

# MEDICAL CERTIFICATION OF PILOTS WITH AUTISM SPECTRUM DISORDER- ASPERGER'S TYPE

CASE REPORT, BY ELIZABETH R. ANDERSON-DOZE MD, MPH

*Autism spectrum disorders are characterized as a group of intellectual disorders resulting in developmental delay. Normally diagnosed in childhood but persisting into adulthood, these disorders can manifest in a wide range, from individuals with low intelligence to those with normal or superior IQs. Patients characteristically display poor social interactions, poor communication skills, and perform repetitive, stereotypical behaviors.<sup>1</sup> This is a case report of a young adult with Autism Spectrum Disorder of Asperger's type, seeking renewal of a second-class medical certificate.*

## History

This college sophomore majoring in aeronautics presented to his local aviation medical examiner (AME) for a medical exam to renew his second-class medical certificate. At the time of presentation, he was 20 years old and had 210 hours of flight time with 50 in the previous 6 months.

He was diagnosed with Asperger's syndrome as a young child but never received formal treatment for this, with the exception of a single, brief hospitalization 3 years before for suicidal ideation. Subsequent psychiatric evaluations determined the correct diagnosis to be a situational adjustment disorder. He was also briefly prescribed Concerta as a result of this episode, but after a few months, it was discontinued because it was ineffective.

Despite the Autism Spectrum Disorder (ASD) diagnosis, he never had any difficulty in school. His teachers described him as cooperative, conscientious, and diligent in his school-work performance. Intelligence and cognitive testing revealed a greater-than-average IQ, consistent with Asperger's syndrome. He displayed no signs or symptoms of Attention Deficit Disorder and successfully applied and was accepted to college. He planned to pursue an aeronautics degree, with hopes of making a career in the airline industry as a commercial, then transport pilot. A year later, he successfully obtained a second-class airman medical certificate after the granting of a one-year Special Issuance by the Federal Aviation Administration.

## Aeromedical Issues

The hallmarks of ASD include poor communication skills, as well as a lack of insight and poor judgment in decision making. Although those with the subtype of Asperger's syndrome tend to function at the higher end of the autism spectrum intellectually, the tendency to be inflexible and to have the inability to make quick-thinking decisions in the face of an unexpected emergent situation could be disastrous in an aviation environment. Lack of insight into social cues and the loner mentality often exhibited by these individuals would also be a concern for airmen with this diagnosis.<sup>2</sup> Cognitive skills may be exhibited unevenly, which could mean that although the airman may do well during the learning and student aspect of flight training, once left to interpret emergent situations alone, poor decisions regarding safety may occur.<sup>3</sup>

In a paper by Lorenz and Heintz, the authors noted that those with Asperger's syndrome are more adept at concentrating on long and tedious tasks, identifying logical patterns, recalling facts, and processing visual information than "neurotypical individuals." As a result of these skills, they excel in natural science, information technology, and engineering, as well as other career fields not requiring empathy or emotional investment.<sup>4</sup>

### **Autism Spectrum Disorder – Asperger's type**

According to the Centers for Disease Control, the prevalence of autism among children in the United States is currently 1 in 68.1 This disorder is defined as a developmental disability and ranges over a wide spectrum from those profoundly disabled to those with superior intellectual abilities. Asperger's disease is a subset of the disorders comprising the autism spectrum of diseases. There is no widely available data evaluating the long-term performance of these individuals or studies on the function of autistic patients as adults. It is known, however, that they function poorly in positions requiring communication, social skills, and do not make good team players. They can, though, be trained through one-on-one coaching to excel in professions for which they may have superior intellect and can also be taught to overcome the obstacles of social ineptitude via occupational self-efficacy.<sup>4</sup>

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## Role of the AME

The aviation medical examiner is delegated authority to examine airmen that are either applying for or in possession of an airman medical certificate to determine if they meet the health qualifications to possess this certificate. This decision is based on applicable medical standards outlined in *The Guide for Medical Examiners*, or the AME Guide.

Neither ASD nor the subtype of Asperger's syndrome is discussed in the AME Guide. Under the general medical standards outlined in Title 14 of the Code of Federal Regulations Part 67.213, any functional disease or functional defect that makes it unsafe for an airman to operate an aircraft will preclude the granting of any class of medical certificate. This applies to a currently active disease process or to a health issue which could recur before the expiration of the certificate in question.<sup>5</sup>

## Outcome

This airman was diagnosed with ASD, Asperger's type, for several years since childhood. He had never required formal treatment for this diagnosis, however, and it never affected his ability to perform well in school. His cognitive tests revealed an average to superior intelligence, and so he was initially granted a second-class airman's medical certificate with an Special Issuance. The AME who examined him referred his exam to the FAA Aerospace Medical Certification Division (AMCD) for review and final disposition. Upon review of his exam, an "Unable to Establish" letter was sent to the airman requesting documentation from his psychiatrist, confirming stability of his condition in the past year. Because he was no longer under the care of a psychiatrist since his brief hospitalization 3 years previously, documentation from his primary care pediatric provider was accepted instead. The AMCD issued another second-class medical certificate with a 1-year Special Issuance to the airman.

## References

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## About the author

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