



# Guidelines for MR Imaging of Sports Injuries

European Society of Skeletal Radiology  
Sports Sub-committee

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# Abbreviations and clarifications

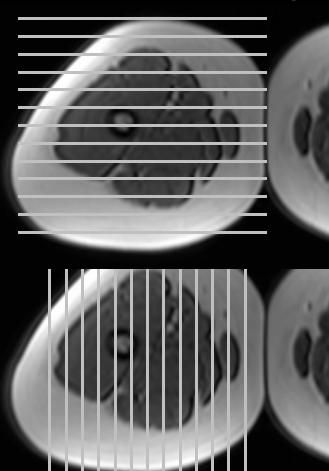
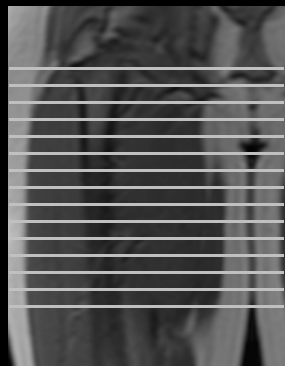


- Ax = axial
- Cor = coronal
- Sag = sagittal
- FOV = field of view
- PD = proton density
- TE = time to echo in milliseconds
- FS = fat suppressed
- Int = intermediate
- Int FS: this is a fat suppressed sequence with a long TR and a TE between that of a traditional PD (e.g. TE= 10-20) and a traditional T2 (e.g. TE=80-100). The advantage of this sequence is that the TE is short enough to maintain sufficient signal for visualisation of the anatomy (like a PD) yet long enough to be more fluid sensitive (like a T2)
- For STIR sequence, TI (inversion time) should be 140-150 at 1.5T

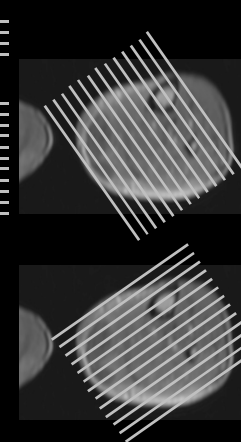
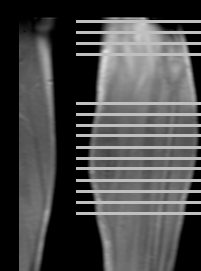
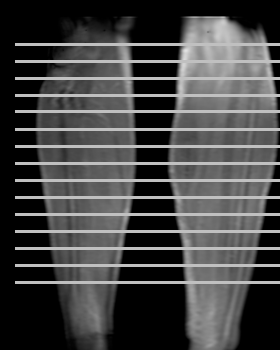


# Thigh / Calf

- Patient feet first in supine position, phased-array surface coil over thighs or calves, legs together, marker at site of pain
- Axials of both thighs or calves with wide margins above and below the markers (STIR/ T1/ GRE)
- Axial, coronal and sagittal PD & PD FS covering one thigh or calf
  - in calf, make sure coronals and sagittals are along axis of lower leg using tibia and fibula as landmarks since leg is often rotated



Thigh e.g. quadriceps



Calf e.g. gastrocnemius

# Thigh / Calf

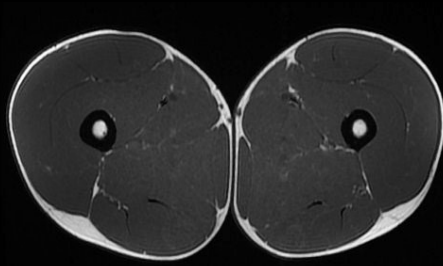


	Sequence	FOV (max)	Slice (max)	TE	Matrix (min)
BILATERAL SURVEY	Ax T1	38 cm	7 mm	Min	256x256
	Ax STIR/FS	38 cm	7 mm	40-60	256x256
	Ax GRE	38 cm	7 mm	Min	256x256
ONE THIGH/ ONE CALF	Ax PD	24 cm	5 mm	35	288x256
	Ax PD FS	24 cm	5 mm	35	288x256
	Cor/Sag PD FS	32 cm	3 mm	35	288x256

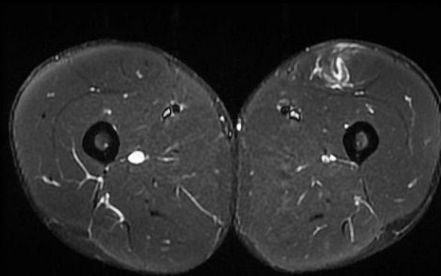
# Thigh e.g. quadriceps



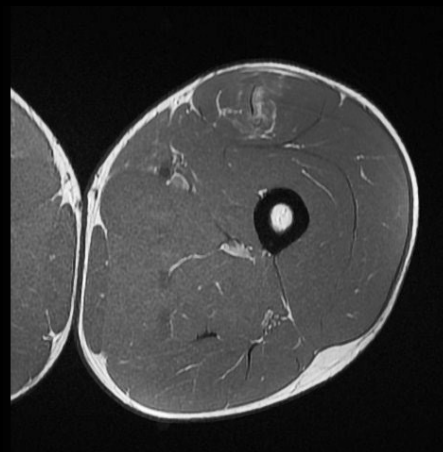
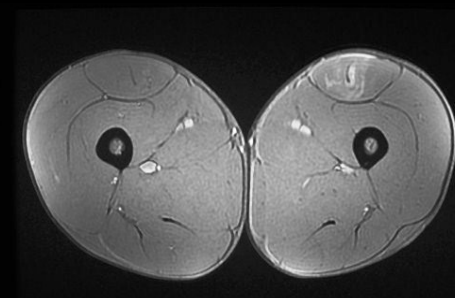
Ax T1



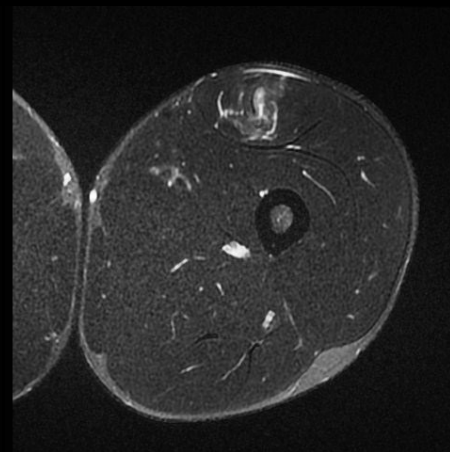
Ax STIR



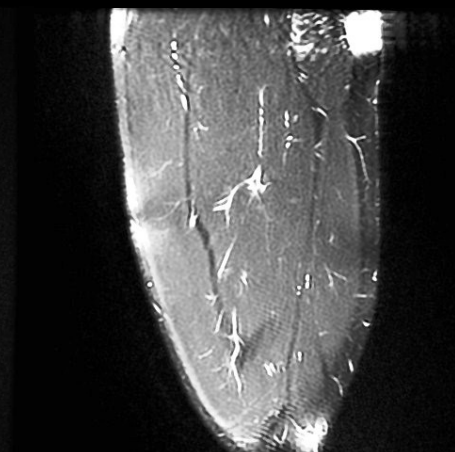
Ax GRE



Ax PD



Ax PD FS

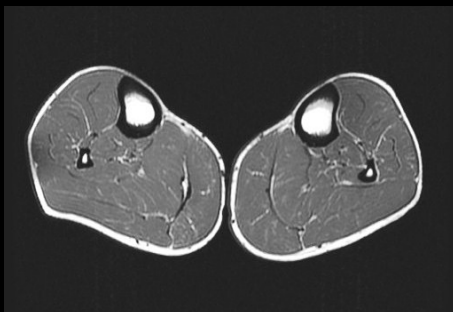


Cor PD FS

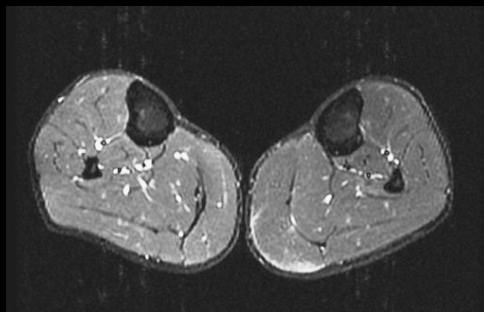
# Calf e.g. gastrocnemius



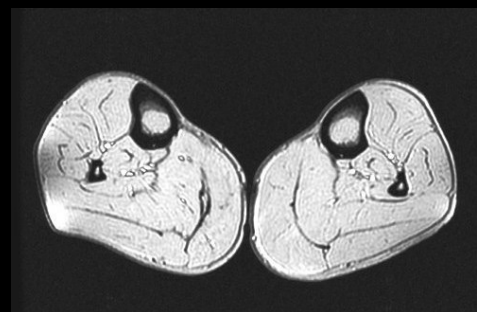
Ax SE T1



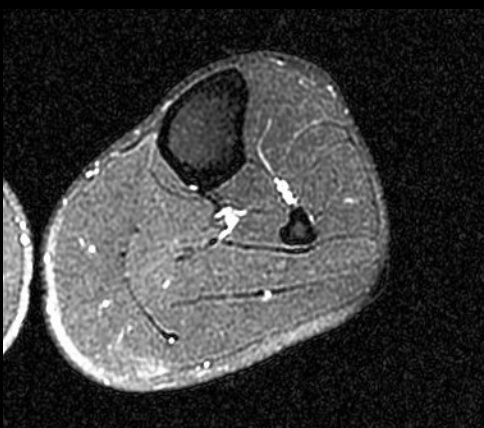
Ax STIR



Ax GRE



Ax PD



Ax PD FS



Sag PD FS