Official Title: Single Injection Interscalene Brachial Plexus Nerve Block With Adjuvants vs. Liposomal Bupivacaine Interscalene Brachial Plexus Nerve Block for Total Shoulder Arthroplasty
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Department of Anesthesiology

SINGLE INJECTION INTERSCALENE BRACHIAL PLEXUS NERVE BLOCK WITH ADJUVANTS VS LIPOSOMAL BUPIVACAINE INTERSCALENE BRACHIAL PLEXUS NERVE BLOCK FOR TOTAL SHOULDER ARTHROPLASTY

Informed Consent Form to Participate in Research
J. Doug Jaffe, DO, Principal Investigator

SUMMARY

You are invited to participate in a research study. You are invited to this study because you are having a shoulder surgery performed. For these types of shoulder surgeries, a regional anesthesia technique is used called an interscalene block, which is a way to numb the shoulder by injecting medications directly onto the nerves. Nerve blocks are commonly used for shoulder surgeries to decrease pain for several days after surgery.

The purpose of this research is to determine whether the amount of pain after shoulder surgery is the same for two types of medication used in the regional anesthesia block. The two types of medications are liposomal bupivacaine, which is a commonly used long-acting medicine, or regular bupivacaine with other medications added to prolong its effect.

Your participation in this research will involve no additional visits, but will consist of a written form to be filled out each day and a telephone call daily with a study coordinator for about 3 days.

Participation in this study will involve having a nerve block done using one of the two types of medications. All research studies involve some risks. The risks for this study is the same type of risk that you would have regardless of the medication used to block the nerves. These risks include lasting irritation to the nerves, infection at the injection site, bleeding, difficulty breathing, injury to the lung, or allergic reaction. These risks, however, are small.

Your participation in this study is voluntary. You do not have to participate in this study if you do not want to. There may be other choices available to you. Some other choices may include undergoing regional anesthesia with plain bupivacaine alone. You will not lose any services, benefits, or rights you would normally have if you choose not to participate.

The remainder of this form contains a more complete description of this study. Please read this description carefully. You can ask any questions if you need help deciding whether to join the study. The person in charge of this study is Dr. Doug Jaffe. If you have questions, suggestions, or concerns regarding this study or you want to withdraw from the study his/her contact information is: [redacted]

If you have any questions, suggestions or concerns about your rights as a volunteer in this research, contact the Institutional Review Board at [redacted] or the Research Subject Advocate at [redacted]

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INTRODUCTION

You are invited to be in a research study. Research studies are designed to gain scientific knowledge that may help other people in the future. You are being asked to take part in this study because you are having shoulder surgery. Your participation is voluntary. Please take your time in making your decision as to whether or not you wish to participate. Ask your study doctor or the study staff to explain any words or information contained in this informed consent document that you do not understand. You may also discuss the study with your friends and family.

If you do not wish to be involved in this study, you will still be able to receive a regional nerve block.

WHY IS THIS STUDY BEING DONE?

A common way to reduce pain associated with shoulder surgery is to numb the nerves that go to the shoulder and the arm by doing a procedure called a nerve block. This numbness can last from a few hours to a few days, depending on the type of medication used in the nerve block. The medication is injected through a small needle in your neck, using an ultrasound machine to guide the needle.

The purpose of this research study is to compare two modalities of medications used for nerve blocks, to see if they provide the same amount of pain relief after surgery. There is currently no standard of care for which medications are used in these types of nerve blocks, and patients often receive different types of medications.

Bupivacaine is a medicine that blocks pain from being transmitted by the nerves in your arm. When used in a nerve block, it typically gives pain relief up to 6-12 hours after surgery. Medications called 'adjuvants' can be added to bupivacaine to make it last longer. Studies have shown that the addition of epinephrine, clonidine, buprenorphine, and dexamethasone to bupivacaine can make it last much longer, possibly up to 72 hours. Liposomal bupivacaine, or "Exparel", is a type of medicine that has been approved by the FDA for use in these nerve blocks. Liposomal bupivacaine is a slow-release form of bupivacaine that is believed to provide pain relief for up to 36-48 hours after surgery.

The dosages of medications that you will receive are either 133mg liposomal bupivacaine with 25mg plain bupivacaine OR 50mg plain bupivacaine with adjunct medicines: 32mcg clonidine, 50mcg epinephrine, 2mg dexamethasone and 150mcg buprenorphine.

Our goal is to see if regular bupivacaine with adjuvant medications works better, worse, or the same, as liposomal bupivacaine in relieving pain after shoulder surgery.

HOW MANY PEOPLE WILL TAKE PART IN THE STUDY?

80 people at 2 research sites (Wake Forest Baptist Health and Wake Forest- Davie Medical Center) will take part in this study.

WHAT IS INVOLVED IN THE STUDY?

On the day of your surgery, you will meet with one of the study coordinators to review this consent form. If you agree to participate, you will be randomized into one of the study groups described above. Randomization means that you are put into a group by chance. It is like flipping a coin. You will have an equal chance of receiving either liposomal bupivacaine or plain bupivacaine with added medications in your nerve block. You will not know which one you received. The surgeon will not know which medication you received, and the study coordinators will not know which medication you received. The

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anesthesiologist who performs the nerve block will know which medication you received, but he will not tell you nor anyone else.

An anesthesiologist will perform your nerve block using an ultrasound machine to guide a needle onto the space next to your nerves, called the brachial plexus. The anesthesiologist will inject the medication around the nerves, and your shoulder and arm will go numb after a few minutes. You will be taken to the operating room for surgery, where you will be given additional medications for pain and sedation. You will be followed by research personnel upon arrival to PACU and every 12 ours postoperatively after surgery both in the hospital and at home via a phone call. Most of your arm will probably still be numb during this time, and the numbness will gradually wear off over the next few days. For 3 days after your surgery, you will be asked to rate your shoulder pain with movement every 12 hours, and medications you use for pain control will also be obtained. If you are discharged from the hospital before 3 days after your surgery, a study coordinator will call you at home until 3 days after surgery has occurred in order to obtain your pain scores and pain medications.

How Long Will I Be in the Study?

You will be in the study for 4 days total, including the day of your surgery. You can stop participating at any time. If you decide to stop participating in the study we encourage you to talk to the investigators or study staff first to inform them.

What Are the Risks of the Study?

Nerve blocks are overall very safe, however there is always some risks. The risks of this type of nerve block (interscalene nerve block) are: lasting irrigation to the nerves (rare), infection at the injection site, bleeding (rare), injury to the lung (rare), or allergic reaction (rare). The risk of these side effects is less than 1%. For patients with decreased lung function (like COPD or asthma), the risk of difficulty breathing is higher (very common), and these patients will be excluded from this study. These risks are the same regardless of the type of medication used in the nerve block. In addition, the medicines used for nerve blocks have their own small risks. Liposomal bupivacaine and plain bupivacaine have low risks (less than 10%) of nausea, constipation, or vomiting. There are very rare risks (less than 1%) of changes in heart rhythms or seizures with these medications. Epinephrine has the low risk (less than 1%) of causing a fast heartbeat or high blood pressure. Clonidine has the low risk (less than 1%) of causing a slow heartbeat or low blood pressure. Buprenorphine has the very small risk (less than 1%) of causing drowsiness or causing slow breathing. Dexamethasone has the small risk (less than 1%) of causing increased blood sugar. All of these risks are very low, as these medicines will be injected around the nerves in your arm, rather than into your bloodstream.

Your involvement in this study does not increase your risk of adverse effect any more than the risk of a regular nerve block.

This study is comparing two approved methods for treating your condition. You will be randomly assigned to one of the two groups. It is possible that one treatment group may have a better response than the other. Therefore there is a risk that you may be assigned to a group that does not perform as well as its comparison.

Additionally, by entering this study you will not be eligible to have an interscalene catheter that is left in place after the surgery. These catheters can usually provide pain relief for 3-4 days, so there is the risk that you may not receive as many days of pain relief.

In addition, there is always a slight risk of a breach of confidentiality. We will do our best to protect your

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confidential information. There also may be other risks that we cannot predict. You should tell the research staff about all the medications, vitamins and supplements you take and any medical conditions you have. This may help avoid side effects, interactions and other risks.

Pregnant women are excluded from participation in this study. Because NO method of birth control is 100% reliable, a pregnancy test is required at least 10 days from your last normal menstrual period, if you are a sexually active woman of childbearing potential.

SECURITY AND CONFIDENTIALITY: Taking part in this research study may involve providing information that you consider confidential or private. Efforts, such as coding research records, keeping research records secure and allowing only authorized people to have access to research records, will be made to keep your information safe.

ARE THERE BENEFITS TO TAKING PART IN THE STUDY?

If you agree to take part in this study, there may or may not be direct benefit to you. You may or may not have longer pain relief after surgery. We hope the information learned from this study will benefit other people in the future.

WHAT ARE THE COSTS?

All study costs, including any study medications (133mg liposomal bupivacaine with 25mg plain bupivacaine OR 50mg plain bupivacaine with adjunct medicines: 32mcg clonidine, 50mcg epinephrine, 2mg dexamethasone and 150mcg buprenorphine), and procedures related directly to the study, will be paid for by the study, which is funded with a departmental grant. Costs for your regular medical care, which are not related to this study, will be your own responsibility. You will be charged for the surgery, and administration fees, that would occur otherwise should you not be enrolled in study."

WHAT OTHER CHOICES ARE THERE?

You do not have to be in this study to receive treatment. You should talk to your doctor about all the choices you have. Instead of being in this study, you have these options:

-Receive interscalene nerve block with medications as decided by your anesthesiologist. Some options include liposomal bupivacaine, plain bupivacaine, mepivacaine, or another type of local anesthetic.

-Receive an interscalene nerve block with a catheter left in place for 3-4 days. This would likely provide pain relief for at least 3 days.

-Receive general anesthesia without a nerve block, if decided by your anesthesiologist.

You could be treated with liposomal bupivacaine, plain bupivacaine, epinephrine, clonidine, dexamethasone, and buprenorphine even if you do not take part in the study.

WILL YOUR RESEARCH RECORDS BE CONFIDENTIAL?

The results of this research study may be presented at scientific or medical meetings or published in scientific journals. Your identity and/or your personal health information will not be disclosed unless it is authorized by you, required by law, or necessary to protect the safety of yourself or others. There is always some risk that even de-identified information might be re-identified.

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Participant information may be provided to Federal and other regulatory agencies as required. The Food and Drug Administration (FDA), for example, may inspect research records and learn your identity if this study falls within its jurisdiction.

WILL YOU BE PAID FOR PARTICIPATING?

You will receive no payment or other compensation for taking part in this study.

WHO IS SPONSORING THIS STUDY?

This study is being sponsored by funding from the Department of Anesthesiology at Wake Forest Baptist Health. The researchers do not hold a direct financial interest in the products being compared or a financial relationship to the manufacturers of the medications.

WHAT HAPPENS IF YOU EXPERIENCE AN INJURY OR ILLNESS AS A RESULT OF PARTICIPATING IN THIS STUDY?

Should you experience a physical injury or illness as a direct result of your participation in this study, Wake Forest University School of Medicine maintains limited research insurance coverage for the usual and customary medical fees for reasonable and necessary treatment of such injuries or illnesses. To the extent research insurance coverage is available under this policy the reasonable costs of these necessary medical services will be paid, up to a maximum of $25,000. Wake Forest University Baptist Medical Center holds the insurance policy for this coverage. It provides a maximum of $25,000 coverage for each claim and is limited to a total of $250,000 for all claims in any one year. The Wake Forest University School of Medicine, and the North Carolina Baptist Hospitals, Incorporated do not assume responsibility to pay for these medical services or to provide any other compensation for such injury or illness. Additional information may be obtained from the Medical Center's Director of Risk and Insurance Management, at [redacted].

If you are injured, the insurer may require information such as your name, social security number, and date of birth in order to pay for your care. This is because the insurer is required by law to report any payments made to cover the care of any persons who are members of a government insurance plan to the Department of Health and Human Services.

You do not give up any legal rights as a research participant by signing this consent form. For more information on medical treatment for research related injuries or to report a study related illness, adverse event, or injury you should call Dr. Doug Jaffe at [redacted].

WHAT ABOUT MY HEALTH INFORMATION?

In this research study, any new information we collect from you and/or information we get from your medical records or other facilities about your health or behaviors is considered Protected Health Information. The information we will collect for this research study includes**:** Your medical history, your current medications, your surgical procedure, your age, height and weight, your pain scores after surgery, and your medication use after surgery.

We will make every effort to keep your Protected Health Information private. We will store records of your Protected Health Information in a cabinet in a locked office or on a password protected computer.

Your personal health information and information that identifies you ("your health information") may be given to others during and after the study. This is for reasons such as to carry out the study, to determine the results of the study, to make sure the study is being done correctly, to provide required reports and to get approval for new products.

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Some of the people, agencies and businesses that may receive and use your health information are the research sponsor; representatives of the sponsor assisting with the research; investigators at other sites who are assisting with the research; the Institutional Review Board; representatives of Wake Forest University Health Sciences and North Carolina Baptist Hospital; representatives from government agencies such as the Food and Drug Administration (FDA) or the Office of Human Research Protections (OHRP), the Department of Health and Human Services (DHHS) and similar agencies in other countries.

Some of these people, agencies and businesses may further disclose your health information. If disclosed by them, your health information may no longer be covered by federal or state privacy regulations. Your health information may be disclosed if required by law. Your health information may be used to create information that does not directly identify you. This information may be used by other researchers. You will not be directly identified in any publication or presentation that may result from this study unless there are photographs or recorded media which are identifiable.

If required by law or court order, we might also have to share your Protected Health Information with a judge, law enforcement officer, government agencies, or others. If your Protected Health Information is shared with any of these groups it may no longer be protected by federal or state privacy rules.

Any Protected Health Information collected from you in this study that is maintained in the research records will be kept for at least six years after the study is finished. At that time any research information not already in your medical record will either be destroyed or it will be de-identified.
You can tell Dr. Doug Jaffe, DO that you want to take away your permission to use and share your Protected Health Information at any time by sending a letter to this address:

Dr. Doug Jaffe, DO
[redacted]

However, if you take away permission to use your Protected Health Information you will not be able to be in the study any longer. We will stop collecting any more information about you, but any information we have already collected can still be used for the purposes of the research study.
By signing this form you give us permission to use your Protected Health Information for this study. If you choose to participate in this study, your medical record at Wake Forest University Baptist Medical Center will indicate that you are enrolled in a clinical trial. Information about the research and any medications or devices you are being given as a participant may also be included in your medical record. This part of the medical record will only be available to people who have authorized access to your medical record. If you are not a patient at this Medical Center, a medical record will be created for you anyway to ensure that this important information is available to doctors in case of an emergency.

A description of this clinical trial will be available on http://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.

Medical procedure reports created as a result of your participation in the research study may be entered into the computer systems of Wake Forest University Health Sciences and North Carolina Baptist

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Hospital. These will be kept secure, with access to this information limited to individuals with proper authority, but who may not be directly involved with this research study.

A North Carolina Baptist Hospital (NCBH) medical record will be created for all study participants. Information about your participation in the study will be placed in the NCBH medical record, along with any routine medical test results that were obtained at NCBH as part of this study.

WHAT ARE MY RIGHTS AS A RESEARCH STUDY PARTICIPANT?

Taking part in this study is voluntary. You may choose not to take part or you may leave the study at any time. Refusing to participate or leaving the study will not result in any penalty or loss of benefits to which you are entitled. If you decide to stop participating in the study we encourage you to talk to the investigators or study staff first to learn about any potential health or safety consequences. The investigators also have the right to stop your participation in the study at any time. This could be because it is in your best medical interest, your condition worsened, new information becomes available, you had an unexpected reaction, you failed to follow instructions, or because the entire study has been stopped. Information that identifies you may be removed from the data that is collected as part of this study and could be used for future research or shared with others without additional consent.
You will be given any new information we become aware of that would affect your willingness to continue to participate in the study.

WHOM DO I CALL IF I HAVE QUESTIONS OR PROBLEMS?

For questions about the study or in the event of a research-related injury, contact the study investigator:

Daytime Hours: Dr. Doug Jaffe at [redacted].

After Hours: Regional Anesthesia Physician at [redacted]
(enter your callback number followed by # key)

The Institutional Review Board (IRB) is a group of people who review the research to protect your rights. If you have a question about your rights as a research participant, or you would like to discuss problems or concerns, have questions or want to offer input, or you want to obtain additional information, you should contact the Chairman of the IRB at [redacted] or the Research Subject Advocate at [redacted]

You will be given a copy of this signed consent form and a copy will be placed in your medical record.

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SIGNATURES

I agree to take part in this study. I authorize the use and disclosure of my health information as described in this consent and authorization form. If I have not already received a copy of the Privacy Notice, I may request one or one will be made available to me. I have had a chance to ask questions about being in this study and have those questions answered. By signing this consent and authorization form, I am not releasing or agreeing to release the investigator, the sponsor, the institution or its agents from liability for negligence.

Subject Name (Printed):_____

Subject Signature: _____ Date: _____Time:_____ am pm

Person Obtaining Consent (Printed):_____

Person Obtaining Consent:_____ Date:_____ Time:_____ am pm

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Institutional Review Board
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