EBM Board Review

Sensitivity: True Positives/(True positives + false negatives) i.e. *total with disease*

**Key points--Those who have disease

Specificity: True negatives/(True negatives + false positives) i.e. *total without disease*

**Key points—those without disease

**Another key point is that sensitivity and specificity are independent of prevalence of disease.

Positive Predictive Value: True positives/(True positives + False positives)
i.e. *all who test positive*

**Probability of disease in patient with a positive test
**Prevalence dependent

Negative Predictive Value: True negative/(True negatives + False negatives)
i.e. *all who test negative*

**Probability of no disease if a test is negative
**Prevalence dependent

		DISEASE +	DISEASE -
TEST	+	TP	FP
	-	FN	TN

Type 1 Error: conclude there is a difference when there is none
Type 2 Error: conclude there is no difference when there is one

Likelihood ratio: Ratio of the likelihood of a result in someone with disease/ likelihood of a result in someone without disease (remember you use this with pretest probability to predict post test probability). A LR> 10 or <0.1 is thought to be "conclusive" (increases or decrease post-test probability enough to give a conclusive result). A LR or >1 increases post-test probability whereas a LR of < 1 decrease post-test probability of a target disorder.

+LR (likelihood ratio for a positive test)
sensitivity
1-specificity

-LR (likelihood ratio for a negative test)
1-sensitivity
specificity

Accuracy: TP +TN/ Total number