

WHAT DOES fMRI MEASURE?

- Whenever neurons in a particular brain area are firing, blood flow to that area increases (Roy & Sherrington, 1890).
- The increased blood flow brings more oxyhemoglobin to that area.
- The inflow of oxyhemoglobin increases more than the increase in oxygen consumption. Thus, the concentration of deoxyhemoglobin decreases in the veins.
- Because deoxyhemoglobin is magnetic and not uniformly distributed (it's in red cells), the decrease in deoxyhemoglobin makes the magnetic field more homogeneous.
- When the magnetic field becomes more homogeneous, the MR signal increases in intensity.