Self Assessment - Module D

14) Name the lung volumes & give normal values of each
   a) Inspiratory Reserve Volume   3,100 mL
   b) Expiratory Reserve Volume   1,200 mL
   c) Tidal Volume   500 mL
   d) Residual Volume   1,200 mL

15) What is the normal RV/TLC ratio? 1,200 mL/6,000 mL = .20 or 20%

16) What is the primary defect in restrictive lung diseases? Reduced Lung Volumes

17) What is the primary defect in obstructive lung diseases? Reduced Flow Rates

18) Name the flowrates that can be measured during a PFT
   a) Forced Expired Volume$_{1\ sec}$/Forced Vital Capacity (FEV_1/FVC)
   b) Peak Expiratory Flow Rate (PF or PEFR)
   c) Forced Expiratory Flow$_{200\text{-}1200}$ ($FEF_{200\text{-}1200}$)
   d) Forced Expiratory Flow$_{25\text{-}75}$ ($FEF_{25\text{-}75}$)

19) Patients with asthma are often taught to monitor their flowrates at home. Which flowrate is measured in the home setting because of the portability of the monitor? Peak Expiratory Flow Rate (PF or PEFR)

20) When performing a PFT, predicted values are based on three parameters. They are:

   a) AGE
   b) HEIGHT
   c) SEX
   d) (Some authors include weight, but although it is usually reported on a PFT, the value is not included in the formulae which determine predicted values)

21) Give the normal values for the FEV1% 83%, however some age variation may exist. "Obstruction" is definitely present if the percentage is below 65%.

22) The FEVt% is normal in RESTRICTIVE diseases and are decreased in OBSTRUCTIVE diseases.

23) Complete the following tables

Test	Actual	Predicted	% Predicted
FVC (L)	3.4	4.8	**.708 or 71%**
TLC (L)	5.0	6.0	**.8333 or 83%**
FRC (L)	1.8	2.4	**.75 or 75%**
RV (L)	0.6	1.2	**.50 or 50%**

14) Does the patient have obstructive or restrictive disease? Reduced lung volumes indicate a RESTRICTIVE lung process.

Test	Actual	Predicted	% Predicted
FVC (L)	3.4	4.3	.79 or 79%
TLC (L)	6.8	5.8	1.17 or 117%
RV (L)	2.0	1.0	2.0 or 200%
FRC (L)	3.3	2.3	1.43 or 143%

14) Does the patient have obstructive or restrictive disease? This is an obstructive process because there is an increased amount of trapped air (can't get it out) as exemplified by an increased RV, FRC, and TLC. This diagnosis can be made even WITHOUT spirometry.

Test	Actual	Predicted	% Predicted
FVC	3.6	4.15	.867 or 86.7%
FEV1	1.66	3.45	.481 or 48.1%
FEV1%	46%	83%	.554 or 55.4%

14) Does the patient have obstructive or restrictive disease? Obstructive

Test	Actual	Predicted	% Predicted
FVC	3.2	4.65	.688 or 68.8%
FEV1	2.7	3.87	.698 or 69.8%
FEV1%	84%	83%	1.01 or 101%

14) Does the patient have obstructive or restrictive disease? Restrictive

15) Name the obstructive diseases: CBABE (Cystic Fibrosis, Chronic Bronchitis, Asthma, Bronchieactasis, Emphysema