Consent of an Adult to Be in a Research Study

In this form "you" means a person 18 years of age or older who is being asked to volunteer to participate in this study.

Participant's Name_____

Medical Record Number_____

What is the purpose of this form?

This form will provide you with information about this research study. You do not have to be in the study if you do not want to. You should have all your questions answered before you agree to be in this study.

Please read this form carefully. If you want to be in the study, you will need to sign this form. You will be given a copy of this form.

Who is funding this study?

This study is being funded by the University of Virginia Strategic Investment Fund (SIF). The continuous glucose monitors (CGM) will be provided at no cost by Dexcom Inc.

Key Information About This Research Study

Principal Investigator:	Chiara Fabris, PhD Center for Diabetes Technology University of Virginia P.O. Box 400888 Charlottesville, VA 22903 434-982-6483
Sponsor	UVA Strategic Investment Fund (SIF)

You are being asked to take part in a research study. You do not have to take part in this study. You should only agree to take part in this study after reading this consent form and discussing it with the study team. You may also discuss this with your family, friends, health care providers or others before you make a decision.

What problem is this study trying to solve?

Managing blood glucose in patients with Type 1 diabetes is an ongoing challenge. This is especially true for females during their menstrual cycle. You are being asked to take part in this study because you are a regularly cycling females, between the ages of 18-40 years old who has been diagnosed with Type 1 Diabetes. This study will recruit females who are using oral contraceptive with one week of placebo as well as females who are not using hormonal contraceptive ("free cycling").

This study is trying to find out how much the menstrual cycle effects the blood glucose variability and the effectiveness of insulin delivery. Your glucose levels will be tracked using a commercially available continuous glucose monitor (CGM) throughout the duration of three menstrual cycles. The CGM used in this study is approved by the FDA to measure glucose in patients with diabetes.

Why would you want to take part in this study?
You will not be helped by being in this study, but the information gained by doing this study may help others in the future.

Why would you NOT want to take part in this study?
You might not want to take part in this study because we will ask you to wear a study CGM and a study activity tracker during the study. Though these are commercially available items, there are some risks associated with wearing them. The study CGM may cause bleeding or redness at the insertion site. The study activity tracker may cause skin irritation. You will also have a blood draw at the start and the end of the study to test your hemoglobin A1c. You will use an app to keep track of your menstrual cycle. If you are free cycling, you will be asked to use an ovulation kit.

What will I have to do if I take part in this study?
Full details of all the procedures are found later in this form. If you take part in this study you will:

- Share your medical history
- Have a blood draw at the beginning and end of the study
- Wear a CGM and activity tracker throughout the study (3 months)
- Keep track of the amount of carbohydrates you consume each day
- Carbohydrates that you eat or drink without taking insulin (unbolused carbs) must be recorded in the Decom App/Receiver
- Use an ovulation test (if you are not using oral contraception)
- Keep track of menstrual cycle (logging data) and use an app to do so
- Tell the study team if you receive a positive COVID-19 test result

What is the difference between being in this study and getting usual care?
All of the procedures described above are being done for research purposes. If you were not in this study, these things would not likely be done.

What other treatments may I receive if I decide to not take part in this study?
Instead of being in this study, you may choose not to participate.

Up to 55 people will be in this study at UVA.

How long will this study take?

Your participation in this study will last about 3 months and will require about 5 study visits.

What will happen if you are in the study?

Please note that all procedures are performed for research purposes only*

Visits identified can either be completed in person at the clinical site or remotely over the secure WebEx.

Screening Visit (about 2-3 hours)

Visit 1 (Day 1)

If you agree to participate, you will sign this consent form before any study related procedures take place. Before you can start in the study, there will be a screening period. You will have tests and procedures during this time to make sure you are eligible, and it is safe for you to participate. These include the following:

- Collection of information about you: contact information, your diabetes history, past and current medical conditions, surgical procedures, menstrual history, allergies, medications and supplements, social history (including drinking and smoking)
- Review of your pump settings and average daily insulin use over the past seven days
- Physical exam, if available, (including self-reported height, weight, and vital signs)
- HbA1c to test for your average blood sugar over the last 3 months
- A urine pregnancy test if you are a woman who can become pregnant. The pregnancy test must be negative in order for you to participate and will be repeated at the final study visit.

If you are a current CGM user, the study team will ask permission to download the last 3-months of your data from your personal CGM data. This download is optional and does not impact your ability to participate in this study.

If these items show you are eligible, you may begin your participation in the study. This visit may begin on the same day as your Screening visit.

STUDY EQUIPMENT TRAINING

- Continuous Glucose Monitor (CGM) - You will wear a study CGM sensor to collect data over three menstrual cycles.
    - You will receive a study CGM to use each day during the study.
    - If you are not familiar with the study CGM, you will be trained on how to use it during the study. You will be trained on how to insert the CGM sensor into your abdomen.
    - You will receive study CGM supplies.
    - You will be trained on how to upload the study CGM and your insulin pump.

- You will be asked to bring your personal laptop to the screening appointment to download specific software to be used during data collection. If you do not have a laptop or do not want to use your personal laptop for this research, a memory stick will be provided. You will be instructed on how to upload the information from the CGM.

- Ovulation Kit
  - If you are a woman who is NOT taking contraception, you will be trained on the use of ovulation kits in order to track your cycle. An ovulation kit measures Luteinizing Hormone (LH) in your urine. The LH levels rise in the middle of your menstrual cycle near the start of the ovulation phase. Ovulation happens about 14 days before the start of your menstrual cycle.

- Activity Tracker
  - You will wear an activity tracker on your wrist during the entire study.
  - You will be taught how to upload the information from the activity tracker.
  - You may remove the activity tracker before bathing.

- Menstrual Tracking App
  - You will be taught how to use this app and record information about your menstrual cycle
  - You will be asked to download the study recommended app to record dates of beginning of menstrual cycle and ovulation.

- Study Phone
  - In order for the study team to get the data from the CGM, the activity tracker, and menstrual tracking app, the information on the devices needs to be uploaded.
  - You may use your personal phone or a study phone to record the CGM and menstrual cycle data. You will share your CGM and menstruation information monthly with the study team. You will be contacted by the study team if data collection is not adequate, meaning that there must be at least 6-7 of the last days of CGM data input within the last 30 days.

- Carbohydrate Counting
  - You will be asked to record the carbohydrates consumed each day (i.e., meals, snacks, hypoglycemia treatments).
  - You will be asked to record all carbohydrates (i.e. meals, snacks, carbohydrate treatments and the insulin that you dose yourself for these carbohydrates) in your insulin pump.
  - Carbohydrates that you eat or drink without taking insulin (unbolused carbs) must be recorded in the Decom App/Receiver, not in your insulin pump.

Monthly Monitoring

Visit 2,3,4 (Day 2-90)

- Wear CGM and activity tracker each day through three (3) menstrual cycles
- Record monthly menstrual cycle in App
- Upload data collected on insulin pump, CGM, the activity tracker, and menstrual tracking app each month and provide to study team
- Study team members may assist you on obtaining study data from the web-based servers. You may choose to provide your personal login information for the team to copy this data.
- Monthly contact with the study team
- For subjects not on oral contraception, you will need to take an ovulation test each month you are enrolled in the study.

Final Visit (about 1 hour)

Visit 5 (~ Day 90)

A final visit will be scheduled once you have completed three (3) menstrual cycles. Because of the potential for changes in cycles, the final visit timeline from the start of the study will be based on your cycle and not scheduled at the beginning of the study. This visit may occur at the Clinical Research Unit or remotely. If visit does not occur at the Clinical Research Unit, supplies can be returned to the study team via FedEx. Procedures to be completed during this visit will include:

- CGM and insulin pump data will be downloaded and provided to the study team
- Menstrual dates and ovulation data will be provided to the study team
- A pregnancy test will be performed (urine); photograph of the test result will be provided to the study team
- Hemoglobin A1c (collected at the clinical site or at a local laboratory)

Study Schedule

	Screening	Monthly Monitoring	Final
Study Days	1*	2-90	~90
Visit	1	2,3,4	5
Informed consent	x		
Review study eligibility	x		
Medical history (optional)	x		
Pregnancy test	x		x
Physical exam (optional), height, weight, and vital signs (self-reported)	x		
HbA1c	x		x
CGM use	x		
Activity tracker use		x	
Ovulation test (if applicable)		x	
Record menses in app		x	
Data uploads provided to study team		x	x
Monthly check-ins with staff		x	
Return study equipment			x

* Visit 1 may be split over 2 days

What are your responsibilities in the study?

You have certain responsibilities to help ensure your safety. These responsibilities are listed below:

- You must complete each study visit.
- You must be completely truthful about your health history.
- Follow all instructions given.
- You should tell the study doctor or study staff about any changes in your health or the way you feel.
- Inform the study doctor or study staff as soon as possible if you have to take any new medications, including anything prescribed by a doctor or those that you can buy without a prescription (over-the-counter), including herbal supplements and vitamins. The study doctor will let you know if you can take these medications.

If you want to know about the results before the study is done:

During the study your study leader will let you know of any test results that may be important to your health. In addition, as the research moves forward, your study leader will keep you informed of any new findings that may be important for your health or may help you decide if you want to continue in the study. The final results of the research will not be known until all

the information from everyone is combined and reviewed. At that time you can ask for more information about the study results.

What are the risks of being in this study?

Risks and side effects related to treating type 1 diabetes (with or without using study equipment) include:

Likely

- Risk of possible mild to moderate low blood sugar and possible symptoms of low blood sugar, such as sweating, trembling, difficulty thinking, dizziness, and feeling uncoordinated.
- Risk of possible mild to moderate high blood sugars and possible symptoms of high blood sugars such as thirst and frequent urination. You may have a higher level of sugar in your urine.

Rare but serious

- Risk of severe temporary low blood sugar (hypoglycemia) that can lead to unconsciousness, hypoglycemic seizure, hospitalization, or even death.
- Risk of prolonged high blood sugar leading to diabetic ketoacidosis (DKA), hospitalization, and coma. DKA can lead to kidney failure, cardiac arrhythmia (irregular heartbeat), myocardial infarction (heart attack), rhabdomyolysis (muscle breakdown), and even death.

Risks and side effects related to the continuous glucose monitor (CGM) include:

Likely

- Failure of CGM to stay on skin, requiring insertion of new sensor
- Discomfort from insertion of sensor

Less Likely

- Bruising less than ½ inch
- Bleeding less than ¼ teaspoon
- Sensitivity to adhesives with use of the CGM resulting in skin irritation, redness, blistering, scarring, systemic allergic reaction, or secondary skin infection

Rare but serious

- Swelling or redness at insertion site
- Breakage of the CGM sensor under the skin with the possible symptoms of skin irritation and inflammation. If a sensor breaks and no portion of it is visible above the skin, do not attempt to remove it. Please call the study team or seek immediate medical assistance. Seek professional medical help if you have symptoms of infection or inflammation – redness, swelling, or pain – at the insertion site.

- Bloodborne pathogen, such as Hepatitis B, if the shared CGM transmitter is not cleaned thoroughly with a diluted mixture of bleach or other appropriate cleaner after use per hospital approved cleaning procedure

Risks of wearing an Activity Monitor Risk include:
Rarely

- Skin irritation or redness

Risks and side effects related to performing a urine pregnancy test (for females who are able to become pregnant) include:
Less Likely

- False positive or false negative results

Risks of having your blood drawn:
Having blood drawn may cause:

- pain (common),
- a bruise (sometimes),
- fainting or passing out (not very often), and
- infection (rare).

If the people doing the study are exposed to your blood or body fluids in a way that could give them a disease, your blood may be tested. The tests might check for:

- hepatitis,
- HIV (Human Immunodeficiency Virus), or
- other infections.

You and the person exposed would be told the test results. However, your name would be kept private. If your test is positive for hepatitis or HIV or any other infection that may affect your clinical care, we will tell you the results and help you understand what the results mean for you.

Other unexpected risks:
You may have side effects that we do not expect or know to watch for now. Call the study leader if you have any symptoms or problems.

Could you be helped by being in this study?

You will not benefit from being in this study. However, the information researchers get from this study may help others in the future.

What are your other choices if you do not join this study?

You do not have to be in this study to be treated for your illness or condition. You can get the usual treatment even if you choose not to be in this study. Instead of being in this study, you may continue your standard diabetes management

If you are an employee of UVA your job will not be affected if you decide not to participate in this study. If you are a student at UVA, your grades will not be affected if you decide not to participate in this study.

Will you be paid for being in this study?

You will be paid $200 by check for finishing this study and returning the study equipment (the CGM and associated supplies, activity tracker, study cell phone (if provided)). You should get your payment about 60 days after finishing the study. The income may be reported to the IRS as income.

If you do not finish the study, you will be paid $50 for each month of data obtained. If the study leader says you cannot continue, you will be paid the full amount for the study.

The study equipment must be returned in order to receive subject compensation:

- the CGM and its associated supplies (e.g. transmitter, remaining sensors, receiver if provided)
- the activity tracker

You will not be paid at all if **you** decide not to finish this study. If the study leader says you cannot continue, you will be paid the full amount for the study.

Will being in this study cost you any money?

All of the procedures in this study will be provided at no cost to you or your health insurance.

You and/or your insurance company must pay for any tests or care given beyond what is required in this study. In addition, you and/or your health insurance may also have to pay for other drugs or treatments that are given to help you control any side effects. You will have to pay for any costs not covered by your health plan. You may be responsible for any co-payments or deductibles. You may wish to ask your insurance company for an estimate of what these costs might be or if pre-approval is required.

You will be responsible for the cost of travel to come to any study visit and for any parking costs.

What if you are hurt in this study?

You do not give up any legal rights, such as seeking compensation for injury, by signing this form. If you feel you have been injured as a result of this study you may contact the Principal Investigator or the IRB (phone numbers are located near the end of this form). If you are hurt as

a result of being in this study, there are no plans to pay you for medical expenses, lost wages, disability, or discomfort. The charges for any medical treatment you receive will be billed to your insurance. You will be responsible for any amount your insurance does not cover.

What happens if you leave the study early?

You can change your mind about being in the study any time. You can agree to be in the study now and change your mind later. If you decide to stop, please tell us right away. You do not have to be in this study to get services you can normally get at the University of Virginia.

Even if you do not change your mind, the study leader can take you out of the study. Some of the reasons for doing so may include:

a) Your study physician is concerned about your health
b) Your condition gets worse
c) The side effects of the study are too dangerous for you
d) New information shows the study will not work or is not safe for you
e) You do not follow your doctor's instructions
f) The study is closed for safety, administrative or other reasons

If you decide to stop being in the study, we will ask you to complete and return the "Leaving the Study Early" section of this form.

Any data collected about you up until the time you leave the study must be kept in order to determine the results of the study.

How will your personal information be shared?

The UVA researchers are asking for your permission to gather, use and share information about you for this study. If you decide not to give your permission, you cannot be in this study, but you can continue to receive regular medical care at UVA.

If you sign this form, we may collect any or all of the following information about you:

- Personal information such as name, address and date of birth
- Social Security number ONLY IF you are being paid to be in this study
- Your health information if required for this study. This may include a review of your medical records and test results from before, during and after the study from any of your doctors or health care providers. This may include mental health care records, substance abuse records, and/or HIV/AIDS records.

Who will see your private information?

- The researchers to make sure they can conduct the study the right way, observe the effects of the study and understand its results

- People or groups that oversee the study to make sure it is done correctly
- The sponsor(s) of this study, and the people or groups it hires to help perform or review this research
- Insurance companies or other organizations that may need the information in order to pay your medical bills or other costs of your participation in the study
- Tax reporting offices (if you are paid for being in the study)
- People who evaluate study results, which can include sponsors and other companies that make the drug or device being studied, researchers at other sites conducting the same study, and government agencies that provide oversight such as the Food and Drug Administration (FDA) if the study is regulated by the FDA.
- If you tell us that someone is hurting you, or that you might hurt yourself or someone else, the law may require us to let people in authority know so they can protect you and others.

Some of the people outside of UVa who will see your information may not have to follow the same privacy laws that we follow. They may release your information to others, and it may no longer be protected by those laws.

The information collected from you might be published in a medical journal. This would be done in a way that protects your privacy. No one will be able to find out from the article that you were in the study.

Information obtained from you during this study may be used in future research. Your information may be shared with other researchers inside or outside of the University of Virginia. They will not be sent with information that could identify you such as name, address or phone number.

A description of this clinical trial will be available on *http:// www.ClinicalTrials.gov,* as required by U.S. Law. This Web site will not include information that can identify you. At most, the Web site will include a summary of the results. You can search this Web site at any time.

What if you sign the form but then decide you don't want your private information shared?

You can change your mind at any time. Your permission does not end unless you cancel it. To cancel it, please send a letter to the researchers listed on this form or complete the "Leaving the Study Early" part of this form and return it to the researchers. Then you will no longer be in the study. The researchers will still use information about you that was collected before you ended your participation.

Please contact the Principal Investigator listed earlier in this form to:

- Obtain more information about the study
- Ask a question about the study procedures or treatments

- Report an illness, injury, or other problem (you may also need to tell your regular doctors)
- Leave the study before it is finished
- Express a concern about the study

Principal Investigator: Chiara Fabris, PhD
Center for Diabetes Technology
University of Virginia, Box 400888 Charlottesville, VA 22903
Telephone: 434- 982-6483

What if you have a concern about this study?

You may also report a concern about this study or ask questions about your rights as a research subject by contacting the Institutional Review Board listed below.

University of Virginia Institutional Review Board for Health Sciences Research
PO Box 800483, Charlottesville, Virginia 22908, Telephone: 434-924-9634

When you call or write about a concern, please give as much information as you can. Include the name of the study leader, the IRB-HSR Number (at the top of this form), and details about the problem. This will help officials look into your concern. When reporting a concern, you do not have to give your name.

You may also report a concern anonymously by calling the UVA Compliance Hotline phone number at 1-800-235-8700.

Signatures

What does your signature mean?

Before you sign this form, please ask questions about any part of this study that is not clear to you. Your signature below means that you have received this information and all your questions have been answered. If you sign the form it means that you agree to join the study. You will receive a copy of this signed document.

Consent From Adult

_____	_____	_____
PARTICIPANT (SIGNATURE)	PARTICIPANT (PRINT)	DATE

To be completed by participant if 18 years of age or older.

Person Obtaining Consent

By signing below you confirm that you have fully explained this study to the potential subject, allowed them time to read the consent or have the consent read to them, and have answered all their questions.

_____	_____	_____
PERSON OBTAINING CONSENT (SIGNATURE)	PERSON OBTAINING CONSENT (PRINT)	DATE

Notification of My Health Care Provider

Please indicate below whether you want us to notify your health care provider that you have agreed to take part in this study.

_____ Yes, I want the study doctor to notify my health care provider that I have agreed to take part in this study.

Health Care Provider Name:
Health Care Provider Address:
Study team will send a copy of the consent form to the health care provider.

_____ No, I do not want the study doctor to notify my health care provider that I have agreed to take part in this study or I do not have a health care provider.

Leaving the Study Early

If you leave the study early the study leader will keep the data collected about you up until the time you leave the study to help determine the results of the study.

Check one option below:

____ I am withdrawing my consent from the intervention or treatment part of this study but agree to continue to have follow up information about me collected by the study team. The follow up information will be collected until the end of my study participation.

- Follow up check in visit
- Return of all study equipment

____ I am withdrawing my consent for this study. No additional information may be collected about me including follow up information from my medical records.

Signature From Adult

_____	_____	_____
PARTICIPANT (SIGNATURE)	PARTICIPANT (PRINT)	DATE

To be completed by participant if 18 years of age or older.

Person Obtaining Signature

By signing below you confirm that you have fully explained the implications of withdrawing from the study to the subject and have answered all their questions.

_____	_____	_____
PERSON OBTAINING SIGNATURE (SIGNATURE)	PERSON OBTAINING SIGNATURE (PRINT)	DATE