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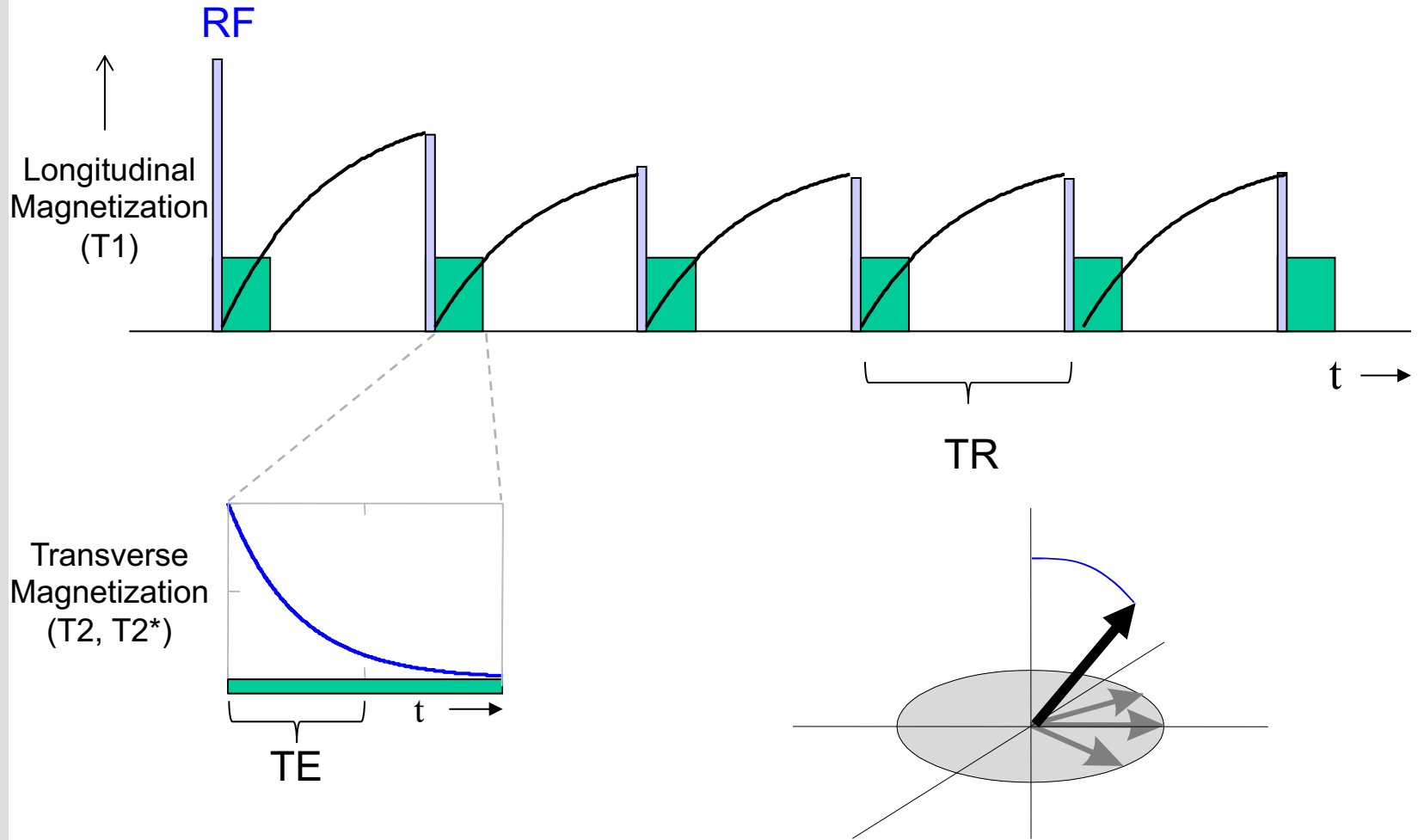
# MRI pulse sequences for neuroimaging research

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additional RF pulses

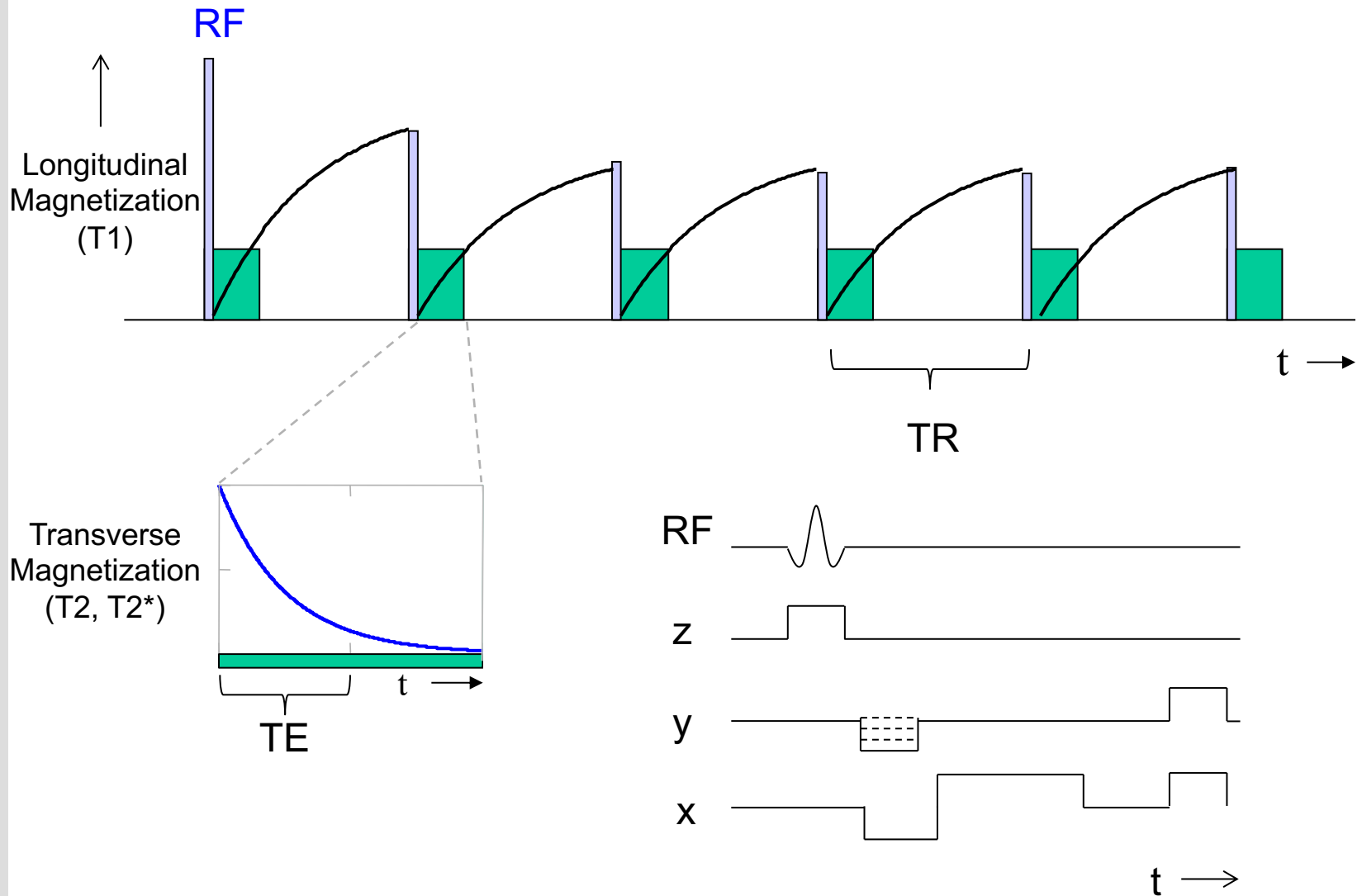


# Crusher gradients



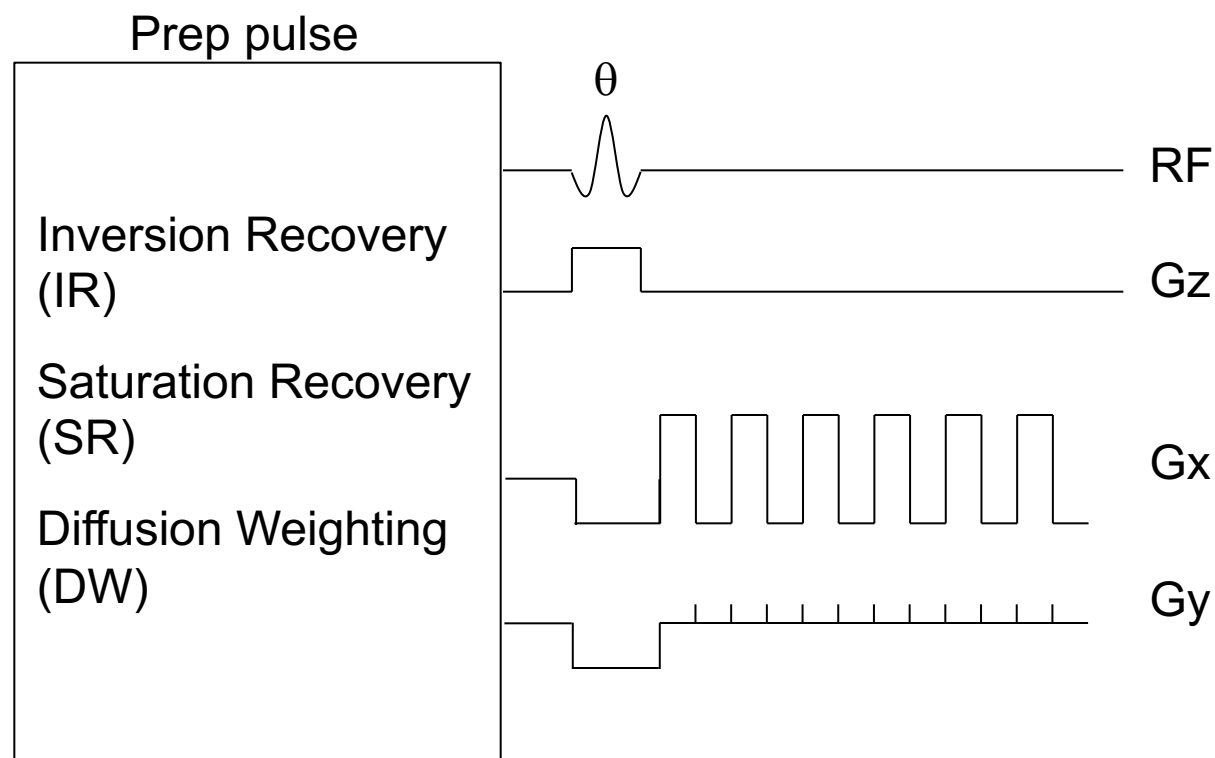


# Crusher gradients





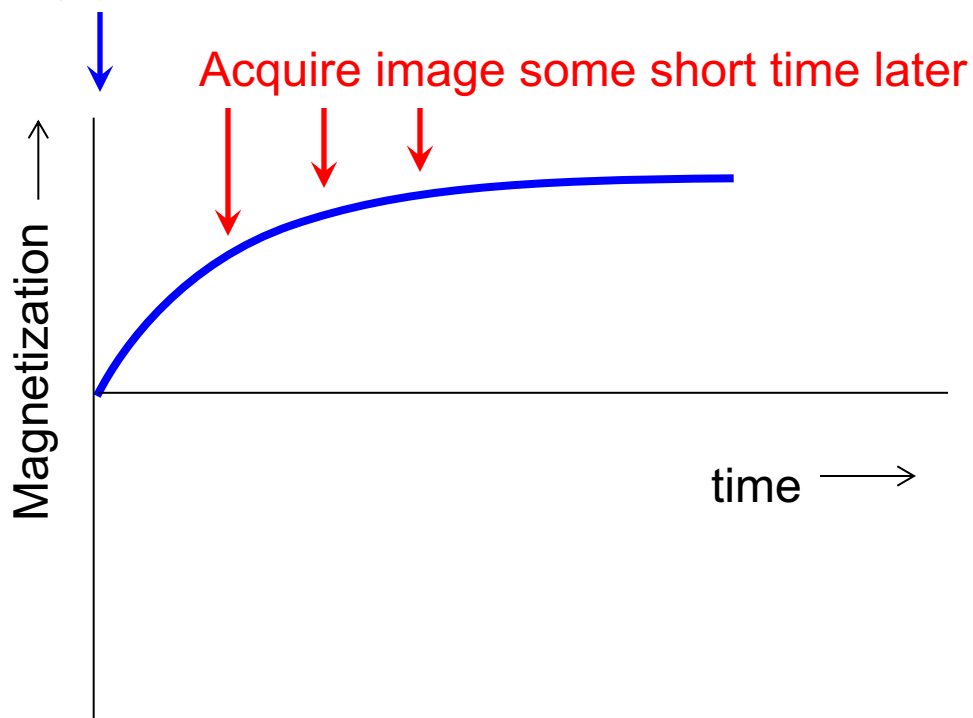
# Preparation pulses



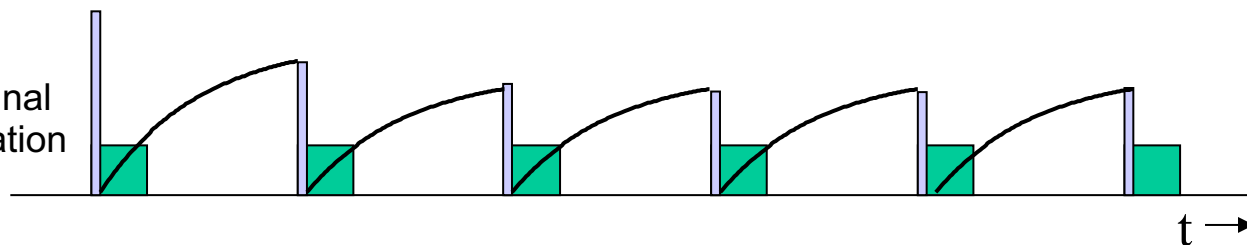


# T1 weighting – via preparation pulses

Apply  $90^\circ$  pulse

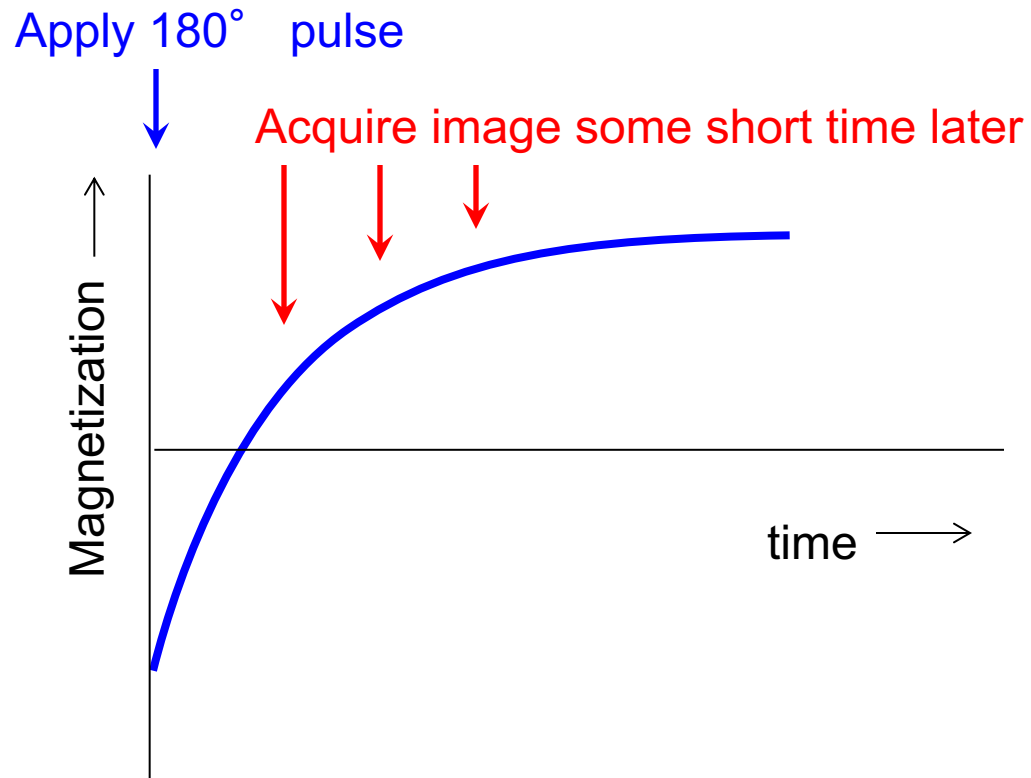


Longitudinal  
Magnetization  
(T1)



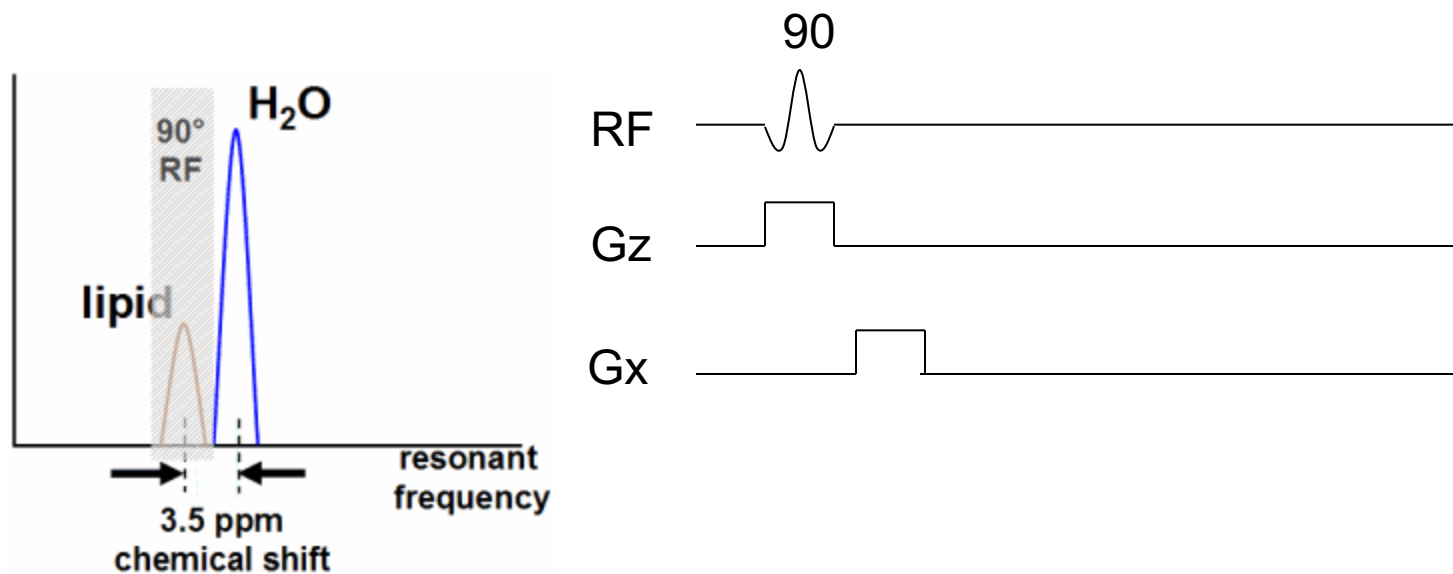


# Inversion recovery





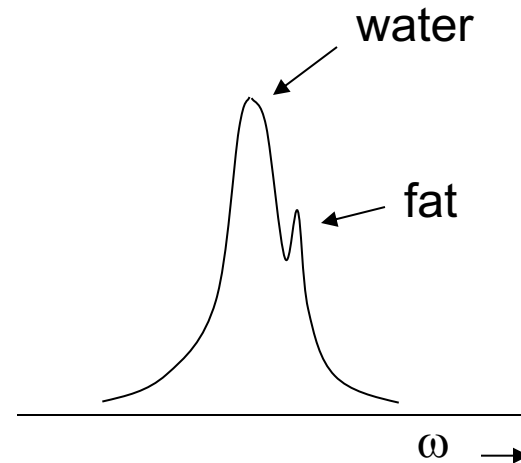
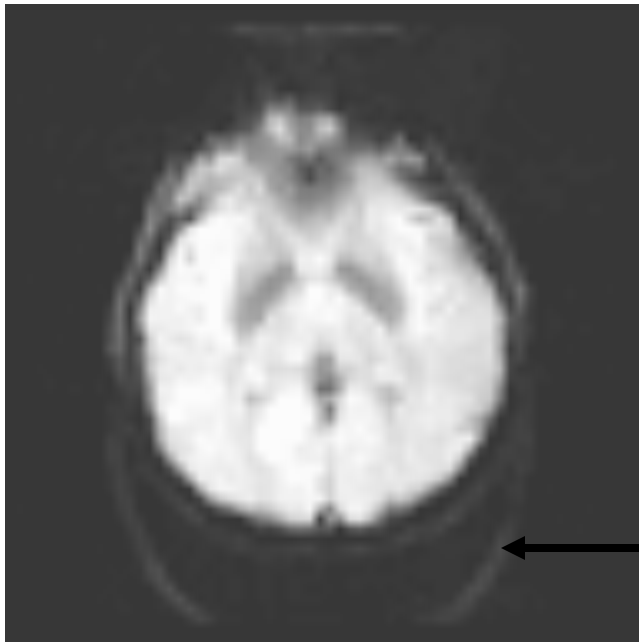
# Fat suppression





# RF – Fat suppression

- *Ghost image of the fat, displaced in the phase-encode direction*



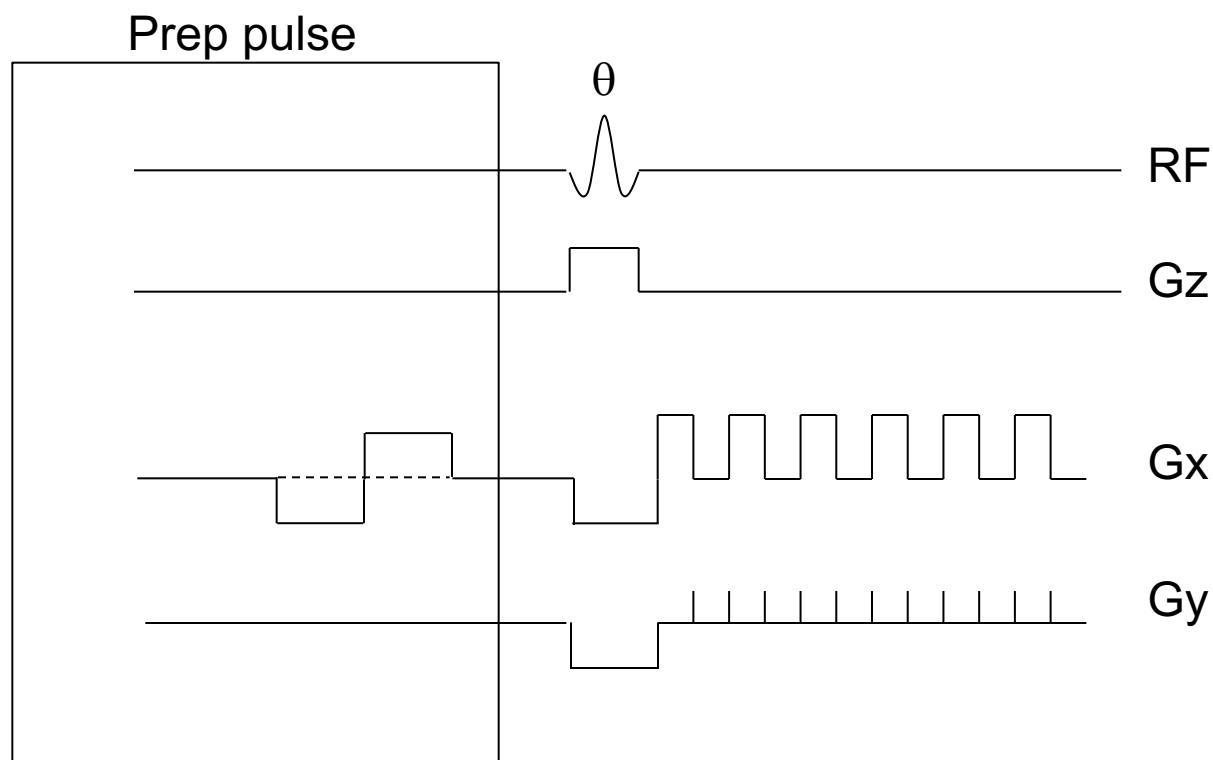
**Solution:**

- turn on fat suppression
- improve shim





# Motion (Flow, Diffusion) weighting

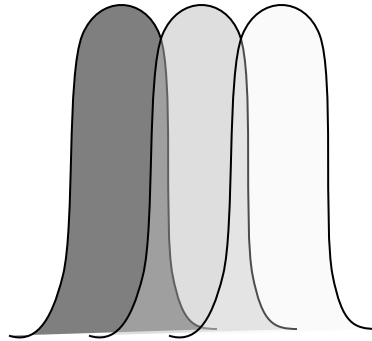
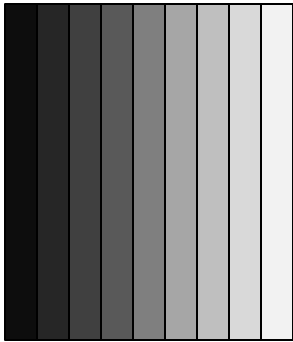




# Slice acquisition

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## Sequential



## Interleaved

