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MRI Paramter 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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