

## Comparison of 1.5T vs. 3.0T MRI Machines

*This is an extra resource to go along with the original article:  
 How Strong Does Your MRI Magnet Really Need to Be?*

	1.5T	3.0T
<b>Cost:</b>	Basic ~ \$1.8M Mid ~ \$2.1M Premium ~ \$2.8M	Basic ~ \$2.6M Mid - Premium ~ \$3.6M  Also note that you may need to upgrade the shielding in your MRI room to accommodate the stronger magnetic field.
<b>Image quality:</b>	Considered to provide state-of-the-art imagery for most clinical conditions.  Less signal for very highly detailed images, particularly of smaller body parts.	Improved imaging for conditions such as: - Brain MRS, DTI and DWI - Spine - Prostate.
<b>Artifacts:</b>	Produces clear images with fewer artifacts.	May produce more artifacts such as from blood, fluids or breathing.
<b>Speed and throughput:</b>	You can shorten scan times for quicker throughput, but there will be some sacrifice of image quality.	Scan times on the 3 T can be shortened with less impact on image quality. Overall throughput is faster than 1.5T.
<b>Maintenance and repair:</b>	Parts and maintenance are relatively easy to obtain and cheaper than the higher field strength machines.	Parts and maintenance are more expensive and harder to come by.
<b>Safety:</b>	1.5T MRI machines are considered to be safe for most patients and have fewer implant issues.	Fewer exams may be possible on pregnant patients with 3.0T MRI machines.

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