# Imaging: MRIs

**MRI: magnetic resonance imaging** is a technique of taking a picture of a person's body using magnetic energy. There is no radiation as there is in xrays or CTs. People with metal implants, some brain aneurysm clips or injuries with metal may not be able to have an MRI performed. Orthodontic braces may cause artifact limiting the use of MRI of the head or neck but the study can still be done if needed. Children with Vagus Nerve Stimulators may undergo MRI but requires:

1. use of the head coil
2. use of a cool pack over the lead wire to limit overheating
3. rechecking the settings in our office afterwards

**Duration:** the study takes about 1 – 1 ½ hours and requires the child to remain very still. Therefore, sedation is used for most children less than 10 years of age or for those older children with anxiety, claustrophobia or difficulty not moving.

**Sedation:** may be needed for some children and adolescents. If so, Dr. Siegler will ask your PCP to perform a history and physical (H&P) and fax the filled out H&P form to us after which we will order the study with sedation (if an insurance authorization is also needed then scheduling will be delayed until your PCP obtains the authorization). Anesthesiologists or the sedating physician or nurse may use oral or IV (intravenous catheter) routes. If the sedation is ineffective or for children with certain disorders (asthma, Down syndrome, severe CP, autism, others) an anesthesiologist will perform general anesthesia. Your child should not eat at least 6 hours before study time and not drink liquids 4 hours before the study. Do not give your child chewing gum, mints or candy less than 4 hours prior to study time. If your child is an infant ask the radiology department on feeding guidelines. Be sure to ask about guidelines on taking medications (often are allowed to be taken with sips of water) but this should be cleared with the radiology or anesthesiology department.

**Contrast:** is typically used in all pediatric neurology studies as it is usually medically indicated and efficient. Convenience supports initial use of contrast: if the radiologist finds an abnormality after a non-contrast study, then a repeat study with contrast and a second sedation would be needed on a different day which also may delay diagnosis and treatment. Reactions to contrast can occur. If your child has a history of allergies to contrast or you have concerns about the risk, talk with the nurse or radiologist in the radiology department.

**Authorization:** insurance companies may require an authorization which your PCP may obtain with Dr. Siegler's office note. The process may take 1-2 weeks for non-emergent studies. We ask that your PCP obtain the authorization and fax to Child Neurology of Tulsa and we will schedule the study. If sedation is needed, your PCP will be asked to perform a history and physical and send the H&P form to us, then we will order the study with sedation. Appeals for denials are subject to a minimum charge of $25 (Non-Covered Benefit) depending on the amount of work and time involved.

**Results:** may take 1-3 days depending on the radiologist. Dr. Siegler prefers to schedule an appointment to review the films and discuss the results.