HEARING AIDS
AND
FITNESS TO FLY FOR CLASS 1 PILOTS

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- The mandatory use of HA within Class 1 pilots is determined by the Authority, AMC1 MED.B.001 limitation to class 1

- HAL: means wearing HA
- More than 50% of the HA are of open-type.
- New numeric HA now exist.
- In France, the ear prothesis technician must successfully complete a 3-year program in order to practice
Important Issue ...

- Regardless of the deafness type, this question must take into account medical, cultural and economic factors.
- **LEVEL 1**: No HA is prescribed if there is no significant disturbance of daily routine and activities.

- **LEVEL 2**: HA are considered when auditory deficiency has no significant impact on daily life and no impact whatsoever on professional duties.

- **LEVEL 3**: HA are necessary when auditory deficiency impacts both personal and professional activities.
THE AIM OF HA IS TO INCREASE THE LEVEL OF HEARING IN THE CONTEXT OF NOISY BACKGROUND

- Hearing in a silent environment is easy and of no challenge.
- The end goal is to amplify the sound during daily routine life using HA or using a mandatory helmet during flight duty.
HEARING AIDS

- HA are considered efficient if the vocal audiometry results generate more than 15dB.
- The ENT conducts an ear prosthesis tone audiometry test and a vocal audiometry test with and without HA, in silence in noise.
Between 2015 and 2017 following Authority examination, it was determined that 14 class 1 pilots required a mandatory helmet during flight duty in order to be fit for flying and were categorized with a HAL limitation.

Evolutive ear pathologies, middle ear cholesteatoma and vestibular schwannoma must first be ruled out before HA can be prescribed.
- In cases deemed fit to fly using a mandatory helmet, both tone and vocal audiometry results, with and without background noise (speech discrimination hearing test), must be submitted to the Authority. An Analysis of the audio prosthesis benefit is also verified.

- The British (UK) Authority requires a mandatory functional hearing test.
Clinical case study: 41 year old class 1 pilot
- Post surgery otosclerosis resulting in bilateral (left and right) hearing loss at 60 dB tone audiometry.
- At 80 dB vocal audiometry in silence, 100% of words are heard.
- At 90 dB vocal audiometry in noise, 100% of words are heard.
With bilateral HA, a 25 dB increase in vocal audiometry in silence is observed while a 15 dB increase is noted in vocal audiometry in noise.
Decision by authority SSL : HAL / mandatory helmet during flight duty / Survey Aemc / SIC 36 month
- New decisions regarding the fitness of class I pilots to fly depend on both the in-depth knowledge of deafness by the AME and technical improvements.