is at 20% infection, enemy at 10% infection, player's virus may increase at (0.05%/second).

- The player is at 20% infection, enemy at 20% infection, player's virus may increase at (0.1%/second).
- The player is at 20% infection, enemy at 40% infection, player's virus may increase at (0.2%/second).

The virus would not decrease automatically. However, many abilities/upgrades/events allow the player to decrease virus levels

Enemies also have an energy bar for their health, similar to the player.



<https://what-remains-of-me-charge-test.netlify.app/> This website showcases the interactions between charge and virus on an enemy outlet.

- Enemies would permanently shut down when their energy drops below 0%, which means being killed.
- If their energy reaches over [100%] of their max energy, they will be stunned for a few seconds, depending on the magnitude of overloaded charge. Most enemies do not start with max energy.
- Enemies may also may consume energy to use special abilities.

- Enemies, like the player, have virus as a percentage of their energy level. Enemies with more virus are usually more aggressive towards the player. An enemy with no 0% virus will be docile, not interacting with the player unless given virus.

Ideas discussed in class recently

- (there is possibility of the player needing to unlock the ability to perceive virus - not implemented)
- The player may be able to regenerate energy slowly outdoors by [0.1/second] using solar power. (Not applicable for chapter 1)
- Some abilities/upgrades/events may allow the player to restore energy or increase max energy. (not implemented)