Athletic Recovery on Airplanes
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Abstract
Recovery after athletic events on airplanes can be accomplished through a variety of therapeutic modalities. This research reviews the literature of athletic recovery in light of the challenges and opportunities of air travel. The researcher evaluates the work already undertaken by the Nike-Teague collaborative design as well as the development of the Sukhoi SportJet. It is concluded that while recovery methods during air travel exist, there is a need for more research to determine the best techniques and methods for recovery during flight. This study also proposes a longer-term project to prove which different types of therapeutic modalities can be used to assist an athlete with recovery for the duration of a flight.

What happens to your Body During Flight?
• Dehydration
• Lower humidity
• Stress increases on the ears
• Stomach bloats
• Pressure, temperature, and oxygen levels fluctuate
• Cabin is only pressurized to 6000-8000 ft
• Lower air pressure -> body takes in less O2

Athlete-Specific Recovery Needs
• Tight muscles
• Injuries
• Increase in oxygen
• Hydration
• Sleep

Current Practices for Teams
• Increased leg room
• Comfortable seats
• Sleeping accommodations
• Private showers

Nike-Teague and Sukhoi: The Current Leading Designs
• In flight biometrics
• Ice and compression sleeves
• Noise-reducing technology
• Lie flat seats or beds
• OLED screens and hydration reports
• Exercise bikes and massage tables

Impacts/Conclusions
Designing airplanes with interiors better suited to the needs of athletes can help with recovery and future performance. By allowing athletes to recover as soon as they get in the air, teams can have healthier athletes, thereby increasing their chances of winning games.

Designing Specifically for Athletes
• NormaTec boots
• Game ready ice/heat/compression systems
• Hydrotherapy
• Massage
• Cupping
• Electronic stimulation