

1. Record Nr.	UNINA9910876648803321
Autore	Campbell R. D
Titolo	Human performance and limitations in aviation // R.D. Campbell and M. Bagshaw
Pubbl/distr/stampa	Oxford ; ; Malden, MA, : Blackwell Science Ames, Iowa, : [US distributor] Iowa State University Press, 2002
ISBN	1-280-21373-6 9786610213733 0-470-70951-0 0-470-77447-9 1-4051-4734-2
Edizione	[3rd ed.]
Descrizione fisica	1 online resource (208 p.)
Altri autori (Persone)	BagshawM (Michael)
Disciplina	629.132/52
Soggetti	Aeronautics - Human factors
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references (p. 187) and index.
Nota di contenuto	Contents; Preface; Part 1 Human Factors: Basic Concepts; 1 Human Factors in Aviation; 1.1 Competence and limitations; 1.2 Becoming a competent pilot; 1.3 Accident statistics; 1.4 Flight safety concepts; Part 2 Basic Aviation Physiology and Health Maintenance; 2 The Basics of Flight Physiology; 2.1 The atmosphere; Composition; Altitude; The physical gas laws; 2.2 The respiratory and circulation systems; Functional anatomy; The hypobaric environment; Hypoxia; Oxygen systems; Cabin pressurisation; Rapid decompression; Decompression sickness; Barotrauma; Hyperventilation; Effects of acceleration 2.3 The high altitude environment Ozone; Cosmic radiation; Relative humidity; 3 Man and the Environment: The Sensory System; 3.1 The central and peripheral nervous system; Central nervous system; Peripheral nervous system; The autonomic nervous (vegetative) system; Workings of the nervous system; 3.2 Vision; Functional anatomy of the eye; The visual field - scanning techniques; Binocular and monocular vision; Night vision; 3.3 Hearing; Functional anatomy of the ear; Flight related hazards to hearing; Effects of altitude change; 3.4 Equilibrium; Functional anatomy of the vestibular system

Motion sickness  
3.5 Integration of sensory inputs; Orientation; Sensory illusions and spatial disorientation; Vestibular illusions; Visual illusions; Approach and landing errors; Prevention of disorientation;  
4 Health and Hygiene; 4.1 Personal hygiene; 4.2 Common minor ailments; Colds; Influenza; Gastro-intestinal upset; 4.3 Problem areas for pilot health; Hearing loss; Defective vision; Hypotension; Hypertension; Coronary artery disease; Obesity; Nutrition; Tropical climates and epidemic disease; 4.4 Intoxication; Tobacco; Alcohol; Drugs and self-medication; Toxic hazards; Carbon monoxide  
4.5 Incapacitation during flight  
Symptoms and causes; Operational coping procedures; Flying after SCUBA diving; Part 3 Basic Aviation Psychology; 5 Human Information Processing; 5.1 Attention and vigilance; 5.2 Perception; Perception illusions; Perceptual subjectivity; 5.3 Memory; Short-term memory (sensory); Long-term memory; Working memory; Motor memory (skills); 5.4 Response selection; Learning principles and techniques; Motivation; 6 Human Error and Reliability; 6.1 Reliability of human behaviour; 6.2 Hypotheses of reality; 6.3 Theory and model of human error; 6.4 Error generation  
Ergonomics  
Economics; Social environment; 7 Decision Making; 7.1 Decision-making concepts; Structure phases; Limits; Risk assessment; Practical application of risk management; 8 Avoiding and Managing Errors: Cockpit Management; 8.1 Error management; 8.2 Safety awareness; Risk area awareness; Error proneness; Error sources; Situational awareness; 8.3 Multi-crew co-ordination; 8.4 Co-operation; Group dynamics; Leadership and management styles; Individual duty and role; Advantages and disadvantages of team work; 8.5 Communication; Communication models; Verbal and non-verbal communication  
Communication barriers

---

### Sommario/riassunto

Human error is cited as a major cause in over 70% of accidents, and it is widely agreed that a better understanding of human capabilities and limitations - both physical and psychological - would help reduce human error and improve flight safety. This book was first published when the UK Civil Aviation Authority introduced an examination in human performance and limitations for all private and professional pilot licences. Now the Joint Aviation Authorities of Europe have published a new syllabus as part of their Joint Aviation Requirements for Flight Crew Licensing. The book has been compl

---