G-Force: Angles Helping Pilots Go Faster

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Gravity induced loss of consciousness, better known as G-LOC , occurs when excessive gravitational forces are applied to the body resulting in decreased intracerebral blood flow. Even after pilots undergo G-LOC, there is a period of functional incapacitation following it that usually lasts around 15 seconds, but could last up to 30 seconds, after the pilot initially regains consciousness. This is a problem because in newer, more advanced military aircraft like the Lockheed Martin F-35 Lightening II, jets are capable of going 1.6 times the speed of sound exerting higher levels of g-force than in the past. After doing this experiment to prove changing the angle of the ejection seat could help during flight, with the data that is collected, a seat to lower the risk of G-LOC could be engineered. It was hypothesized that if the body is put at a 10 degree angle, the least amount of g-force possible will be put on the brain, lowering the risk of G-LOC. By doing this you have changed the direction of -Gz to +Gz. After conducting the experiment, it was found that the hypothesis was correct. Reclining the angle of where Gz has contact with the body, decreases the stress on the blood in the direction of +Gz to -Gz. In conclusion, it would be very beneficial to create a seat for aircraft combat maneuvering that could change the direction of Gz while in flight.