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Breaking Bad: Gus Fring's Face Blown Off

Somaya Turk

The Centre for Interdisciplinary Science, University of Leicester

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Abstract

Be aware that this paper contains spoilers and potentially distressing imagery. Gus (Gustavo Fring) is a fictional character from the American crime drama *Breaking Bad*. In the events of the Season 4 finale, Gus experiences the explosion of a homemade bomb, which kills two characters immediately, but Gus walks out of the room, with half of his face seriously disfigured, and he calmly adjusts his tie before collapsing dead in the doorway. This paper investigates whether his reaction is justifiable, and whether it would occur in real life.

Introduction

Breaking Bad is based on the story of Walt (Walter White), a secondary school Chemistry teacher turned criminal, producing crystal meth (amphetamine) with his partner, Jesse. At one point, Walt attempts to kill the villainous drug lord Gus by planting a homemade bomb under a wheelchair placed in the room where Gus is present with his partner Tyrus and rival Hector.

When the bomb is triggered, the explosion immediately kills Tyrus and Hector; however Gus calmly walks out of the room adjusting his tie, before collapsing dead in the doorway. We are shown Gus's severely disfigured face in the episode, and are left wondering how Gus could react in such an unusual manner [1].



Image 1: Gus Fring's reaction after the explosion [2].

Acute Stress Response

Gus may have been experiencing acute stress response to the explosion, in other words Gus was in

a complete state of "shock". When someone goes in to shock, stress hormones such as adrenaline (epinephrine) are released into the bloodstream, and there is increased activity of nerve impulses to various parts of the body. Once the stress response is triggered in the body, a series of changes occur, including: the quickening of pulse, redirection of blood away from extremities and instead to major organs and the release of cortisol which can bring long and short term changes [3], such as Gus' instant response. The elevated cortisol levels would have created physiological changes that helped replenish Gus' body energy, giving him the ability to walk out of the room even for a few brief seconds [4].

Response Initiation

From the episode we can see that the explosion initiates Gus' sensory nerve cells to pass the perception of a threat from the environment to the hypothalamus in his brain. Neurosecretory cells in the hypothalamus transmit signals to the pituitary gland, releasing chemical messengers into his bloodstream. At the same time, the hypothalamus transmits a nerve impulse down the spinal cord. The nerve impulse and chemical messenger both travel to the adrenal gland [5], located above the kidneys [3].

Once the adrenal glands have received these signals, epinephrine is released into the bloodstream. A cell signalling cascade results in the release of cortisol into the bloodstream, where it begins several

signalling cascades in various cell types and an increase in glucose levels.

Energy Boost

Once the epinephrine binds to receptors in Gus' liver cells, it triggers a signalling cascade producing glucose from large sugar molecules. Fatty acids are also free to be transformed into energy due to circulating cortisol. With these molecules circulating in the bloodstream, Gus' muscles are readily provided with energy. This response can also be referred to as the "fight or flight" response [6].

Signals from sensory nerve cells are also received by an area of Gus' brain stem initiating its own responses involving the release of norepinephrine, which again triggers numerous cell signalling cascades in Gus' body. A rapid increase in norepinephrine level provides the body with extra strength and increased arousal, as this particular neurotransmitter is involved with creating several physical reactions and changes such as: muscle tension, increased startle reflex, shortness of breath, dizziness, and numbness and tingling throughout the body [7]. These symptoms are visible when Gus walks out of the room, with an irregular breathing pattern, calm but shaken, and numb to the pain.

Conclusion

By observing Gus Fring's behaviour after the explosion, it is clear to see that his unusual reaction to the explosion was a result of simultaneously released signalling molecules in his body. Combined together, the cell signalling molecules increase the energy and blood circulation to parts of Gus' body which are in most need, preparing him for extreme action – in this case preventing him from feeling any pain for a few brief moments before collapsing to his death.

Furthermore, the injury shows the skull is still intact implying that the motor cortex is not damaged, therefore the fact that Gus walked out of the room adjusting his tie, can be justified by this.

However, looking at the substantial injury that Gus suffered, it is unlikely that he would walk out of the room in such a calm manner, as the sudden release of norepinephrine would make it more likely for Gus to behave erratically. Although we are only shown the top half of Gus' body, and hence can only see half his face and a portion of his torso to be severely disfigured, the explosion may have caused injuries to other parts of his body also. With the additional injuries, his ability to walk would be impaired, leaving him unable to walk if the explosion was to occur in real life.

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