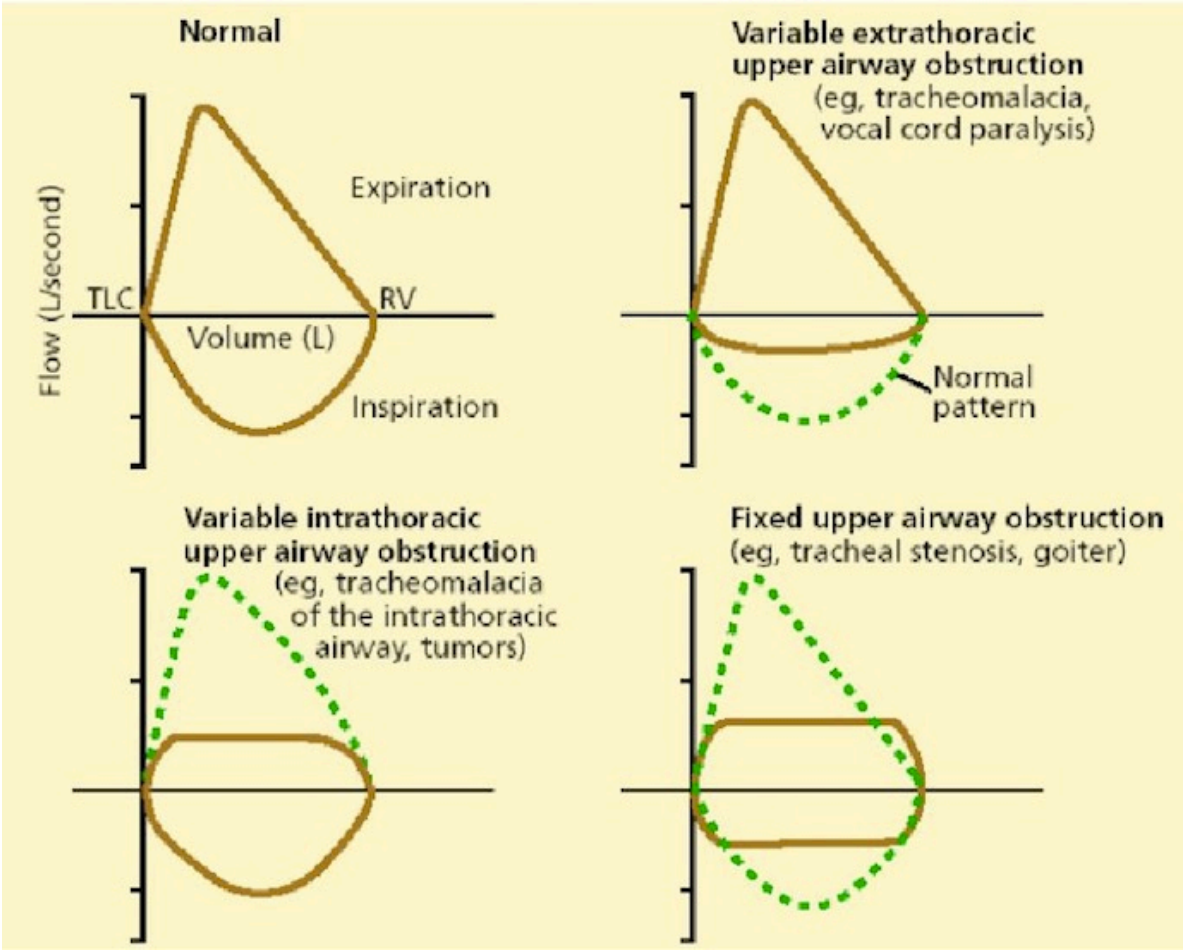
PFT lab

Airway obstruction flow loops

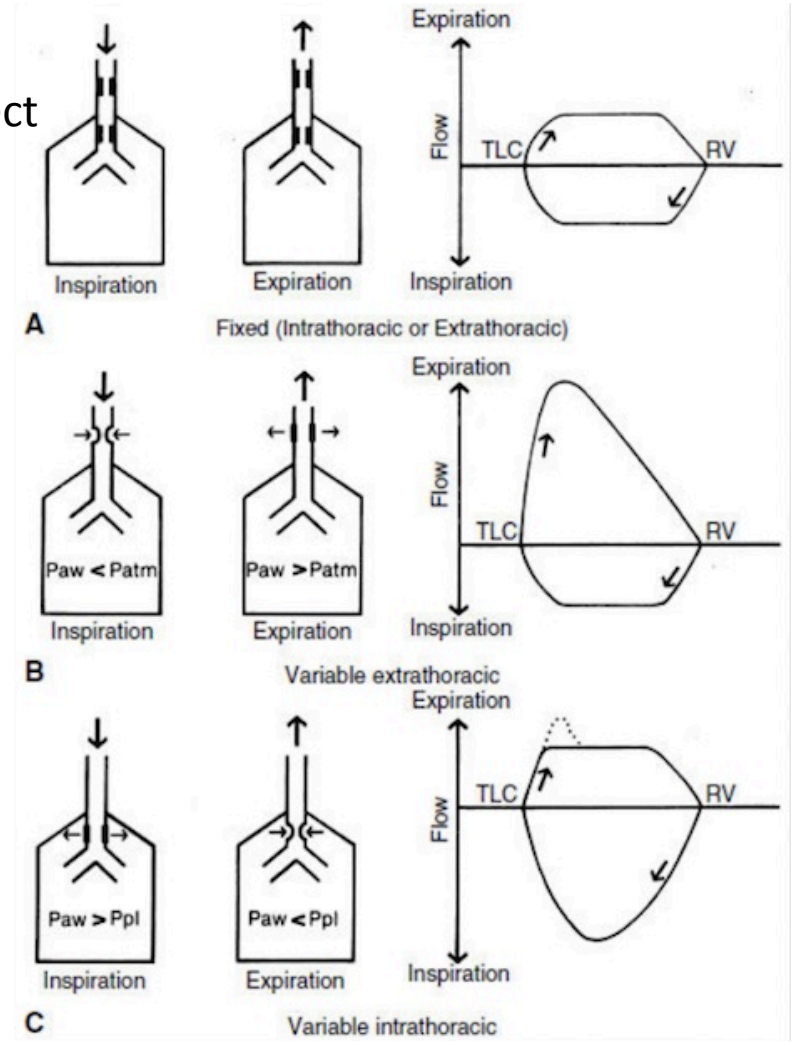
Flow loops demonstrating attenuation in the flow volume loops.



Physiology behind the flow volume loops

Fixed airway defect

Remember the nasal sniff



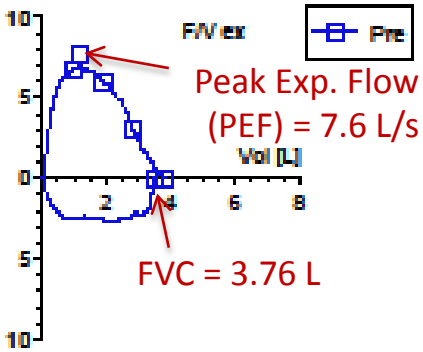
Age: 32 Years Race: Caucasian Pack Years:
Technician: RRT, CPFT Melton Paula

Spirometry

		Pred	Meas	% pred	LLN
FVC	L	3.43	3.76	110	2.81
FEV 1	L	3.14	3.52	112	2.50
FEV1/FVC	%	84	94	111	73
PEF	L/s		7.61		
FET	sec		2.82		

Know definitions of FEV1 and FVC , and know that FEV1/FVC is normally about 0.8 and is decreased by obstructive disease.

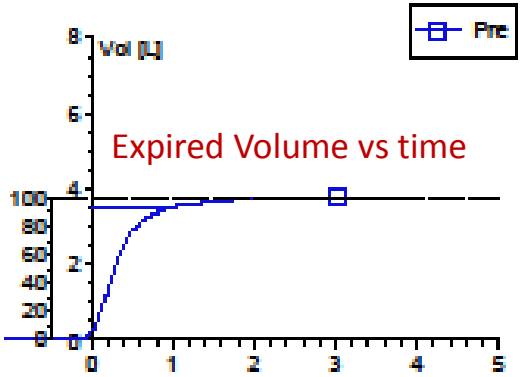
Flow-Volume Loop



Diffusing Capacity

	Pred	Meas	% pred	LLN
DLCOSB	30.67	21.50	70	22.71
DLCOcorr	30.67	27.48	90	22.71
DL/VA	5.68	4.64	82	4.48
VASB	4.89	4.63	95	3.53
IVC	3.43	3.72	109	2.81
BHT		11.51		
Hb		8.00		

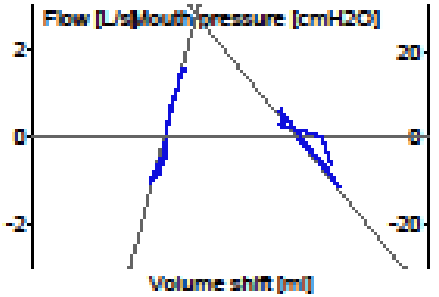
Know that DLCO is a measure of diffusing capacity. Other lines in this table are more for pulmonary fellows than M2's



Lung Volumes

		Pred	Meas	% pred	LLN	ULN
VC MAX	L	3.43	3.76	110	2.81	4.05
IC	L		2.38			
ERV	L		1.38			
RV	L	1.21	1.54	127	0.83	1.59
TLC	L	4.68	5.31	113	3.91	5.45
FRCpl	L	2.65	2.93	110	1.91	3.39
RV/TLC	%	28	29	105	21	35

Should know definitions of all the lung volumes and capacities above. Know which ones can be measured with plain spirometry (without He dilution or plethysmography).



Graph immediately above is beyond what M2's are expected to know.

Predicted Values:
Spirometry: GLI 2012
Lung Volumes: Goldman
DLCO: Miller non-smoking
MIP/MEP (PIMAX/PEMAX): Black & Hyatt
DLCO values are affected by Hgb; measured DLCO is

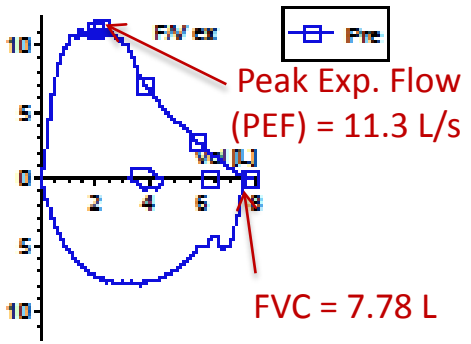
Workstation	DAMB1902
Channel	Flow (MS-BID-EAS) Box pressure (MS-BID-EAS)

Age: 32 Years Race: Caucasian Pack Years:
Technician: RRT, CPFT Melton Paula

Spirometry

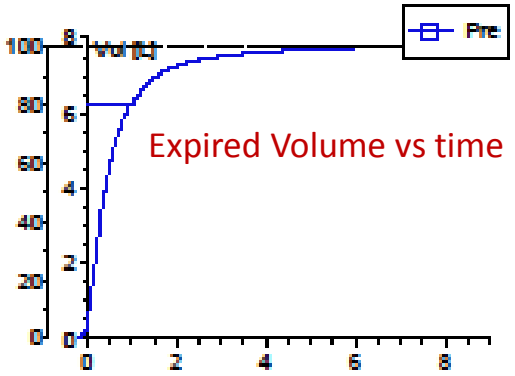
		Pred	Meas	% pred	LLN
FVC	L	6.19	7.78	126	5.07
FEV 1	L	5.46	6.23	114	4.34
FEV1/FVC	%	81	80	99	70
PEF	L/s		11.30		
FET	sec		8.03		

Flow-Volume Loop



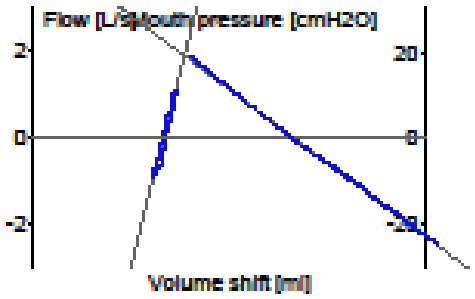
Diffusing Capacity

	Pred	Meas	% pred	LLN
DLCOSB	37.78	54.20	143	29.82
DLCOcorr	37.78	63.83	169	29.82
DL/VA	4.71	6.02	128	3.51
VASB	8.17	9.01	110	6.81
IVC	6.19	7.53	122	5.07
BHT		10.60		
Hb		10.20		



Lung Volumes

		Pred	Meas	% pred	LLN	ULN
VC MAX	L	6.19	7.81	126	5.07	7.31
IC	L		4.71			
ERV	L		3.10			
RV	L	2.38	1.78	75	1.63	3.12
TLC	L	8.74	9.58	110	7.30	10.17
FRCpl	L	4.42	4.88	110	3.19	5.66
RV/TLC	%	28	19	67	21	35



Respiratory Muscle Function

Workstation	DAMB1902
Channel	Flow (MS-BID-EAS) Box pressure (MS-BID-EAS)

Predicted Values:
Spirometry: GLI 2012
Lung Volumes: Goldman
DLCO: Miller non-smoking
MIP/MEP (PIMAX/PEMAX): Black & Hyatt
DLCO values are affected by Hgb; measured DLCO is