Bioavailability of SPMs in Obese Humans

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University of North Carolina at Chapel Hill
Consent to Participate in a Research Study
Adult Participants

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IRB Study # 20-0131
Title of Study: Bioavailability of SPMs in Obese Humans
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CONCISE SUMMARY

This is a research study to establish Specialized Pro-resolving Mediator (SPM) concentrations in the plasma of obese individuals upon 4 weeks of supplementation with the dietary supplement 'SPM Active.' The information we learn by completing this study will help advance our knowledge about SPM bioavailability (how much SPMs are present after supplementation) in obese human individuals. This study does not intend to make any health-related claims or measure any health-related outcomes. There are no potential direct benefits to subjects.

Participants in this study will take the dietary supplement 'SPM Active' once a day for 4 weeks. Prior to the 4-week supplementation period, participants will have their blood drawn by a licensed phlebotomist at the UNC Family Medicine Center at Chapel Hill for analysis. Participants will then take the 'SPM Active' dietary supplement once a day for 4 weeks. After the 4-week supplementation period, participants will have their blood drawn a final time by a licensed phlebotomist at the UNC Family Medicine Center at Chapel Hill for analysis. Participant health status will be monitored via phone contact at the end of week 2 and week 3 of supplementation by questionnaire. Each clinical visit will last 30 minutes to 1 hour, and each phone contact will last 10 to15 minutes. You will be compensated a total of $250 cash for completing the entire study.

Bloodwork collected at the UNC Family Medicine Center at Chapel Hill be transferred to Michael Hooker Research Center Room 2204 (Shaikh Lab) for immediate processing.

There are no health risks associated with taking the dietary supplement 'SPM Active.' There is minimal risk of bruising and/or onset of infection at the site of venipuncture for each blood draw.

If you are interested in learning more about this study, please continue to read below.

What are some general things you should know about research studies?
You are being asked to take part in a research study. To join the study is voluntary.

You may choose not to participate, or you may withdraw your consent to be in the study, for any reason, without penalty.

Research studies are designed to obtain new knowledge. This new information may help people in the future. You may not receive any direct benefit from being in the research study. There also may be risks to being in research studies. Deciding not to be in the study or leaving the study before it is done will not affect your relationship with the researcher, your health care provider, or the University of North Carolina-Chapel Hill. If you are a patient with an illness, you do not have to be in the research study in order to receive health care.

Details about this study are discussed below. It is important that you understand this information so that you can make an informed choice about being in this research study.

You will be given a copy of this consent form. You should ask the researchers named above, or staff members who may assist them, any questions you have about this study at any time.

Who is sponsoring this study?
This research is supported by UNC-Chapel Hill. Saame Shaikh, the principal investigator on this study, has received the gift of dietary supplements from Metagenics Inc. These dietary supplements are being used in and/or evaluated as part of this research study.

If you would like more information, please ask the researchers listed in the first page of this form.

What is the purpose of this study?
The purpose of this research study is to establish: 1) the bioavailability of SPMs in plasma, serum and peripheral blood mononuclear cells (PBMCs) of obese individuals, and 2) their effects on immune cell abundance (number of each type of immune cell in the blood) and in vitro antibody production. This study does not intend to make any health-related claims or measure any health-related outcomes. You are being asked to be in the study because you meet the inclusion and exclusion criteria.

Specialized pro-resolving mediators (SPMs) are a large category of metabolites made from the major omega-3s eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA). Our research, in agreement with other labs, is finding that obese mice and humans have lower circulating levels of SPMs relative to lean controls.

Based on the notion that SPMs are lowered in obese individuals, we hypothesize that SPM levels can be elevated in the obese through dietary supplementation. Therefore, we propose a bioavailability study in which the dietary supplement ‘SPM Active’ will be administered to obese human subjects.

No safety issues identified in previous clinical studies that used this same dosage level of 'SPM Active.'

Are there any reasons you should not be in this study?

You should not be in this study if you are unwilling or unable to fully comply with the supplementation instructions for the full length of the study. We ask that you take the dietary supplement 'SPM Active' once a day (4 capsules each morning with breakfast), for 4 weeks.

How many people will take part in this study?

Approximately 24 people at the UNC Family Medicine Center at Chapel Hill will take part in this study.

How long will your part in this study last?

You will participate in this study for 4 weeks while taking the 'SPM Active' supplement. You will have two clinical visits total for pre- and post- supplementation blood draws, and two phone contacts. Each clinical visit will last 30 minutes to 1 hour, and each phone contact will last 10-15 minutes. There are no scheduled in-person follow-up visits. The overall length of time from the clinical visits and phone contacts will be no more than 2.5 hours. All health information will be relayed to the family doctor, Dr. Butler, who may determine if an in-person visit is warranted. The bloodwork collected for processing will be transferred to Michael Hooker Research Center Room 2204 (Shaikh Lab) for immediate processing. Tubes will be labelled with a de-identified research code and will not include any protected health information.

Data from this study will be kept in electronic and hard copy forms with the respective security measures. All data acquisition will meet HIPPA and confidentiality standards. Electronic data will be kept on an encrypted desktop computer protected by multiple passwords and stored for a minimum of five years in the case that this data needs to be verified. Human biological samples (serum/plasma) will be stored for a minimum of five years in the case that these samples are needed for duplication of or verification of study results. When all analysis of human biological samples is completed, all samples will be disposed of according to university and environmental health guidelines. There are no plans to use your samples for commercial profit. You will not be compensated for the use of your samples other than what is described in this consent form. Data that links dummy identifiers to any personal identifying information will be shredded and disposed of, or, in the case of electronic data, will be permanently deleted. Limited clinical data may be part of subjects' secure electronic medical record in Epic.

Note that the biological samples and data collected from subjects who are withdrawn from this study or lost to follow-up will also be handled in this way.

What will happen if you take part in the study?

You will be participating in a clinical trial that lasts 4 weeks, and involves 2 face-to-face clinical visits at the UNC Family Medicine Center, and two telephone contacts. When you are consented, and enrolled in the study, your clinical visits will be scheduled ahead of time. You will be given the dietary supplement 'SPM Active' as intervention at your first clinical visit, and instructed to take it every day for the next 4 weeks. You will be contacted at week 2 and week 3 by phone to monitor health status and supplement adherence via a telephone questionnaire. You may choose not to answer a question for any reason. At the end of the 4-week period, you will return to the

UNC Family Medicine Center for your final clinical visit, which will conclude your involvement in the trial. This is outlined below:

Visit 1: Pre-intervention clinical visit at UNC Family Medicine Center

This is a face-to-face visit that will start the study

- You will be seen by Dr. Butler and/or his clinical study coordinator
- Your 12-hour fasting blood will be drawn by a licensed phlebotomist (10 blood tubes or 100 mL)
- Your height, weight, blood pressure, and pulse will be taken
- You will be given the dietary supplement 'SPM Active' and instructions on how to take it
- You will be compensated $100 cash for your time

Telephone Contact 1: Health and Supplement Adherence Follow-up Questionnaire
This is a telephone call that will occur the 2nd week of the 4-week supplementation period

- You will be called by either the clinical study coordinator or a research assistant
- You will be asked general health questions and have the opportunity to report symptoms/concerns
- You will be asked questions relating to COVID-19 from a questionnaire
- You will be asked questions about your experience with and adherence to taking the supplement
- All information will be relayed to Dr. Butler, who may decide to schedule an in-person visit if he deems necessary

Telephone Contact 2: Health and Supplement Adherence Follow-up Questionnaire
This is a telephone call that will occur the 3rd week of the 4-week supplementation period

- You will be called by either the clinical study coordinator or a research assistant
- You will be asked general health questions and have the opportunity to report symptoms/concerns
- You will be asked questions relating to COVID-19 from a questionnaire
- You will be asked questions about your experience with and adherence to taking the supplement
- All information will be relayed to Dr. Butler, who may decide to schedule an in-person visit if he deems necessary

Visit 2: Post-intervention clinical visit at UNC Family Medicine Center
This is a face-to-face visit that will conclude the study

- You will be seen by Dr. Butler and/or his clinical study coordinator
- Your 12-hour fasting blood will be drawn by a licensed phlebotomist (10 blood tubes or 100 mL)
- Your height, weight, blood pressure, and pulse will be taken
- You will be compensated $150 cash for your study completion

At the end of the study, you will follow up in a routine manner as designated by your physician at UNC Family Medicine.

It is imperative that you take the dietary supplement 'SPM Active' as instructed for the entire 4-week study period. We ask that you take 4 capsules of 'SPM Active' per day, each morning. Failure to take the supplement as instructed will compromise the integrity of the study and may result in you being withdrawn from the trial (without compensation). You will be given the supplement and receive instructions on taking it at your fist clinical visit (Visit 1).

What are the possible benefits from being in this study?
Research is designed to benefit society by gaining new knowledge. You will not benefit personally from being in this research study.

What are the possible risks or discomforts involved from being in this study?
There may be uncommon or previously unknown risks. You should report any problems to the researcher.

There are no known immediate or long-term physical health risks associated with taking the dietary supplement 'SPM Active.' There is minimal risk of bruising and/or onset of infection at the site of venipuncture for each blood draw. However, each blood draw will be performed by a licensed and experienced phlebotomist to minimize discomfort. There are no psychological or social risks associated with this research study.

What if we learn about new findings or information during the study?
You will be given any new information gained during the course of the study that might affect your willingness to continue your participation.

Will I receive any other clinical results?
Any substantial findings would be provided free of cost upon request. For those who are interested, we will give them our contact information so they can keep up with our findings. Our data will also be available through publication of significant findings.

How will information about you be protected?
Data from this study will be kept in electronic and hard copy forms with the respective security measures. Electronic data will be kept on an encrypted desktop computer protected by multiple passwords in a lab, located on a hall protected by card access in Michael Hooker Research Center, Chapel Hill, NC. De-identified data will be stored on REDCap for use by research team personnel only. Data management will be performed by the principal investigator, Dr. Saame R. Shaikh, and the research assistants. All data acquisition will meet HIPPA and confidentiality standards. Electronic data will be stored for a minimum of five years in the case that this data needs to be verified. When deemed appropriate, all files will be purged and permanently deleted from research computers. Hard copy data will be shredded. Human biological samples (serum/plasma) will be stored for a minimum of five years in the case that these samples are needed for duplication of or verification of study results. These samples will be stored in locked freezers in locked research laboratories in secure facilities that require card access. When all analysis of human biological samples is completed, all samples will be disposed of according to

university and environmental health guidelines. Data that links dummy identifiers to any personal identifying information will be shredded and disposed of, or, in the case of electronic data, will be permanently deleted. Limited clinical data may be part of subjects' secure electronic medical record in Epic. Note that the biological samples and data collected from subjects who are lost to follow-up will be handled in this way as well.

The PIs will be responsible for monitoring and reviewing subject data, lab results, study progress, subject safety and confidentiality, and the accuracy and security of the emerging data. They will also be responsible for running the assays and entering all data into redcap for statistical analysis.

Participants will not be identified in any report or publication about this study. We may use de-identified data and/or specimens from this study in future research without additional consent. Although every effort will be made to keep research records private, there may be times when federal or state law requires the disclosure of such records, including personal information. This is very unlikely, but if disclosure is ever required, UNC-Chapel Hill will take steps allowable by law to protect the privacy of personal information. In some cases, your information in this research study could be reviewed by representatives of the University, research sponsors, or government agencies (for example, the FDA) for purposes such as quality control or safety. There are no plans to use your samples for commercial profit. You will not be compensated for the use of your samples other than what is described in this consent form.

By signing this informed consent document, you agree that some of the information generated by participating in this study and/or a copy of the consent form may be included in your medical record and that this information may be viewed by other physicians or caregivers who provide healthcare services to you. This will allow the doctors caring for you to know what study medications or tests you may be receiving as a part of the study and know how to take care of you if you have other health problems or needs during the study. Additionally, the information may be shared with your medical insurance plan if the research services provided are billed to your insurance.

What will happen if you are injured by this research?

All research involves a chance that something bad might happen to you. If you are hurt, become sick, or develop a reaction from something that was done as part of this study, the researcher will help you get medical care, but the University of North Carolina at Chapel Hill has not set aside funds to pay you for any such injuries, illnesses or reactions, or for the related medical care. Any costs for medical expenses will be billed to you or your insurance company. You may be responsible for any co-payments and your insurance may not cover the costs of study related injuries.

If you think you have been injured from taking part in this study, call the Principal Investigator at the phone number provided on this consent form. They will let you know what you should do.

By signing this form, you do not give up your right to seek payment or other rights if you are harmed as a result of being in this study.

What if you want to stop before your part in the study is complete?
You can withdraw from this study at any time, without penalty. The investigators also have the right to stop your participation at any time. This could be because you have had an unexpected reaction, or have failed to follow instructions, or because the entire study has been stopped.

If you withdraw or are withdrawn from this study all data collected will be destroyed and no additional data will be collected. Finally, you will not be compensated $150 dollars for dropping out of this study or being withdrawn from it before completion.

Will you receive anything for being in this study?
You will be receiving $250 cash for taking part in this study. You will receive $100 cash at the first clinical visit, and $150 cash after the 4-week supplementation period at the second clinical visit. Individuals who are withdrawn from this study (for failure to adhere to the supplementation guidelines) or who choose to drop out of the study will not receive the $150. Any payment provided for participation in this study may be subject to applicable tax withholding obligations.

There are no plans to use your samples for commercial profit. You will not be compensated for the use of your samples other than what is described in this consent form.

Will it cost you anything to be in this study?
It will not cost you anything to be in this study.

What if you have questions about this study?
You have the right to ask, and have answered, any questions you may have about this research. If you have questions about the study (including payments), complaints, concerns, or if a research-related injury occurs, you should contact the researchers listed on the first page of this form.

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

What if you have questions about your rights as a research participant?
All research on human volunteers is reviewed by a committee that works to protect your rights and welfare. If you have questions or concerns about your rights as a research subject, or if you would like to obtain information or offer input, you may contact the Institutional Review Board at 919-966-3113 or by email to IRB_subjects@unc.edu.

What is a Certificate of Confidentiality?
This research is covered by a Certificate of Confidentiality. With this Certificate, the researchers may not disclose or use information, documents or biospecimens that may identify you in any federal, state, or local civil, criminal, administrative, legislative, or other proceedings in the United States, for example, if there is a court subpoena, unless you have consented for this use.

The Certificate cannot be used to refuse a request for information from personnel of a federal or state agency that is sponsoring the study for auditing or evaluation purposes or for information that must be disclosed in order to meet the requirements of the federal Food and Drug Administration (FDA).

The Certificate of Confidentiality will not be used to prevent disclosure as required by federal, state, or local law, such as mandatory reporting requirements for child abuse or neglect, disabled adult abuse or neglect, communicable diseases, injuries caused by suspected criminal violence, cancer diagnosis or benign brain or central nervous system tumors or other mandatory reporting requirement under applicable law. The Certificate of Confidentiality will not be used if disclosure is for other scientific research, as allowed by federal regulations protecting research subjects or for any purpose you have consented to in this informed consent document.

You should understand that a Certificate of Confidentiality does not prevent you from voluntarily releasing information about yourself or your involvement in this research. If an insurer, employer, or other person obtains your written consent to receive research information, then the researchers may not use the Certificate to withhold that information."

Participant's Agreement:

I have read the information provided above. I have asked all the questions I have at this time. I voluntarily agree to participate in this research study.

_____ _____
Signature of Research Participant Date

_____
Printed Name of Research Participant

_____ _____
Signature of Research Team Member Obtaining Consent Date

_____
Printed Name of Research Team Member Obtaining Consent

_____
Signature of Witness if applicable; e.g. literacy issues, visually impaired, physically unable to sign, witness/interpreter for non-English speaking participants using the short form) _____ Date

_____
Printed Name of Witness