MRI Parameter Relationships

Parameter Increased	TIME	SNR	CNR	RESOLUTION	ARTIFACTS AND NOTES
TR	+	+	-	N/A	Increased TR reduces T1 weighting
TE	N/A	-	+	N/A	Increased TE increases T2 weighting
ETL	-	-	+	N/A	High ETL can cause image blur; increases T2 weighting; MT effects; reduces susceptibility
BANDWIDTH	-	–	-	N/A	Reduces echo spacing; increase image sharpness; decrease chem shift; reduce motion
FREQ MATRIX	+	-	N/A	+	Increases TE
PHASE MATRIX	+	-	N/A	+	
FOV	N/A	++	N/A	-	Reduces wrap artifact
NEX	++	+	N/A	N/A	Reduces motion; SNR increase sqrt2
SLICE THICKNESS	N/A	++	N/A	-	Increases volume averaging

Provided by Scott Johnson, MS RT (R)(MR) - edited by meuon, a weird spinning particle in the machine.

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