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Title of Study: Effect of Sulfidogenic and Related Bacteria and Diet in Colon Cancer in Humans – Longitudinal Study

Sponsor: National Institute of Health

RUSH

Subject Information Sheet and Consent Form

Introduction

You are being invited to take part in this research study. Before you decide, it is important for you to understand why the research is being done and what it will involve. Please take the time to read the information in this form carefully, as it may contain words you do not understand. You may wish to discuss it with your doctor, family, and/or friends. If there is anything that you do not understand or you would like more information, please ask questions and the study doctor or study staff will try their best to answer them. Once the study has been explained and you have had all your questions answered to your satisfaction, you will be asked to sign this form if you wish to participate. Before anything is done for this study, you must sign this form. A copy of this signed form will be given to you.

You do not have to take part in this study. You are free to withdraw from this study at any time you choose without giving a reason. This will not affect any future care you will receive. No promises can be made about the outcome of this as far as your current condition, either positive or negative. People who take part in research are called "subjects" instead of "patients".

Why are you being invited to participate in this study?

You are being asked to take part in this study because we believe that you may be at an increased risk of colorectal cancer because you have had adenomatous type polyps during a previous colonoscopy. Adenomatous polyps are growths that form on the lining of your large intestine from which colon cancer typically arises.

What is the purpose of this study?

The purpose of this study is to test two different meals plans or "diets" in patients with history of adenomatous polyps and determine if these diets alter certain groups of bacteria or their effects on the colon. For the purpose of this study, "diet" simply refers to what you eat, and is not related to weight loss.

Colon cancer is a lead cause of death in the United States and is a type of cancer that occurs in the colon, which is the large intestine, which is the last part of your digestive tract. People over the age of 50 get colon cancer more often, but African Americans have a higher chance of getting colon cancer at an earlier age. Colon cancer is also usually more advanced and spread in African Americans when it is diagnosed. The cause for this difference and why African Americans get colon cancer earlier and more severely is not known. We suspect that the high chance of colon cancer in African Americans may be because of a different group of intestinal bacteria that sit on the surface of the colon or is present in the stool. We also suspect that there may be a relationship of this group of bacteria with the diet or other factors in the environment. It is also possible that hereditary factors which are factors that a person may inherit from their

mother and father could be a cause. For this reason, we would like to give you the two different diets and take samples and clinical information from you to look at the relationship between bacteria in the intestines and your diet and other factors that may contribute to colon cancer.

How many study subjects are expected to take part in the study?

We are expecting to enroll a total of 44 subjects at Rush University Medical Center.

What will you be asked to do?

The study will run for 10 weeks and will consist of 5 total visits at Rush University Medical Center up to 8 visits at the University of Illinois at Chicago (UIC).

Visit 0 (Eligibility/Screening visit): This visit will happen at Rush University Medical Center. After you have reviewed this information sheet and signed it, we will check to see if you are eligible for this study. First, we will review your medical history and your list of medications to see if you fit the study requirements and are eligible to participate. You will then have 2½ tablespoons of blood drawn by a certified nurse, medical assistant, or Clinical Research Coordinator who is phlebotomy certified.The blood will be used to check inflammation levels in your body based on C-Reactive Protein (CRP) – a protein found in blood plasma whose levels rise in response to inflammation. During this visit, we will also measure your height and your weight to determine your body mass index (BMI), in other words the ratio of your height to your weight. This visit is expected to take 1 hour.

When blood test results are available, those who do not fit the study requirements will be called within 7 days after Visit 1 and will be notified that they are not eligible. If you continue to be a candidate in this study, you will also get a phone call and you will be scheduled for visit 2 which will take place 7-10 days after your first visit.

Visit 1 (Before 1st diet): This visit will first happen at UIC, then the second half of the visit will happen at Rush University Medical Center. You will be reminded in advance to fast (no eating or drinking liquids besides water) for 12 hours prior to your research visit.

During the first portion of the visit at UIC, you will be given a separate subject information sheet to review and sign. Then, you will go for a test that measures Resting Energy Expenditure. This will measure how many calories your body needs. We will use this data when we create your meal plan. You will rest for about 30 minutes and then wear a transparent hood that is connected to a metabolic monitor to measure your resting energy use. You will need to lie still under the hood for about 30 minutes. This will be followed by a Dual Energy X-ray absorptiometry (DXA) body composition scan which takes about 15 minutes. A DXA scanner is a machine that uses x-rays to measure body composition (percent of body fat, total body fat, and muscle mass and bone mass) that involves exposure to very low amounts of X-ray radiation. If you are female and pregnant, you cannot have your body composition tested using a DXA scan because it emits a small amount of radiation. Women that have had at least one menstrual period within the past six months will not qualify to participate in this study. We will also assess the abdominal fat through an abdominal ultrasound machine, which will take about 5-10 minutes. The ultrasound machine does not use any radiation. An ultrasound gel will be applied to your abdominal area, followed by placing an ultrasound transducer (probe) to the right side of your belly button and then to the left side of your belly button. Two measurements will be recorded on each side and the gel will be cleaned off.

During this visit we will also ask you about the foods that you have eaten in the last 24 hours, which is also called a 24 hour dietary recall. We will fill out a food frequency questionnaire that asks about your dietary intake over the past year. You will also be handed a food log that we will ask you to fill out at home. The procedures at UIC will take up to a total of 2 hours.

After the visit at UIC, you will need to go to Rush University to complete the rest of the visit. Rush University is within a two to three block walking distance of UIC.

We will collect a 30 ml fasting blood (2 tablespoon) sample when you arrive for the visit. We will ask you to spit into a cup and we will ask you to provide a urine sample. We will brush the inside of your cheek in your mouth with a sterile oral swab. An oral swab is a Q-tip like device. We will ask you to spit into a cup to collect your saliva. We will ask you to complete questionnaires related to your health, disease, your family medical history, medications, prior surgeries, digestive symptoms and exercise. You will also pee into a sterile cup so that we can collect a urine sample from you. You will be asked to provide the names, doses and frequency, and duration taken of all prescription and over the counter medications you are currently taking.

You will undergo a procedure called a limited flexible sigmoidoscopy. During this procedure, we will insert a video camera into your large intestine. The purpose of flexible sigmoidoscopy is to assess the state of your colon and take biopsies (1-2 mm small pinhead sized tissue pieces). This procedure will not require any colon cleansing and it will be limited to the last 20 centimeters (approximately 8 inches) of your large intestine and thus will be far less uncomfortable than a routine flexible sigmoidoscopy. During the flexible sigmoidoscopy, you will not receive any sedation (any medications that make you sleepy) or anesthesia (numbing agent). This type of procedure occurs routinely without any sedation or anesthesia and is completed in less than five minutes. You will not require any assistance in getting home. Prior to the flexible sigmoidoscopy, the study doctor will answer any questions related to the procedure that you will have and will ask you to sign a separate consent form for the procedure.

You will also be provided with stool collection supplies and instructions to take home. You will be reminded to complete the stool collection the day before or the morning of Visit 3.You are advised to not keep the stool at room temperature longer than 5 hours. If you anticipate it to be longer than 5 hours before your visit time, then the stool should be kept in the freezer. The stool sample is to be brought to Visit 3, which is 4-10 days after Visit 2. The portion of the study visit at Rush will take about 2 hours. In total, this visit will take about 4 hours.

Safety phone call: The study coordinator will call you 24-72 hours after you have undergone the flexible sigmoidoscopy to make sure you are doing well.

Visit 2 (First food pick up for the 1st diet, and stool collection visit): This visit takes place at UIC within 7 days of visit 2. This will be the 1st food pick up visit. All food pickups will take place at the Applied Health Sciences Building located at 1919 W. Taylor Street, Chicago, IL, 60612 on the UIC campus. All meals will be provided in prepackaged form with breakfast, lunch, dinner, beverages, snacks and condiments. Seven days of meals will be provided at a time. You will be instructed on how to keep a daily food log and will be asked to return this log at each food pick-up. For the first week, you will be asked to save any uneaten foods and beverages in the original packaging and bring with you to the 2nd food pick (visit 4). A non-fasting blood sample (30 mls or two tablespoons) and your body weight will also be collected at this visit to measure bile acids and other factors in your blood related to bacteria in your intestines. You will give the study coordinator your stool sample (and the date of stool collection), will be asked

about the method of storing the sample. You will also be asked to turn in your food log and we will review the log with you. You will be asked about medication use. If you have not provided a stool sample at this visit, we will not able to give you the study food or start you on the diet. If you have started antibiotics, we will also not be able to give you the study food or start you on the diet. This visit will take approximately 30 minutes.

Visit 3 (Additional food pick up visit): This visit takes place at UIC one week after visit 3. This will be a food pick up visit. When you return for the visit 4 food pickup, staff will collect from you any uneaten food, measure your body weight, and review with you your daily food logs including any deviations from the study-provided food items. Seven days of meals will be provided. You will receive new daily food logs and we will review with you how to keep a daily food log; you will be asked to return this log at the visit 5 food pick-up. You may be asked to continue to collect your uneaten foods and beverages. This visit will take approximately 20 minutes.

Visit 4 (**Additional food pick up visit**): This visit takes place at UIC one week after visit 4. This will be the last food pick up for the 1st diet. When you return for the visit 5 food pickup, staff will collect from you any uneaten food, measure your body weight, and review with you your daily food logs including any deviations from the study-provided food items. We will collect a non-fasting blood sample (30mls or two tablespoons). Seven days of meals will be provided. You will receive new daily food logs and we will review with you how to keep a daily food log; you will be asked to return this log at the visit 6 food pick-up. You may be asked to continue to collect your uneaten foods and beverages. The study coordinator will provide you with stool collection supplies and instructions to take home. You will be asked to collect a stool sample and bring it to your next visit which will be visit 6 to Rush University Medical Center. This visit will take approximately 30 minutes.

Visit 5 (After consuming 1st diet for 3 weeks): This visit will happen at Rush University Medical Center no more than 1 day after you finish your last study meal. You will be reminded in advance to fast (no eating or drinking liquids besides water) for 12 hours prior to your research visit. We will collect a fasting blood sample when you arrive for the visit. We will ask you to spit into a cup, we will brush the inside of your cheeks with oral swabs, and we will ask you to provide a urine sample by peeing into a sterile cup. We will ask you to complete a questionnaire about your digestive symptoms, bowel habits, exercise, medical problems and medications. We will check your body weight. You will give the study coordinator your stool sample (and the date of stool collection), as well as the method of storing the sample. After completing the diet you will be asked to provide the study staff with any adverse events you may have experienced during the consumption of the provided food. You will also be asked to turn in your last food log for the 1st diet.

You will also have a limited flexible sigmoidoscopy with biopsies, which will be exactly the same as in visit 2. During this procedure we will insert a video camera into your large intestine. The purpose of flexible sigmoidoscopy is to assess the state of your colon and take biopsies (1-2 mm small pinhead sized tissue pieces). This procedure will not require any colon cleansing and it will be limited to the last 20 centimeters (approximately 8 inches) of your large intestine and thus will be far less uncomfortable than a routine flexible sigmoidoscopy. During the flexible sigmoidoscopy, you will not receive any sedation (any medications that make you sleepy) or anesthesia (numbing agent). This type of procedure occurs routinely without any sedation or anesthesia and is completed in less than five minutes. You will not require any assistance in getting home. Prior to the flexible sigmoidoscopy, the study doctor will answer any questions

related to the procedure that you will have and will ask you to sign a separate consent form for the procedure.

After this visit you will resume eating your normal diet for at least three weeks. You will also be scheduled for visit 7 in 3-4 weeks.

This visit will take approximately 3 hours.

Safety phone call: The study coordinator will call you 24-72 hours after you have undergone the flexible sigmoidoscopy to make sure you are doing well.

Visit 6 (Before 2nd diet): This visit will first happen at UIC, then the second half of the visit will happen at Rush University Medical Center. You will be reminded in advance to fast (no eating or drinking liquids besides water) for 12 hours prior to your research visit.

You will go through a repeat Dual Energy X-ray absorptiometry (DXA) body composition scan which takes about 15 minutes. A DXA scanner is a machine that uses X-rays to measure body composition (percent of body fat, total body fat, muscle mass, and bone density) that involves exposure to very low amounts of X-ray radiation. If you are female and pregnant, you cannot have your body composition tested using a DXA scan because it emits a small amount of radiation. Therefore, if you are a female who has had a menstrual cycle within the last six months, you will not be able to participate in this study.

During this visit we will also ask you about the foods that you have eaten in the last 24 hours, which is also called a 24 hour dietary recall. You will also be handed a food log that we will ask you to fill out at home. The procedures at UIC will take up to 1 hour.

After the visit at UIC, you need to go to Rush University for the rest of the visit. Rush University is within walking distance of the UIC.

We will collect a fasting blood sample when you arrive for the visit. We will ask you to spit into a cup and we will ask you to provide a urine sample. We will brush the inside of your cheek of your mouth with oral swabs. We will ask you questions about your health at this visit and you will fill out the questionnaires related to your digestive symptoms, bowel habits, exercise, medical problems and medications. You will be asked to provide the names, doses and frequency, and duration taken of all prescription and over the counter medications you are currently taking.

You will again undergo a limited flexible sigmoidoscopy. During this procedure we will insert a video camera into your large intestine. The purpose of flexible sigmoidoscopy is to assess the state of your colon and take biopsies (1-2 mm small pinhead sized tissue pieces). This procedure will not require any colon cleansing and it will be limited to the last 20 centimeters (approximately 8 inches) of your large intestine and thus will be far less uncomfortable than a routine flexible sigmoidoscopy. During the flexible sigmoidoscopy, you will not receive any sedation (any medications that make you sleepy) or anesthesia (numbing agent). This type of procedure occurs routinely without any sedation or anesthesia and is completed in less than five minutes. You will not require any assistance in getting home. Prior to the flexible sigmoidoscopy, the study doctor will answer any questions related to the procedure that you will have and will ask you to sign a separate consent form for the procedure.

You will also be provided with stool collection supplies and instructions to take home. You will be reminded to complete the stool collection the day before or the morning of Visit 8. You are advised to not keep the stool at room temperature longer than 5 hours. If you anticipate it to be longer than 5 hours before your visit time, then the stool should be kept in the freezer. The stool sample is to be brought to Visit 8.

This visit will take about 4 hours.

Safety phone call: The study coordinator will call you 24-72 hours after you have undergone the flexible sigmoidoscopy to make sure you are doing well.

Visit 7 (1st food pick up for 2nd diet and stool collection visit):
This visit takes place at UIC within 7 days of visit 7. This will be the 1st food pick up visit for the 2nd diet. All meal pickups will take place at the Applied Health Sciences Building located at 1919 W. Taylor Street, Chicago, IL, 60612 on the UIC campus. All meals will be provided in prepackaged form with breakfast, lunch, dinner, beverages, snacks and condiments. Seven days of meals will be provided at a time. You will be instructed on how to keep a daily food log and will be asked to return this log at each food pick-up. For the first week, you will be asked to save any uneaten foods and beverages in the original packaging and bring with you to the 2nd food pick (visit 9). A non-fasting blood sample (30 ml or two tablespoons) and your body weight will also be collected at this visit. You will give the study coordinator your stool sample (and the date of stool collection), will be asked about the method of storing the sample. You will also be asked to turn in your food log and we will review the log with you. You will be asked about medication use. If you have not provided a stool sample at this visit, we will not able to give you the study food or start you on the diet. If you have started antibiotics, we will also not be able to give you the study food or start you on the diet. This visit will take approximately 30 minutes.
If you have started antibiotics, we will also not able to give you the study food or start you on the diet. This visit will take approximately 30 minutes.

Visit 8 (Additional food pick-up visit): This visit takes place at UIC one week after visit 8. This will be a food pick up visit. When you return for the visit 9 food pickup, staff will collect from you any uneaten food, measure your body weight, and review with you your daily food logs including any deviations from the study-provided food items. Seven days of meals will be provided. You will receive new daily food logs and we will review with you how to keep a daily food log; you will be asked to return this log at the visit 10 food pick-up. You may be asked to continue to collect your uneaten foods and beverages. This visit will take approximately 20 minutes.

Visit 9 (Additional food pick up visits):
This visit takes place at UIC one week after visit 9. This will be the last food pick up for the 2nd diet. When you return for the visit 10 food pickup, staff will collect from you any uneaten food (if you were asked to do this), measure your body weight, and review with you your daily food logs including any deviations from the study-provided food items. We will collect a non-fasting blood sample (30mls or two tablespoons). Seven days of meals will be provided. You will receive new daily food logs and we will review with you how to keep a daily food log; you will be asked to return this log at the visit 11 food pick-up visit. You may be asked to continue to collect your uneaten foods and beverages. The study coordinator will provide you with stool collection supplies and instructions to take home. You will be asked to collect a stool sample and bring it to your next visit which will be visit 11 to Rush University Medical Center. This visit will take approximately 30 minutes.

Visit 10 (After consuming 2nd diet for 3 weeks): This visit will happen at Rush University Medical Center no more than 1 day after you finish your last study meal. You will be reminded in advance to fast (no eating or drinking liquids besides water) for 12 hours prior to your research visit. We will collect a fasting blood sample when you arrive for the visit. We will ask you to spit into a cup and we will ask you to provide a urine sample. We will brush the inside of your cheek in your mouth with an oral swab. We will check your body weight. We will ask you to complete a questionnaire about your digestive symptoms, bowel habits, exercise, medical problems and medications. You will give the study coordinator your stool sample (and the date of stool collection), as well as the method of storing the sample. After completing the diet you will be asked to provide the study staff with any adverse events you may have experienced during the consumption of the provided food. You will also be asked to turn in your food log.

You will also have a limited flexible sigmoidoscopy with biopsies, which will be exactly the same as in visit 2. During this procedure we will insert a video camera into your large intestine. The purpose of flexible sigmoidoscopy is to assess the state of your colon and take biopsies (1-2 mm small pinhead sized tissue pieces). This procedure will not require any colon cleansing and it will be limited to the last 20 centimeters (approximately 8 inches) of your large intestine and thus will be far less uncomfortable than a routine flexible sigmoidoscopy. During the flexible sigmoidoscopy, you will not receive any sedation (any medications that make you sleepy) or anesthesia (numbing agent). This type of procedure occurs routinely without any sedation or anesthesia and is completed in less than five minutes. You will not require any assistance in getting home. Prior to the flexible sigmoidoscopy, the study doctor will answer any questions related to the procedure that you will have and will ask you to sign a separate consent form for the procedure.

This will take about 3 hours.

Safety phone call: The study coordinator will call you 24-72 hours after you have undergone the flexible sigmoidoscopy to make sure you are doing well.

Dietary compliance assessments in addition to the above visits:
In order to ensure that you are indeed following the provided diets you will be asked to comply with the following:

1) You may receive an unannounced phone call and be asked to provide a 24-hour dietary recall. This will take no longer than 30 minutes.
2) Your weight will be taken each week when you go to pick up your meals from UIC. The provided diets are specifically formulated for your weight to remain stable thus your weight is expected to remain the same.
3) You will be asked to keep daily records of consumption of food provided when you are consuming the experimental diets and you will also be asked to keep diaries of any additional foods you consume that were not provided to you. The diets are each only 3 weeks in length. Thus, we do ask that you adhere closely to the provided diets during this time period. There is no allowance for going out to eat. However, if you have an event like a party or wedding, we can extend the diet by 1 day to account for this event. In the case of a major holiday, we allow you to skip 1 meal on the holiday and to report in detail on the foods consumed, like we would for any non-study foods. We don't typically start a subject on a diet treatment around Christmas and New Year's due to all the parties and temptations.
4) The study team may provide additional counseling so that you can follow the diet that

you are given, if needed.

Prohibited medications. In order to ensure that the medications you may be taking do not interfere with the dietary effects of the study, you will be asked to not start taking Carbose (a medication that lowers blood sugar in pre-diabetic patients), Cholestyramine (medication taken for high cholesterol levels), Probiotics (potentially beneficial bacteria found in pill form), Prebiotics (dietary supplements that make beneficial bacteria grow in your intestines), aspirin doses which are above 81mg per day or 325 mg every other day for prevention of cardiovascular disease, blood thinning medications, vitamin pills or herbal supplements over the counter, and antibiotics if possible. If you need to start an antibiotic, you will not be able to continue in the rest of the study and we ask that you notify the study coordinator.

Future Genetic Research:
Genetic research could be done on the samples you provide to us. The cells of your body contain deoxyribonucleic acid or DNA for short. DNA is passed down from your parents. It carries the genes that determine physical features such as the color of your hair and eyes. Differences in our genes help explain why we all look different. They may also determine how different people get certain diseases and respond to drug treatments. The use of genetic material in research to study the causes of disease and to help understand how individuals respond to drug treatments is called genetic research.

How long will you be in the study?

You will be in the study for about 72 days. You may be removed from this study without your consent. Possible reasons may be that the study doctor decides that continued participation in the study will be harmful to you, you will need a treatment not allowed on the study, your disease becomes worse, you are unable to take the meals as directed, or the study is canceled.

What are the possible risks of the study?

You will have a flexible sigmoidoscopy on 4 occasions. This procedure involves the doctor looking at part of your colon in order to obtain tissue from the colon. This will be a limited sigmoidoscopy, since it will involve only the area that is closest to your anus, which is the opening where stool comes out of. This type of procedure is not associated with much discomfort. Most patients either experience no discomfort or minimal bloating. With any endoscopic procedure there is a risk of bleeding when tissue samples are taken. This risk is estimated to be less than 1 in 1000. If bleeding occurs, it will usually stop by itself and does not usually require hospitalization, blood transfusion or other interventions. There is also a risk of a tear (perforation) in your colon. This is extremely rare but a possible complication. In a routine sigmoidoscopy, which inspects two feet of the colon, the risk for perforation is 1 out of every 30,000. Since this procedure is a limited sigmoidoscopy, and involves only the area that is closest to your anus, there is an even smaller risk for perforation (tear). If a tiny tear occurs, you may experience pain and fever. If you think you are experiencing a tear, you should contact the Principal Investigator of the study, Ece Mutlu, M.D., immediately, by calling 312-942-5861. You may need to be hospitalized and undergo surgery, to repair the tear.

You will have blood drawn from your arm on eight different occasions. Drawing blood involves placing a tight wrap on your upper arm and inserting a needle into the vein in your arm and withdrawing blood. You may experience discomfort at the time of the blood draw and/or bleeding, bruising at the site where the needle enters the body. In rare cases, fainting or infection occurs. To minimize discomfort and local bruising, an experienced nurse or a trained medical or

research assistant will complete the blood draw.

You will be asked to collect a stool sample four times throughout the study. Collecting a stool sample involves placing a "hat" that will be provided by our staff on your commode (toilet) before you are seated. This hat will collect the stool and then you can use a wooden stick and protective gloves, which will be provided by our staff to transfer the stool sample into special zip lock bags. The special zip lock bags that contain the stool samples require that they be frozen until you bring it into the study office, unless it is collected within 5 hours of your study visit, then it can stay in room temperature. One of the special zip lock bags will have a fluid inside and you will be asked to press on the outside of the bag with your fingers to make sure the fluid is mixed with the stool sample you have provided. You may experience emotional stress related to working with your own stool. Mishandling stool can lead to infections however a safe hand washing technique will be taught that reduces this risk to only rare cases.

An additional potential physical risk is imposed by the diets. The two diets are designed so that a participant maintains his/her weight within 2% of the weight obtained at the study visits before starting the diets (before diet visits, in other words visits 2 and 7). All foods, beverages, and condiments will be provided. Water, non-caloric non-cola soda, and coffee will be provided consistently across the two diets. The relatively short 3 week exposures to safely-prepared diets are not expected to pose further physical risks. The UIC diet team has food sanitation training and certification. Careful regular monitoring will assure that any unanticipated adverse events, due to dietary changes, are immediately brought to the attention of the study doctors. Food allergies will be assessed during the inclusion/exclusions screening phase. Anyone with any food allergies, aversions to any foods included in the trial, or with special dietary needs due to religious or other secular reasons will be excluded. It is not feasible to plan special diets.

The DXA scan is done in this study to measure your body composition and it uses X-rays that yield precise, high quality images of your body compartments (e.g., fat and muscle tissues). It involves exposure to very low amounts of X-ray radiation. Every person is exposed daily to natural background radiation from sources like soil, rocks, radon, and natural radiation in our bodies, the sun, and outer space. A DXA total body scan delivers an amount of radiation similar to what you may be exposed to on a trans-Atlantic flight (0.77 μC/kg body weight) and imposes no major risk to non-pregnant women or men. All persons have a risk up to several percent, depending on age, of developing a cancer (or second cancer) over their lifetime, even if they receive no medical radiation at all. Medical radiation can increase that risk, however, depending on its dose and where in your body it is directed. In most cases, your cancer risk after receiving medical radiation is so slightly increased from your natural cancer risk that the difference is hard to measure. To reduce risks associated with a DXA, pregnant women and women who have menstruated in the past six months will be not be included in this study.

Risk of Genetic Research

Lastly, while we believe that the risks to you and your family are very low, we are not able to know all of the risks from taking part in genetic research. Your privacy will be protected to the fullest extent possible. Certain health concerns that affect you and your blood relatives might be found as inherited traits are studied. Even though your genes are unique, you share some of the same genes with your blood relatives. Genetic information is considered health information and is protected under the Health Insurance Portability and Accountability Act (HIPAA) as is your other health information. While very rare, information could be misused by employers, insurance companies and others. For example, life insurance companies may charge a higher rate based on this information. A new federal law called the Genetic Information Non-

Discrimination Act (GINA) should help lower the risk from unfair health insurance or employment policies. To learn more about the GINA Law, please go to http://www.dnapolicy.org/gina or ask the study staff.

Are there any anticipated pregnancy risks?

Women

If you are pregnant or breastfeeding, or have menstruated in the past six month, you cannot take part in this study. A pregnancy test may be required and will be given during the first visit. You are responsible for using an effective birth control method such as birth control pills, barrier method (such as condoms or diaphragms), intrauterine device (IUD), hormone implants or surgical sterility while you are taking part in this study. Once you have completed treatment, you may discontinue birth control after three weeks of consuming your last study meal. If you become pregnant, you must notify the study doctor immediately.

Men

You are responsible for using an effective birth control method, such as the ones listed above. If you are a male and your female partner becomes pregnant, you must notify your study doctor immediately. Once you have completed treatment, you may discontinue birth control after three weeks of consuming your last study meal.

Are there benefits to taking part in the study?

There is no direct benefit to you for participating in this study**.**

What other options are there?

The only alternative to participating in this study is not to participate.

What about confidentiality of your information?

Records of participation in this research study will be maintained and kept confidential as required by law. In order to complete the study, the study doctor, Ece Mutlu, M.D. will use and share personal health information about you. This includes information already in your medical record, as well as information created or collected during the study. Examples of the information that may be shared include your medical history, physical exam and laboratory test results. The study doctor will use this information about you to complete this research. This information will be kept indefinitely after completion of the study.

Unique assigned identification numbers will be used along with your initials for identifying your written information. Any records identifying you will also be kept confidential to the extent permitted by applicable laws and/or regulations. The researchers are HIPAA (privacy) trained and will abide by HIPAA rules. Your written study information will be kept under lock with Dr. Mutlu at the Section of Digestive Diseases Offices at Rush University in Suites 222, 224 or 206, under double lock or with Dr. Lisa Tussing-Humphreys at 1747 W. Roosevelt Rd. Rm. 416 at UIC. We will also have an electronic study database for this study at Rush University. Information related to your medical history and questionnaires and eventually all your paper records will be transferred to this electronic study database. The study database is secured in an electronic environment (also known as a firewall) at Rush, and the Rush system is compliant with HIPAA. This database will be password protected by research personnel.

Confidentiality and disclosure of your personal information is further described in the attachment to this form. The attachment is titled HIPAA Authorization to Share Personal Health Information in Research (2 pages).

The Rush Institutional Review Board (IRB) and UIC IRB will have access to your files as they pertain to this research study. The IRB is a special committee that reviews new and ongoing human research studies to check that the rules and regulations are followed regarding the protection of the rights and welfare of human subjects.

What are the costs of your participation in this study?

All costs that are part of your usual medical care will be charged to you or your insurance company. You will be responsible for all costs that are not paid by your insurance company. You should check with your insurance company before you enroll in this research study. All tests, procedures, food, and research related materials will be supplied at no cost to you.

What financial disclosure(s) apply to this study?

Rush University Medical Center and University of Illinois at Chicago are being paid by National Institutes of Health (NIH) to conduct this research. A portion of this money may go to the study doctor to compensate for other institutional research related costs.

Will you be compensated or paid?

You will be compensated with 75 dollars for your time and effort after completing visits 2, 6, 7 and 11. A check will be sent via mail, to the address that you have provided, within 4-6 weeks after each of these visits. Cash will not be provided.

If you are driving to Rush for Visits 1, 2, 6, 7 and 11, we will provide you with a parking sticker for the Rush parking garage. We cannot reimburse you for valet parking or for cab fare to and from Rush. We will provide a paid parking sticker at Visits 1, 2, 6, 7 and 11, good only for parking at Rush University Medical Center. If you take public transportation to Rush we will reimburse you for the round trip fare up to a maximum of $8.50 for each of the Rush visits. If you drive to the UIC food pick-up visits 3, 4, 5, 8, 9 and 10, you can park your car with flashing lights, in the circular drive-way in front of the building for up to 30 minutes. There will be no reimbursement if you take public transportation for the UIC food pick up visits, 3, 4, 5, 8, 9 and 10.

Your participation in this research study may contribute to the development of commercial products from which the researchers or others may derive economic benefit. You will have no rights to any products, patents or discoveries arising from this research, and you will receive no economic benefit.

What happens if you experience a research related injury?

If you experience any injury or illness as a direct result of your participation in this research study, immediate treatment will be provided. However, the cost of that treatment will be billed to you or your insurance company. Please check with your insurance company regarding coverage.

If you have any medical problems during the study, please contact the study doctor. He or she

will explain your treatment options to you and/or help you find a place to get treatment.

Rush University Medical Center and the University of Illinois at Chicago has no program for financial compensation or other forms of compensation for injuries which you may incur as a result of participation in this study.

What happens if you need emergency care?

If you need emergency care while you are participating in this study, it is important that you tell emergency personnel of your participation in this study and notify the study doctor as soon as possible.

Tissue Repository/Storage of Tissue/Blood/Stool Samples for this Study and Future Testing

During this study you will be asked to provide blood, stool, colon tissue and other bodily fluids. These samples will be used to analyze the two different diets in patients with history of adenomatous polyps and determine if these diets alter certain groups of bacteria or their effects on the colon. There is a chance that the samples that you are donating under this study and medical information about yourself may be used for **future** research purposes. For **this** study, all specimens will be stored in the locked laboratory freezer, that also is used as a Specimen Repository for the Section of Gastroenterology and Nutrition at Rush. For **this** study your specimens will be labeled with a code which does not contain your initials or any personal identifiers. No one has access to the Specimen Repository except for the Repository Manager, Ece Mutlu, M.D. and persons working directly under her supervision. **If you chose to participate in this study, but NOT in the repository, at the end of this study, any remaining samples will be destroyed without your having to write to request it**.

If you agree to also donate specimens that we collect for **this** study to the Specimen Repository for **future** research studies, the same code used to label your specimens for this study, will allow Dr. Mutlu to link the repository specimens to you. Also, additional information such as your date of birth, gender, phone number, current and past diagnosis, current and past medications, and information of what and how the specimen samples were collected will be linked to your specimens.

This Specimen Repository, or storage bank, is an ongoing, Rush Institutional Review Board (IRB) approved repository. The purpose of this repository program is for use in future research ideas. If you agree to participate in the repository for future research we will protect your health information associated with the repository. Future research will be done in an anonymous fashion. No identifying information will be given to the future researcher who uses the specimens in the repository. Confidentiality will be protected to the full extent available by law. Under rare circumstances, other persons may have access to the information in the storage bank. These persons might include representative of the organization paying for a future study (for example the National Institutes of Health), appropriate federal or state agencies (for example the U.S. Food and Drug Administration), and the Rush Institutional Review Board. The Research and Clinical Trials Office at Rush has the Specimen Repository on file and it is identified with the ORA #16072507. **You may choose to participate in this study whether or not you choose to participate in the repository for future testing**.

Your samples may be withdrawn from the repository at any time if you change your mind. To do so, please submit your request in writing to Ece Mutlu, M.D., Repository Manager, Rush University Medical Center, Professional Building, Suite 206, Chicago, IL 60612. Be sure to clearly print your name and date of birth on the letter and plainly state "I would like to have all of my specimens removed from the repository and destroyed." In return you will receive a confirmation letter that we have indeed complied with your request**.**

As a result of these activities, a financial gain may be derived by the study Sponsor and Investigator. However, you will not receive any financial gain from these activities

Please indicate below if you will consent to allow your tissue/blood/stool or fluid sample to be kept and used for future research purposes.

Please check and initial the following if you agree:

☐ I agree to allow genetic testing to be performed on my samples for the current present research study.

Initials _____

If there are remaining blood, stool or tissue samples after completing the study we may use those samples for future research.

☐ I agree to the use of my samples to be kept by Dr. Ece Mutlu and shared among the investigators for use in future research to learn more about how to prevent, detect, or treat colorectal cancer.

Initials _____

☐ I agree to the use of my samples to be kept by Dr. Ece Mutlu and shared among investigators for use in future research to learn more about how to prevent, detect, or treat other diseases.

Initials _____

☐ I agree to the use of my samples to be kept by Dr. Ece Mutlu and shared among the investigators for use in future genetic research to learn more about how to prevent, detect, or treat colorectal cancer.

Initials _____

☐ I agree to the use of my samples to be kept by Dr. Ece Mutlu and shared among the investigators for use in future genetic research to learn more about how to prevent, detect, or treat other diseases.

Initials _____

Whom do you call if you have questions or problems?

Questions are encouraged. If there are any questions about this research study or if you experience a research related injury, please contact Ece Mutlu, MD at 312-942-5861. Questions about the rights of research subjects may be addressed to the Rush Research & Clinical Trials Administration Office at 1-800-876-0772.

By signing below, you are consenting to participate in this research study. You have read the information given or someone has read it to you. You have had the opportunity to ask questions,

which have been answered satisfactorily to you by the study staff. You do not waive any of your legal rights by signing this consent form.

SIGNATURE BY THE SUBJECT

Name of Subject	Signature of Subject	Date of Signature

SIGNATURE BY THE INVESTIGATOR/INDIVIDUAL OBTAINING CONSENT:
I attest that all the elements of informed consent described in this consent document have been discussed fully in non-technical terms with the subject. I further attest that all questions asked by the subject were answered to the best of my knowledge.

Signature of Individual Obtaining Consent	Date of Signature

☐ *Check here if the Individual Obtaining Consent observed the signing of this consent document and can attest, to the best of their knowledge, the person signing the consent form is the subject and the person signing the form has done so voluntarily. By checking this box, the Individual Obtaining Consent does not need to sign on the Witness signature line (below).*

SIGNATURE BY WITNESS/TRANSLATOR
(for use if this consent is being used as a written summary of the research along with a short form consent OR when the person obtaining consent is not the witness):

I observed the signing of this consent document and attest that, to the best of my knowledge, the person signing the consent form is the subject and the person signing the form has done so voluntarily.

Signature of Witness/Translator	Date of Signature

☐ Check here if a separate witness signature is not necessary.

<u>SIGNATURE OF THE PRINCIPAL INVESTIGATOR</u>
I attest that I am aware of the enrollment of this subject in the study discussed in this consent document.

Signature of the Principal Investigator	Date of Signature

☐ Check here if Principal Investigator obtained consent and a separate signature is not required.