Medical Selection of The First German Commercial Female Astronaut


German Aerospace Center (DLR)
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Disclosure Information

I have no financial relationships to disclose.

I will not discuss off-label use and/or investigational use in my presentation.
Female Astronauts (61)
European Female Astronauts (3)
Job Advertisement

• Bachelor’s degree in a „STEM“ field/ equivalent military education
• Several years of related professional experience
• Media competency
• Ability to communicate and work in teams
• Stable physical and mental condition
• German citizenship
• Fluent in English
• Advantageous: Experience in aviation or diving, knowledge of Russian language
Selection Process

1. Job Advertisement
2. Application (including video)
3. Medical Preselection (questionnaire)
4. Psychological Selection (2 step)
5. Medical Selection
6. Recommendation
Pseudonymized questionnaire

- Medical
  - History
    - Personal
    - Family
    - Radiation Exposure
- Sporting activities
- Nutrition
Denial because of answers in the questionnaire

- Pregnancies
- Metrics
- Trauma
Psychological Selection

- First step: series of computerized basic aptitude and knowledge tests (e.g. attention, technical knowledge)
  - 81
- Second step: Assessment including
  - group exercise
  - a dyadic cooperation test
  - a reaction-time test
  - a semi-structured interview
  - 30
  - 30

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Medical Selection of Space Flight Participants

• Medical Standards and Certification Procedures for Space Flight Participants
  International Space Station Program
• To ensure that the SFP pose an acceptable medical risk for the ISS program, and the transport to and from the ISS
Medical Examination of Space Flight Participants
Additional Examinations

- Neurology
- Gynecology
- Dentist
- Psychiatry
- Bone density
- MRI brain

- Because of radiation issues the orthopantogram and chest x-ray were only performed after the final selection
Medical Selection Board

- All medical data were presented in an anonymized way
DEUTSCHLAND SUCHT DIE ERSTE DEUTSCHE Astronautin
After the selection …

• Basic training (Space systems)
• Parabolic flight
• Private Pilot License
• USA
• Education and outreach
• Public Relations
Conclusion

- The rate of denials is only about half of the denials of professional astronaut selections, because of the lower requirements.
- As many applicants came out of the space area it made sense to pseudonymize the medical information for decision making to exclude possible bias.
- To perform the necessary radiation examination it makes sense from an administrative perspective to include it into the medical selection process.
Thank you for your attention