

University of Colorado Boulder  
**Assent to Participate**  
 (Ages 13-17)

The Adolescent Brain Cognitive Development (ABCD) Study: CU Boulder

**Why are you in this study and who else is in the study?**

Dr. Banich and Dr. Friedman and other scientists are doing this study to learn more about young people's brains and how they think and change as they get older. You are being asked if you want to be part of this study because you were 9 or 10 years old at the beginning of the study. About 12,000 young people across the country are involved in this study and we hope you will stay in the study for 10 years total.

**Why is this study being done?**

The purpose of the study is to gain a better understanding of mental, social, emotional, and physical development during this important stage of life, and to learn more about why teens may be different in their development. Scientists will try to identify which factors seem to promote better outcomes, as well as which factors may increase a young person's risk for a negative outcome.

**What will happen in the study?**

Interview and Questions

You will answer questions on a computer or tablet or a phone with a researcher about your activities, thoughts and feelings. We might ask questions about school, family, and friends. We will not discuss your answers with anyone, including your parent or caregiver. However, if we learn that you or someone else is in immediate danger, we may need to report this to the authorities and may need to discuss it with your parent/caregiver to help ensure safety. Otherwise your answers are private.

- You will work in a room with a researcher and you will be asked to do some activities and tasks. These include activities where you solve problems or are asked to remember things. We might ask you to do things as fast as you can, and do math or reading problems.
- We might ask questions about smoking, drugs, and alcohol and about any experiences you may have had with these substances. We may ask questions about your personal and physical/sexual interactions. We may also ask questions about events you may have experienced in your life, including things that may have been scary, harmful, or traumatic, such as witnessing or experiencing accidents, crimes, violence, or abuse. Even if these questions do not apply to you, your answers are still important. We won't share your answers with anyone unless we feel you are in immediate danger. Then we will discuss this with you and your parent/caregiver. Like with other questions, you do not have to answer these questions if you would prefer not to answer them.
- We might ask questions about your health over the past year, including questions about whether you have been diagnosed with or treated for any illnesses, have had any sexually transmitted infections (STIs), or have been hospitalized.
- We will also ask your parent/caregiver some questions about you and your family. The questions you and your parent/caregiver are asked are different. Just as we keep your information private, we will not share with you their answers to the questions.

Brain Magnetic Resonance Imaging (MRI)

We will scan your brain with an MRI machine which is like a giant camera every other year. You will lie down on a bed that slides into a large tunnel. You will watch a movie, press buttons, and follow some instructions while we scan your brain. We will ask you to stay still while you are in the scanner. We will put a clip on a finger to measure your heart rate and a band around your abdomen to measure your breathing. To help you stay still, we will put foam pillows around your head. Even with the pillows, the back of your head could hurt from being in the same position for a long time and your eyes could get tired from looking at the screen. You should tell us if you feel uncomfortable at any time. You will also have a microphone and headphones to talk to us anytime.

The MRI is loud so you need to wear earplugs and headphones. We have a mock scanner you can look at or practice in. You will be in the MRI for about an hour and a half to two hours. You can take a break in the middle. Sometimes the scans of your brain are not as clear as we would like. If this happens, we might ask you to come again. The additional scan could take the same amount of time or less. If we ask you to do another MRI, you can decide whether you want to or not.

Female participants may be asked to provide a urine sample for a pregnancy test before the brain scan can be done in the MRI machine. In this study we do not scan pregnant participants, so if the pregnancy test is positive we will not scan you in the MRI.

If the researchers see anything unusual in your brain MRI scans, Dr. Banich will discuss this with your parent/caregiver.

### Biological Samples

- We might ask you to drool into a tube; your saliva allows us to study genetic materials inside cells and chemicals inside your body. If we don't get enough for the study we might ask you to try it again at home later.
- We may ask you to give us saliva and/or urine to check for exposure to drugs and to blow into a plastic tube to check for alcohol. If a test shows you may be under the influence of alcohol or drugs other than as may be prescribed to you, you cannot be in the study that day, but we can reschedule your visit for a later day.
- We may ask for some strands of hair from your head; this will allow us to check for things like drugs. The hairs are taken from a hidden spot so it won't be noticeable.
- We may ask you or your family to give us some of your baby teeth that have fallen out to find out more about what chemicals were in your environment when you were growing up.
- If you are coming to the study for the third year (or later), we will ask you for a sample of your blood from a vein in your arm for genetic analyses and health indicators, now and in the future. If you do this you may feel brief pain, get a bruise, or feel dizzy. We may be able to use a numbing cream or spray, which may reduce the discomfort. It might be red or white for a bit where we put the cream, and it might itch or feel numb and if you are allergic, you may get a rash. You don't have to do the blood draw and you can change your mind. If you try to give us a sample, you will get an extra \$20.

### Blood Pressure

- We might ask you to wear a cuff around one of your arms while you are sitting still so we can measure your blood pressure. It may feel tight as the cuff inflates. The monitor will automatically

measure your blood pressure three times, so you will feel it get tight and then relax three times in a row. We do this to study how your heart is pumping your blood.

#### Information Sharing

If you let ABCD take a blood sample and/or your blood pressure, we will give you and your family written information about these measurements. It will only contain information about your blood pressure and the amount of cholesterol (fats) and glucose (sugar) in your blood. This might help you and your family learn about your health.

Put an "X" next to the statement that applies to you:

Yes, I agree to give blood \_\_\_\_\_

No, I do not want to give blood \_\_\_\_\_

I'm not being asked to give blood at this visit \_\_\_\_\_

#### Activity tracker (Fitbit)

We might ask you and your parent/caregiver if you would wear a Fitbit to measure your heart rate, activity and sleep for 3 weeks. We will tell you how to wear and use it. There is a small chance you might get a rash when you wear the Fitbit. If you see redness, please take the Fitbit off and contact us. After you have worn it for 3 weeks we will ask you to return it and answer some questions online. You can choose to not to wear the Fitbit and stay in the study.

Put an "X" next to the statement that applies to you:

Yes, I agree to wear a Fitbit \_\_\_\_\_

No, I do not want to wear a Fitbit \_\_\_\_\_

I'm not being asked to wear a Fitbit at this visit \_\_\_\_\_

#### Mobile Device Usage Apps

We may ask if you are willing to have one or more apps on your device for 3 weeks that will monitor your device use habits. If you agree, we will ask you some questions about your device use and family rules about screen time. We will then help you install the app(s). After 3 weeks, we will ask you to uninstall the app(s) and answer some questions online. These apps cannot know what you are looking at, what websites you visit, or any content you view. They can only tell what other apps you use on your device, how much you use them, and how many times you press a key or type a word. They cannot tell what keys you are pressing, or what words you are typing.

Put an "X" next to the statement that applies to you:

Yes, I agree to install these apps on my device \_\_\_\_\_

No, I do not want to install these apps on my device \_\_\_\_\_

I'm not being asked to install these apps on my device this visit \_\_\_\_\_

#### School records

We might ask your parent/caregiver permission to use information from your school records. The records may include attendance, classes taken, grades and test scores. We might ask your teachers some questions about how you are in school.

### Follow up

We will call you about every 3-6 months to ask questions about things you have been doing, how you have been feeling, and make sure we have the correct information to get in touch with you again.

The year after your first visit, and then again every 2 years after that, we will ask you to come in again, but for less time (about 3-4 hours), and ask you to do some of the things you did before, but without the brain MRI. About 2 years after you started the study, and then again every 2 years, we will ask you to do most of the same things, like the brain MRI, and computer tasks for about 6-7 hours.

### ***How much time does the study take and will I be paid?***

You may do the study on the same day with breaks or over two days. You will be paid for doing the study. We will give you snacks and/or a meal when you come to the study. We will not ask you to miss school if possible. You and your parent or caregiver might be able to choose to come on one day, over two days or you may have the option to complete your visit with a few other people. We hope you will stay involved in the ABCD Study for up to 10 years.

The interviews every 6 months will take about 15 minutes and you will be paid for each interview. This may be done on the phone.

You will be compensated for your time participating in the study. If you do not finish a study session, you will be paid \$10 for every hour completed.

- Baseline: \$100 (MRI)
- Year 2: \$50
- Year 3: \$100 (MRI)
- Year 4: \$60
- Year 5: \$150 (MRI)
- Year 6: \$75
- Year 7: \$175 (MRI)
- Year 8: \$100
- Year 9: \$200 (MRI)
- Year 10: \$125

6-month interviews: \$15 each interview. During each MRI session there is a reward task performed where you can earn a little more money. This averages about \$20.

If you choose to do the blood draw you will be paid an extra \$20.

If you choose to wear the Fitbit tracking device, you will be compensated with \$20 when you return the device and finish the questionnaires.

If you choose to participate in the installation of apps to monitor mobile device usage, you will be paid an additional \$20.

If you opt to not complete the MRI for reasons other than having braces or an incompatible medical device, or living far away from a study site, your compensation will be \$75 less.

You will be paid a bonus of \$20 if you complete your yearly in-person visit on the originally scheduled appointment date.

Because we sometimes have last minute appointments to fill, we may contact you to ask if you could come in on a day prior to your scheduled one. If you agree, we will pay you an additional \$20. That means if we ask to you to move from your originally scheduled time, a \$40 bonus payment will be added to your compensation.

The payment will be given as cash, check, gift card, or as a ClinCard (a reloadable credit card that can be used at stores, online, or for cash at local banks).

***Do I have to be in the study?***

You do not have to be in this study unless you want to. Even if your parent/caregiver agrees to be in the study, you can still choose not to. We will not be upset if you don't want to do any testing at this time. You can ask questions any time and if you change your mind about doing something, you can stop right away. If we think that something is unsafe for you, we will not ask you to do it. It is important to us that you feel comfortable and safe during the study. Tell us if something does not feel right, and we will fix it or you can stop doing it.

***Will other people find out about me?***

We will do all we can to keep your information confidential. What you tell us will not be shared with your family, friends, or school. We will keep all of the data we collect in a computer or in a secure storage place, but the information will only have a number to identify it, not your name. That way, only a very small number of the scientists on the ABCD Study team will know which information is yours and they are all required to keep this private. We will not tell anyone your answers, that you are in the study, or any other information you give us, not even your parent/caregiver, unless we feel that based on your responses your health or safety or the health or safety of someone else is at risk. If you tell us about something that has happened that is dangerous to you or others we may have to tell others (such as the authorities) about it.

All of the data that we collect as part of this study will be made available to many other researchers so that they can use it to answer research questions and make new discoveries or inventions. This may include some leftover specimens we collect (for example: hair, saliva, and/or blood). But this information will never have your name or any other identifying information on it. To keep your information private, we will require any researchers who ask to use the information in the future that they are not allowed to try to figure out who was in the study. Researchers who use your specimens will not be allowed to create what are called "immortalized cell lines." Immortalized cell lines are cells that have been modified in a lab to keep dividing and growing indefinitely. While we do not yet know all the ways your specimens may be used, we do know they will not be used to create immortalized cell lines.

This form explains the research study. Please read it carefully and ask questions about any part of it. If you do not have questions now, you may also ask us anytime in the future.

***Your Signature and Assent***

You agree to participate.

\_\_\_\_\_  
Subject Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature of Person Obtaining Assent

\_\_\_\_\_  
Date