Management of Pregnancy in Ladies with Cardiac Dis.

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ESC GUIDELINES

2018 ESC Guidelines for the management of cardiovascular diseases during pregnancy

The Task Force for the Management of Cardiovascular Diseases during Pregnancy of the European Society of Cardiology (ESC)

Endorsed by: the International Society of Gender Medicine (IGM), the German Institute of Gender in Medicine (DGesGM), the European Society of Anaesthesiology (ESA), and the European Society of Gynecology (ESG)

Classification of Functional Heart Disease

No clinically applicable test accurately measures functional cardiac capacity. The clinical classification of the New York Heart Association (NYHA) is based on past and present disability and is uninfluenced by physical signs:

- Class I. *Uncompromised—no limitation of physical activity:* These women do not have symptoms of cardiac insufficiency or experience anginal pain.
- Class II. *Slight limitation of physical activity:* These women are comfortable at rest, but if ordinary physical activity is undertaken, discomfort in the form of excessive fatigue, palpitation, dyspnea, or anginal pain results.
- Class III. *Marked limitation of physical activity:* These women are comfortable at rest, but less than ordinary activity causes excessive fatigue, palpitation, dyspnea, or anginal pain.
- Class IV. *Severely compromised—inability to perform any physical activity without discomfort*: Symptoms of cardiac insufficiency or angina may develop even at rest. If any physical activity is undertaken, discomfort is increased.

World Health Organization (WHO) Risk Classification of Cardiovascular Disease and Pregnancy with Management Recommendations

Risk Category	Associated Conditions
WHO 1—Risk no higher than general population	Uncomplicated, small, or mild: Pulmonary stenosis Ventricular septal defect Patent ductus arteriosus Mitral valve prolapse with no more than trivial mitral regurgitation Successfully repaired simple lesions: Ostium secundum atrial septal defect Ventricular septal defect Patent ductus arteriosus Total anomalous pulmonary venous drainage Isolated ventricular extrasystoles and atrial ectopic beats
• Cardiology consultation once or twice during pregnancy	
WHO 2—Small increase in risk of maternal mortality and morbidity	If otherwise uncomplicated: Unoperated atrial septal defect Repaired Fallot tetralogy Most arrhythmias
• Cardiology consultation each trimester	
WHO 2 or 3—Depends on individual case	Mild left ventricular impairment Hypertrophic cardiomyopathy Native or tissue valvular heart disease not considered WHO 4 Marfan syndrome without aortic dilation Heart transplantation
• Individualized care similar to WHO categories 2 or 3 depending on lesion and disease severity	

WHO 3—Significantly increased risk of maternal mortality or expert cardiac and obstetrical care required	Mechanical valve Systemic right ventricle—congenitally corrected transposition, simple transposition post Mustard or Senning repair Post-Fontan operation Cyanotic heart disease Other complex congenital heart disease
• Care directed by multispecialty team; monthly or bimonthly cardiac and obstetrical monitoring	
WHO 4—Very high risk of maternal mortality or severe morbidity; pregnancy contraindicated and termination discussed	Pulmonary arterial hypertension Severe systemic ventricular dysfunction (NYHA III-IV or LVEF <30%) Previous peripartum cardiomyopathy with any residual impairment of left ventricular function Severe left heart obstruction Marfan syndrome with aorta dilated >40 mm
• Pregnancy contraindicated. • If pregnancy occurs, monthly or bimonthly cardiac and obstetrical monitoring	

Summarized from European Society of Gynecology, 2011; Nanna, 2014; Thorne, 2006; World Health Organization, 2010.

TABLE 49-4. Risks for Fetal Heart Lesions Related to Affected Family Members

Cardiac Lesion	Congenital Heart Disease in Fetus (%)		
	Previous Sibling Affected	Father Affected	Mother Affected
Marfan syndrome	NS	50	50
Aortic stenosis	2	3	15–18
Pulmonary stenosis	2	2	6–7
Ventricular septal defect	3	2	10–16
Atrial septal defect	2.5	1.5	5–11
Patent ductus arteriosus	3	2.5	4
Coarctation of the aorta	NS	NS	14
Fallot tetralogy	2.5	1.5	2–3

NS = not stated.
Data from Lupton, 2002.

For nearly all gravidas with cardiac dis. vaginal delivery is preferred ,

However, urgent c/s is suggested for advanced heart failure and hemodynamic instability despite treatment

C/S should be considered :

- obstetric indications
- patients presenting in labour on oral anticoagulants
- with aggressive aortic pathology,
- in acute intractable HF.
- in severe forms of PH(Eisenmenger's syndrome)