

# The Effect of Changing Maternal Position from Left Lateral to Supine Position on Umbilical and Fetal Cerebral Blood Flow Indices

#### A Thesis

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All scientific work is incomplete whether it be observational or experimental.

All scientific work is liable to be upset or modified by advancing knowledge.

That does not confer upon us a freedom to ignore the knowledge we already have, or to postpone the action that it appears to demand at a given time.

A Bradford Hill, 1965

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#### LIST OR ABREVIATIONS

**ACA** Anterior cerebral artery ACC Aortocaval compression syndrome BAS Balloon atrial septostomy **Brain-sparing** BS  $\mathbf{C}$ Propagation speed of sound in the medium C/U Cerebral/umbilical CAI Color amplitude imaging Color Doppler energy CDE **CHD** Congenital heart disease CO Cardiac output **CPR** Cerebral umbilical ratio **CVO** Combined ventricular output CW Continuous wave DV Ductus venosus **EDF** End-diastolic flow  $\mathbf{F}_{\mathbf{d}}$ Doppler shift frequency **FGR** Fetal growth restriction Fetal heart rate **FHR** FO Foramen ovale  $\mathbf{F}_{\mathbf{r}}$ Received frequency  $\mathbf{F_t}$ Transmitted frequency **FVWs** Flow velocity waveforms HLH Hypoplastic left heart **ICA** Internal carotid artery Intrauterine growth restriction **IUGR IVC** Inferior vena cava LCIA&V Left common iliac artery and vein LV Left ventricle Middle cerebral artery **MCA NST** Non-stress tests **OCT** Oxygen challenge test Patent ductus arteriosus **PDA PFC** Persistent fetal circulation PΙ Pulsatility index