What is Autism Spectrum Disorder?

According to *Autism Speaks*, "Autism spectrum disorder (ASD) and autism are both general terms for a group of complex disorders of brain development. These disorders are characterized, in varying degrees, by difficulties in social interaction, verbal and nonverbal communication and repetitive behaviors." www.autismspeaks.org

What is Dyspraxia or Developmental Coordination Disorder?

Understood, a resource for parents of children with learning and attention issues, defines Dyspraxia or Developmental Coordination disorder this way:

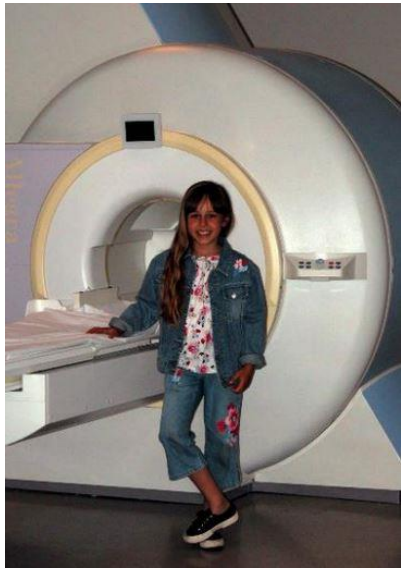
"Dyspraxia isn't a sign of muscle weakness or of low intelligence. It's a brain-based condition that makes it hard to plan and coordinate physical movement. **Children with dyspraxia tend to struggle with balance and posture. They may appear clumsy or "out of sync" with their environment.**

It can affect the development of gross motor skills like walking or jumping. It can also affect fine motor skills like the hand movements needed to write clearly and the mouth and tongue movements needed to pronounce words correctly." Dyspraxia can affect social skills too. Children with dyspraxia may behave immaturely even though they typically have average or above-average intelligence." www.understood.org

What does it feel like inside the MRI scanner?

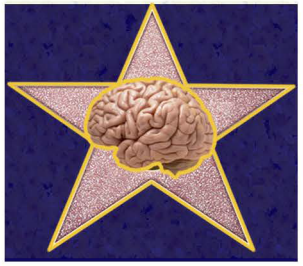
Kind of like lying in bed!

- Children are positioned comfortably on a bed that slides into the MRI.
- They'll be able to enjoy a video of their choice during part of the time in the scanner using goggles and headphones.
- An intercom system allows the child and researcher to speak to each other at all times.
- The MRI does not use X-rays, and there are no known harmful effects of the procedure.



Date of Preparation: 11/1/16
USC IRB # UP-14-00093
Expiration Date:

See STARS &Your BRAIN in LA!



Child fMRI Study at USC!

USC University of Southern California

Motor
I nterpersonal
Neuroimaging
Developmental
Study

For more information visit our website:

Chan.usc.edu/minds

Email: AZlab@usc.edu

Text or call: (424) 888-2543

Lisa Aziz-Zadeh, Ph.D. & Mirella Dapretto, Ph.D.
The Chan Division of Occupational Science and Occupational Therapy

Study ID: UP-14-00093 Valid From: 11/3/2017 To: 11/2/2018

What is this study about?

The goal of this USC study is to look at brain functioning and how it relates to coordination and social skills in developing children. We hope to better understand children's social and motor abilities using functional magnetic resonance imaging (fMRI). Using this safe brain imaging technique, we can take pictures of children's brains while they observe, think about, and do different motor tasks.

Who Can Participate?

You may be eligible if:

- Your child is **8-16 years old**
- You & your child speak **English**
- Your child is **Right-handed**
- Your child is **typically developing**
- OR Your child has a diagnosis of **Autism Spectrum Disorder**

- OR Your child has a diagnosis of **Dyspraxia or Developmental Coordination Disorder.**
  He/she may also be eligible if he/she is very clumsy.

How long will it take?

This study involves 8-10 hours of participation split across 2 separate visits. Each visit will last anywhere from 4-5 hours. **Evening and weekend appointments are available**.

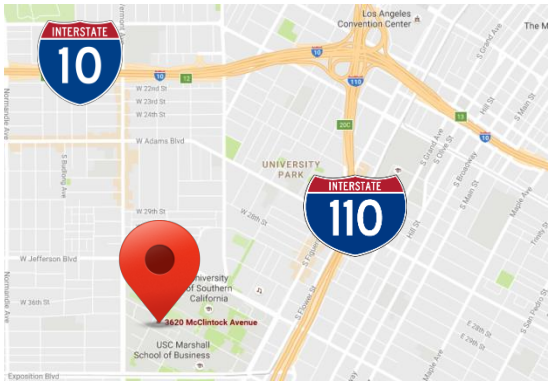
What will happen during the study?

- You and your child will both fill out a set of questionnaires.
- Your child will be asked to complete short cognitive and coordination tasks.
- Magnetic resonance imaging (MRI) will be used to take pictures of your child's brain while he/she performs a task.
- Your child will be able to watch a video of his/her choice during portions of the MRI.

Where will this study take place?

The University of Southern California Brain & Creativity Institute: **3620 McClintock Ave, Los Angeles, CA 90089-2921**

(*Parking will be prepaid, Airfare and hotel not covered*)



What are the benefits of participating?

- While there will be no direct personal advantages from participation in this study, by becoming involved in this project you will be contributing to the advancement of scientific research in the field of brain development and coordination disorders.
- Participants will receive compensation for time and effort. Each family will receive $75 per day up to $150.
- Each participant will also receive pictures of his/her brain.

Safety & Confidentiality

All procedures performed during the study are safe and have no known harmful effects. They are noninvasive and painless. MRI does not involve exposure to radiation.

Information and results of all testing, will be kept strictly confidential.

Study ID: UP-14-00093 Valid From: 11/3/2017 To: 11/2/2018