Class 1/2 certification - Aortic Root Dilatation

Aortic Root Dilatation

Flying may need to be restricted (note 1)

Cardiology review (note 2) to include: Echocardiography MRI required if Root >= 4.0 cm

Results acceptable (note 3)

Certification based on clinical assessment, diameter and rate of change (note 4)

Follow up (Note 5)

NOTES:

1) May require OML (Class 1) or OSL (Class 2) whilst under investigation.

2) By a cardiological specialist. Cases of Marfan's Syndrome shall be individually assessed. There should be no symptoms. Risk factors reviewed incl smoking & family history. Measurements should be made at end-diastole of 1) outflow tract diameter 2) sinuses of Valsalva 3) sinotubular junction 4) tubular ascending aorta. The largest measurement should be utilised. CT is an acceptable alternative to MRI but repeated studies increases radiation exposure.

3) The cardiology report will be reviewed by the Authority Medical Section (AMS) for class 1 and AME for Class 2. Applicants with Marfans will need special consideration. It may be necessary to see the investigations in which case the actual tracings/films/videos will be requested. In borderline cases a secondary review panel of cardiologists will be convened. An OSL may be applied to a Class 2 certificate.

4) The principal measurement to determine medical certification of pilots with aortic root dilatation is MRI. Indexing root area to Body Surface Area (BSA) standardises for large or small BSA.
BSA indexed diameter (BSAID) = measured value x 1.73 ÷ BSA(m^2). The following parameters to be used as a guide:

	Bicuspid		**Tricuspid**	
	BSAID	Rate of change	BSAID	Rate of change
Unrestricted Class 1&2	<4.25 cm	<0.5 cm/yr	<4.5 cm	<0.5 cm/yr
Class 1 OML / Class 2 Unrestricted	<4.5 cm	<1 cm/yr	<4.75 cm	<1 cm/yr
Unfit	>=4.5 cm	>=1 cm/yr	>5.0 cm	>=1 cm/yr

5) Follow up - at least annual echocardiography. MRI (or CT) is required at least 2 yearly where diameter >4.25 cm or rate of change >0.5 cm/yr.

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