EEG epileptiform abnormalities in normal persons

True epileptiform records in normal persons are very unusual. This can be seen as a genetic tendency in families - it is possible to find different patterns of epileptiform patterns in different members of the same family, with or without clinical manifestations. 2 references:


EEG abnormalities in 5,893 jet pilot applicants registered in a 20-year period.

Trojaborg W.

Laboratory of Clinical Neurophysiology, Rigshospitalet, University Hospital, Copenhagen, Denmark.

Abstract

On account of EEG findings in jet pilot applicants examined during 1951-1952, the Royal Danish Air Force (RDAF) accepted EEGs as part of the routine procedures for evaluation of the applicants' fitness. The outlook for a successful completion of the training program was poor for those with a paroxysmal abnormal EEG. As a consequence, candidates were excluded from training on the basis of paroxysmal EEG changes regardless of their clinical findings. During 1956-1975 an EEG was obtained from 5,893 applicants for jet pilot training in the RDAF. Of these, 142 (2.4%) were excluded because of an abnormal EEG. Paroxysmal discharges were induced by intermittent photic stimulation in 90%. Generalized or focal paroxysmal changes were present at rest in 6 applicants, during hyperventilation and sleep in 4 each. Four applicants, although asymptomatic, developed epileptic seizures during intermittent photic stimulation.

PMID: 1582052


Electroencephalogram epileptiform abnormalities in candidates for aircrew training.

Gregory RP, Oates T, Merry RT.

Princess Alexandra Hospital, Royal Air Force Wroughton, Swindon, UK.

Abstract

For 30 years the Royal Air Force has used the EEG as part of the medical screening of candidates for aircrew training. A total of 13,658 males aged 17-25 years have been examined. None had a previous history of significant illness. Sixty-nine (0.5%) of these showed unequivocal epileptiform discharges, 44 (58%) occurring only on photic stimulation. Those with EEG discharges of uncertain significance such as 6 and 14 Hz positive spikes, 6 Hz spike and wave, and non-specific paroxysmal activity were not included. A group of 43 with a follow-up period of 5-29 years have been reviewed. Only one person developed unequivocal epilepsy. If this rate is combined with results from similar studies, the chance of healthy individuals with EEG abnormalities of this type subsequently developing epilepsy is 2-3%.

PMID: 7678394