

SELF EXPERIMENTATION.

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Self experimentation commonplace until Maurice Pappworth's book *Human Guinea Pigs* (1967) launched ethical committees. At the Pneumoconiosis Research Unit, Penarth, I was interviewed by John Cotes who developed breathing circuits for the first successful Everest climb, the ultimate in self-experimentation. Wright and McKerrow developed the peak flow meter (1961); I was a subject for experiments breathing coal dust. In Birmingham (1966)¹ I used a purpose built mass spectrometer to study hypoxia on pulmonary hypertension; I had a PA cardiac catheter and arterial sampling, never published because of Pappworth's book. With David Glaister at Farnborough (1967)¹ studied acceleration on my regional lung function in the human centrifuge. In San Francisco with John Severinghaus (1970) induced pulmonary and cerebral oedema after rapid transition by helicopter from sea level to summit of White Mountain (14,246ft)². MRC Northwick Park with JF Nunn (1974)³ studied morphine on ventilatory control using resistance breathing or electrical stimulating of my tooth fillings to simulate surgical pain; morphine dramatically improved tolerance to resistance breathing. With Norman Veall (nuclear medicine pioneer) developed the lung permeability method breathing radioactive (99m TcDTPA) aerosol using ourselves as subjects; very leaky lungs after cigarette smoking (1980)⁴. Smoke inhalation at MoD Porton (1981) (Frank Beswick) and HMS Excellent, Portsmouth⁴, simulating ship interiors filled with fire smoke. Depth anaesthesia using self as subject for anaesthetics with auditory evoked responses (1982)⁵; electric shocks caused awakening but without pain sensation. Leeds (1988)⁶ hyperventilating on entonox causing prolonged apnoea and severe hypoxaemia. Cambridge (1993)⁴ with Alan Baddeley, low dose anaesthetics devastate working memory.

1. Self-experimentation. Bulletin 8. *The Royal College of Anaesthetists*. July 2001. 376-378.
2. The Hypoxia Hilton. *J Roy Soc Med*. 2002;95:606-8.
3. Comparison of the respiratory effects of meptazinol, pentazocine and morphine. *Br J Anaesth*. 1979;51:497-502
4. Changes in alveolar-capillary barrier permeability in fire-fighters. *Br J Indust Med*. 1985;42:631-4.
5. Awareness During Anaesthesia. Ed MM Ghoneim. 2001. Butterworth-Heinemann.
6. Nitrous oxide sedation causes post-hyperventilation apnoea. *Br J Anaesth*. 1991;67:7-12.