2015H0433: An evaluation of postoperative pain in patients with symptomatic irreversible pulpitis using ibuprofen versus ibuprofen and acetaminophen

Study 2015H0433 - Identification

Title of Study	An evaluation of postoperative pain in patients with symptomatic irreversible pulpitis using ibuprofen versus ibuprofen and acetaminophen
Principal Investigator	Melissa Drum (drum.13)
Study Department	Endodontics (21250)
Department Signer	John Nusstein (Signed: 12/21/2015)

Principal Investigator - Melissa Drum

Campus Mailing Address

305 W Twelfth Avenue, Columbus, OH 43210

Email

drum.13@osu.edu

Phone

6142472533

CITI

Expires 11/05/2016

GCP

Incomplete

Academic Title

Faculty

Department/TIU

Endodontics (21250)

College of TIU

College of Dentistry (21000)

COI

Completed (Expires: 06/30/2016)

PI Eligibility

Eligible

Please verify that the principal investigator's (PI) information displayed above is correct before proceeding. To update this information, the PI must visit the user registration form . If you are not the PI, please email the PI a link to the user registration form to update their information. Only the principal investigator can complete this form.

Study Personnel

Enter all Ohio State study team members below. External collaborators will be entered on a different page. Study team members should only be listed in one category (i.e., PI, co-investigator, or key personnel).

Co-investigators and key personnel are defined as individuals who participate in the design, conduct, or reporting of human subjects research. At a minimum, include individuals who recruit participants, obtain consent, or who collect study data.

Additional contacts can also serve in another role on the project.

All individuals listed as Ohio State study team members will have access to all submitted information, including completion status of team members' administrative and training requirements (CITI, COI disclosure), and may edit submissions on behalf of the principal investigator.

Electronic signatures are required of all Ohio State investigators named on the submission.

Study Team

Co-Investigator - Alexander Stamos

Campus Mailing Address	Academic Title
305 W Twelfth Avenue, Columbus, OH 43210	Student
Email	**Department/TIU**
stamos.10@osu.edu	Endodontics (21250)
Phone	**College of TIU**
—	College of Dentistry (21000)
CITI	**COI**
Expires 11/01/2018	Completed (Expires: 06/30/2016)
GCP	
Incomplete	
Activities Performed	

Protocol development/study design, Recruitment, Assess participant eligibility, Obtain consent/parental permission/assent, Interview participants/administer surveys, Conduct follow-up visits, Data collection/entry/coding, Data analysis/interpretation, Reporting results, Manuscript preparation, Access participant Protected Health Information (PHI)

Funding and Financial Conflicts

If the research is federally funded and involves a subcontract to or from another entity, an IRB Authorization Agreement may be required. Contact ORRP for more information.

Is the research funded or has funding been requested?*	□ Yes ■ No □ Pending
Is any support other than monetary (e.g., drugs, equipment, etc.) being provided for the study?*	□ Yes ■ No □ Pending

Provide a copy of the grant application or funding proposal.

Uploaded Files

No files have been uploaded.

Financial Conflict of Interest

All Ohio State investigators and key personnel must have a current COI disclosure (updated as necessary for the proposed research) before IRB review. Examples of financial interests that must be disclosed include (but are not limited to) consulting fees or honoraria; stocks, stock options or other ownership interests; and patents, copyrights and royalties from such rights. For more information, see Office of Research Compliance COI Overview and eCOI.

Please indicate if any Ohio State University investigator (including principal or co-investigator), key personnel, or their immediate family members has a financial conflict (including salary or other

payments for services, equity interests, or intellectual property rights) that would reasonably appear to be affected by the research, or a financial interest in any entity whose financial interest would reasonably appear to be affected by the research. Select 'none' if no financial conflicts exist.*

■ None
□ Melissa Drum
□ Alexander Stamos

Location of Research

Research to be conducted at locations other than approved performance sites may require a letter of support or another institution's approval if personnel are engaged. See OHRP Engagement Guidance or contact ORRP at irbinfo@osu.edu or 614-688-8457 for more information.

Ohio State Approved Research Sites

College of Dentistry Clinics	305 West 12th Avenue Columbus, OH

Domestic Research Sites – Non-Ohio State Locations

You have listed no alternate domestic research sites.

International Research Sites

You have listed no international research sites.

Type of Research

Select the appropriate option below based on the type of review required for the research.

Exempt research: This option should be selected for research that involves human subjects that is not subject to regulations requiring IRB review and approval. Final determination is made by ORRP staff.

Expedited or full IRB-reviewed research: This option should be selected for review by the Biomedical Sciences, Behavioral and Social Sciences, or Cancer IRBs at Ohio State including research reviewed through either expedited or full board processes. This option should also be selected for any research which will be ceded to another non-Ohio State IRB, such as WIRB, NCI CIRB, or another external institution.

Don't know: This option should be selected if the investigator is uncertain whether the research is exempt or should be reviewed by an IRB.

What type of review is required for your project?

□ Exempt research
■ Expedited or full IRB-reviewed research (includes WIRB, NCI CIRB and other external IRB review)
□ Don't know (screening questions to determine if exempt research)

Review Board

Research at Ohio State involving human subjects that requires Institutional Review Board (IRB) review is reviewed by one of three university IRBs or one of multiple external IRBs, including Western IRB (WIRB), National Cancer Institute Central IRB (CIRB), Ohio CTSA Consortium, and Nationwide Children's Hospital (NCH) IRB. Board assignments are made to ensure that proposed research receives appropriate scientific or scholarly review by individuals with the qualifications to determine that the rights and welfare of research participants are protected. Final board assignment is determined by ORRP.

Selection of one of the three Ohio State IRBs below will connect to the initial review of human subjects research.

Selection of one of the external (non-Ohio State) IRBs will connect to an external review application which provides the necessary information for ORRP staff to perform pre-screening of the application to determine that institutional requirements have been met (e.g., COI disclosure, education) and that the research meets the conditions necessary to be forwarded for external IRB review.

Select the board to review this research.*	
	□ Ohio State Behavioral IRB
	■ Ohio State Biomedical IRB
	□ Ohio State Cancer IRB
	□ National Cancer Institute Central IRB (CIRB)
	□ Nationwide Children's Hospital IRB
	□ Western IRB (WIRB)
	□ Ohio CTSA Consortium
	□ Quorum IRB
	□ Other external IRB

Conditions required for expedited IRB review

The Federal Regulations establish two main criteria for an expedited review:

a. The research may not involve more than "minimal risk." "Minimal risk" means that “the probability and magnitude of harm or discomfort anticipated in the research are not greater in and of themselves than those ordinarily encountered in daily life or during the performance of routine physical or psychological examinations or tests” (45 CFR 46.102(i) and 21 CFR 56.102(i)).
b. The entire research project must be consistent with one or more of the federally defined categories.

The expedited review procedure may not be used where identification of the participants and/or their responses would reasonably place them at risk of criminal or civil liability or be damaging to the participant's financial standing, employability, insurability, reputation, or be stigmatizing, unless reasonable and appropriate protections will be implemented so that risks related to invasion of privacy and breach of confidentiality are no greater than minimal.

The expedited review procedure may not be used for classified research involving human subjects.

Investigators are reminded that the standard requirements for informed consent (or its waiver, alteration, or exception) apply regardless of the type of review (i.e., expedited or convened) utilized by the IRB.

Protocols involving the collection, storage, and/or distribution of data and/or specimens for future research uses do not qualify for expedited IRB review. Convened review is required.

For more information regarding the expedited review procedures, see the Expedited Review Procedures policy.

Are you requesting **Expedited Review**?*

■ Yes □ No

Expedited Review Categories

Select the appropriate category(ies) for expedited review that describe the proposed research. Check all that apply. If the research meets the conditions for expedited review, the review of the protocol will be carried out by the IRB chairperson or by one or more experienced reviewers designated by the chairperson from among members of the IRB. See 45 CFR 46 and 21 CFR 56 for more information.

The categories in this list apply regardless of the age of the participants, except as noted.

Category #1

Clinical studies of drugs and medical devices only when condition (a) or (b) is met.

a. Research on drugs for which an investigational new drug application (21 CFR 312) is not required. (Note: Research on marketed drugs that significantly increases the risks or decreases the acceptability of the risks associated with the use of the product is not eligible for expedited review.)
b. Research on medical devices for which (i) an investigational device exemption application (21 CFR 812) is not required; or (ii) the medical device is cleared/approved for marketing and the medical device is being used in accordance with its cleared/approved labeling.

■ Apply for category #1

Category #2

Collection of blood samples by finger stick, heel stick, ear stick, or venipuncture as follows:

a. From healthy, non-pregnant adults who weigh at least 110 pounds. For these participants, the amounts drawn may not exceed 550 ml in an 8 week period and collection may not occur more frequently than 2 times per week.
b. From other adults and children (defined as persons who have not attained the legal age for consent to treatments or procedures involved in the research, under the applicable law of the jurisdiction in which the research will be conducted.45 CFR 46.402(a)), considering the age, weight, and health of the participants, the collection procedure, the amount of blood to be collected, and the frequency with which it will be collected. For these participants, the amount drawn may not exceed the lesser of 50 ml or 3 ml per kg in an 8 week period and collection may not occur more frequently than 2 times per week.

□ Apply for category #2

Category #3

Prospective collection of biological specimens for research purposes by non-invasive means.

a. Examples: (a) hair and nail clippings in a nondisfiguring manner; (b) deciduous teeth at time of exfoliation or if routine patient care indicates a need for extraction; (c) permanent teeth if routine patient care indicates a need for extraction; (d) excreta and external secretions (including sweat); (e) uncannulated saliva collected either in an unstimulated fashion or stimulated by chewing gumbase or wax or by applying a dilute citric solution to the tongue; (f) placenta removed at delivery; (g) amniotic fluid obtained at the time of rupture of the membrane prior to or during labor; (h) supra- and subgingival dental plaque and calculus, provided the collection

procedure is not more invasive than routine prophylactic scaling of the teeth and the process is accomplished in accordance with accepted prophylactic techniques; (i) mucosal and skin cells collected by buccal scraping or swab, skin swab, or mouth washings; (j) sputum collected after saline mist nebulization.

□ Apply for category #3

Category #4

Collection of data through noninvasive procedures (not involving general anesthesia or sedation) routinely employed in clinical practice, excluding procedures involving x-rays or microwaves. Where medical devices are employed, they must be cleared/approved for marketing. (Studies intended to evaluate the safety and effectiveness of the medical device are not generally eligible for expedited review, including studies of cleared medical devices for new indications.)

a. Examples: (a) physical sensors that are applied either to the surface of the body or at a distance and do not involve input of significant amounts of energy into the participant or an invasion of the participant's privacy; (b) weighing or testing sensory acuity; (c) magnetic resonance imaging; (d) electrocardiography, electroencephalography, thermography, detection of naturally occurring radioactivity, electroretinography, ultrasound, diagnostic infrared imaging, doppler blood flow, and echocardiography; (e) moderate exercise, muscular strength testing, body composition assessment, and flexibility testing where appropriate given the age, weight, and health of the individual.

□ Apply for category #4

Category #5

Research involving materials (data, documents, records, or specimens) that have been collected or will be collected solely for nonresearch purposes (such as medical treatment or diagnosis).

□ Apply for category #5

Category #6

Collection of data from voice, video, digital or image recordings made for research purposes.

□ Apply for category #6

Category #7

Research made on individual or group characteristics or behavior (including, but not limited to,

research on perception, cognition, motivation, identity, language, communication, cultural beliefs or practices, and social behavior) or research employing survey, interview, oral history, focus group, program evaluation, human factors evaluation, or quality assurance methodologies.

□ Apply for category #7

External Co-Investigators & Key Personnel

Enter the names of external collaborators who are engaged in the research. Only external personnel whose activities will be covered by an Ohio State IRB should be included.

"Engaged" individuals are those who intervene or interact with participants in the context of the research or who will obtain individually identifiable private information for research funded, supervised, or coordinated by Ohio State University. See OHRP Engagement Guidance or contact ORRP at irbinfo@osu.edu or 614-688-8457 for more information.

External Collaborators

You have listed no external collaborators.

Multi-site Study

A multi-site study is defined as a study conducted under a single protocol at two or more locations (often geographically diverse), involving legally separate entities and requiring IRB oversight for study activities at each location.

Is this a multi-site study?* □ Yes ■ No

Institutional Approvals

Check all that apply and provide applicable documentation.

■ No institutional approval

Comprehensive Cancer Center (CCC) Clinical Scientific Review Committee (CSRC)

Approval or exemption required prior to IRB review for all cancer-related research.

□ Comprehensive Cancer Center (CCC) Clinical Scientific Review Committee (CSRC)

Institutional Biosafety Committee (IBC)

Approval required prior to IRB review for research involving biohazards (recombinant DNA, infectious or select agents, toxins), gene transfer, or xenotransplantation.
Note: Routine clinical research sample processing (i.e., blood, serum, tissue) must also be conducted under an approved IBC protocol.

□ Institutional Biosafety Committee (IBC)

Summary, Background, and Objectives

Summarize the proposed research using **non-technical** language that can be readily understood by someone outside the discipline. Explain briefly the research design, procedures to be used, risks and anticipated benefits, and the importance of the knowledge that may reasonably be expected to result. **Use complete sentences (limit 300 words).***

The purpose of this study is to determine ibuprofen versus ibuprofen/acetaminophen use for postoperative endodontic (root canal) pain in patients diagnosed with symptomatic irreversible pulpitis (painful teeth needing root canal treatment) experiencing moderate-to-severe pain. One hundred twenty adult patients who present for emergency treatment will be used in this study. The patient must have a tooth with a clinical diagnosis of symptomatic irreversible pulpitis (toothache) as determined by tests using Endo Ice (1,1,1,2 tetrafluoroethane; Hygenic crop., Akron, Ohio), an electric pulp tester (Analytic Technology Corp., Redmond, WA) and a recent history of symptoms. Each patient will rate his or her initial pain on a visual analog scale (VAS). The one hundred twenty patients will receive 2% lidocaine with 1:100,000 epinephrine (Xylocaine, AstraZeneca LP, Dentsply, York, PA) by infiltration or inferior alveolar nerve block (shot in the back of the mouth) and the patient will then rate the pain of the injection using a VAS pain scale. After achieving clinical anesthesia, emergency endodontic treatment will be completed. At the end of the appointment, each patient will randomly be assigned a medication bottle labeled with a random number blinded to both the operator and patient. The patient will receive either a bottle containing tabs of 300 mg Ibuprofen or tabs of 300 mg Ibuprofen/325 mg Acetaminophen combination. The patient will be instructed to take 2 tabs every 6 hours as needed for pain. If the medication given to the patient is not managing their pain, the patient will be prescribed Norco (hydrocodone/acetaminophen) 5/325 20 tabs 1-2 tabs every 6 hours. The patient will be instructed to stop taking any study medications once starting the escape medication to avoid taking multiple doses of acetaminophen. Patients will receive a 4 day diary to record any pain they are having and the type (study or escape) medication they are taking. They will record the number of tabs

taken within each 24 hour period. The time of day will be recorded and any pain will be recorded on visual analog scales as described earlier for pain. There will also be a place for patient comments on the diary. Patients will be required to return all unused medications upon completion of the study to verify diary results. Risks are reasonable and the benefit would be the discovery of the better regimen for reducing postoperative pain following endodontic treatment.

Summarize existing knowledge and previous work that support the expectation of obtaining useful results without undue risk to human subjects. **Use complete sentences (limit 300 words).***

Previous studies have been published in the dental field which have found better postoperative pain control with the combination of ibuprofen and acetaminophen versus when each drug is used alone (1-4). Merry et al. (5) and Mehlisch et al. (6-7) also found better pain control postoperatively with an acetaminophen/ibuprofen combination following 3rd molar extractions. Unfortunately, most of these studies are based on oral surgery models related to postoperative soft tissue and bone pain in a previously asymptomatic non-infected site. A previous endodontic investigation was completed in which they looked at previously symptomatic teeth with spontaneous pain and

periapical inflammation/infection associated with necrotic/infected tissue within the tooth and drainage from the periapical tissues. The study showed no difference in postoperaive pain between ibuprofen and ibuprofen/acetaminophen combination (9). Another endodontic model which has not been studied yet with regard to post operative pain control includes symptomatic irreversible teeth (inflammation) with spontaneous pain and the postoperative pain related to root canal treatment of the tooth. The purpose of this study would be to compare the efficacy of ibuprofen versus the combination of acetaminophen/ibuprofen on postoperative pain in this model. Depending on the results, the way practitioners prescribe medications for postoperative pain for symptomatic irreversible pulpitis may be altered.

List the objectives and/or specific scientific or scholarly aims of the research study.*

The purpose of this prospective, randomized, double-blind study is to compare the efficacy of ibuprofen and ibuprofen/acetaminophen on postoperative pain in symptomatic irreversible pulpitis.

Upload research protocol*

Uploaded Files

StamosProtocol Final.doc

Uploaded by Alexander Stamos on 02/04/2016

Research Methods & Activities

Use the boxes provided below to provide information on all interventions and activities that are to be performed in the research. Based on the selections chosen in the list of activities and components, completion of additional form pages may be necessary to provide required information for IRB review.

Identify and describe all interventions and interactions that are to be performed solely for the research study. Distinguish research (i.e., experimental) activities from non-research activities.*

Each patient will rate his or her initial pain on a Heft-Parker visual analogue scale (VAS). Each patient will complete a Corah Anxiety Survey prior to treatment. Each patient will rate their injection pain with an Inferior alveolar nerve block on a Heft-Parker visual analogue scale (VAS). Each patient will rate injection pain with supplemental injections on a Heft-Parker visual analogue scale (VAS). Each patient will be given a 4 day pain dairy to rate pain on a VAS scale and document the amount of pain medication taken each day. Each patient will receive post operative pain medication to take home, either ibuprofen or ibuprofen/acetaminophen. These medications are routinely recommended following root canal therapy. If these medications do not control postoperative pain the patient is instructed to contact the investigator for an escape medication, Norco 5/325 mg.

Check all research activities and/or components that apply.

□ Anesthesia (general or local) or sedation
□ Audio, video, digital, or image recordings
□ Biohazards (e.g., rDNA, infectious agents, select agents, toxins)
□ Biological sampling (other than blood)
□ Blood drawing
□ Coordinating center
□ Data repositories (future unspecified use, including research databases)
■ Data, not publicly available
□ Data, publicly available
□ Deception
□ Devices
□ Diet, exercise, or sleep modifications
■ Drugs or biologics (including dietary supplements/ingredients)
□ Emergency research
□ Focus groups
□ Food supplements
□ Gene transfer
□ Genetic testing
□ Internet or e-mail data collection
□ Magnetic resonance imaging (MRI)
□ Materials that may be considered sensitive, offensive, threatening, or degrading
□ Non-invasive medical procedures (e.g., EKG, Doppler)
□ Observation of participants (including field notes)
□ Oral history (does not include medical history)
□ Placebo

■ Pregnancy testing
□ Program Protocol (Umbrella Protocol)
□ Radiation (e.g., CT or DEXA scans, X-rays, nuclear medicine procedures)
■ Randomization
■ Record review (which may include PHI)
□ Specimen research
□ Stem cell research
□ Storage of biological materials (future unspecified use, including repositories)
□ Surgical procedures (including biopsies)
□ Surveys, questionnaires, or interviews (group)
■ Surveys, questionnaires, or interviews (one-on-one)
□ Other (Specify)

Provide data collection forms, subject material, subject diaries, and/or other instruments, if applicable. Do not include case report forms for multi-site industry-initiated or cooperative group studies.

Uploaded Files

4dayPainDiary.doc

Uploaded by Alexander Stamos on 12/17/2015

Medical History form.docx

Uploaded by Alexander Stamos on 01/11/2016

Provide surveys, questionnaires, if applicable.*

Uploaded Files

Satisfaction Scale.doc

Uploaded by Alexander Stamos on 12/09/2015

Corah Anxiety Survey.doc

Uploaded by Alexander Stamos on 01/11/2016

Initial Pain Rating VAS.doc

Uploaded by Alexander Stamos on 01/11/2016

IANB Injection Pain Rating VAS.doc

Uploaded by Alexander Stamos on 01/11/2016

Supplemental Injection Pain Rating VAS.doc

Uploaded by Alexander Stamos on 01/11/2016

Provide subject information, such as newsletters, instruction sheets, appointment reminder cards, drug/device information, if applicable.

Uploaded Files

No files have been uploaded.

Drugs or Biologics

Select from the options below to request inclusion of drugs or biologics (e.g., vaccines, cellular products, blood- or plasma-derived products) in the proposed research. *Include only those drugs or biologics that are to be administered as part of the research protocol (i.e., not those administered for routine care or evaluation).* Enter as many drugs or biologics as required for the research.

The College of Medicine Office of Research (COM/OR) provides assistance to investigators obtaining INDs for human subjects research. A COM/OR representative will meet with investigators to review the FDA requirements of sponsor-investigators. For assistance, contact the College of Medicine Office of Research at 614-292-2595.

For assistance with drug accountability and recordkeeping procedures, contact the OSUMC Department of Pharmacy at 614-293-8470. For more information on the requirements for conducting research involving investigational drugs or biologics, see HRPP policy Research Involving Investigational Drugs.

FDA Approved Products

Ibuprofen

Brand Name	Generic Name
Advil, Motrin	Ibuprofen
Dose and dosage form	**Frequency/route of administration**
300 mg tablet	2 tabs every 6 hours

Description

Ibuprofen is a nonsteriodal anti-inflammatory agent that is used to reduce inflammation and is a COX inhibitor.

Proposed rationale of use

Ibuprofen is a commonly used and effective drug for reducing inflammation associated with root canal treatment.

Potential side effects

Potential side effects include nausea, epigastric pain, heartburn, diarrhea, abdominal distress, or allergic reaction.

Preparation summary

Central Ohio Compounding Pharmacy will make the ibuprofen into capsules that are identical in appearance and label them with random, six-digit numbers so that blinding will be ensured.

Acetaminophen

Brand Name	Generic Name
Tylenol	Acetaminophen
Dose and dosage form	**Frequency/route of administration**
325 mg tablets	2 tabs every 6 hours by mouth.

Description

Acetaminophen is an analgesic and antipyretic. The exact analgesic mechanism of action is unknown, but involves interaction with cyclo-oxygenase. The antipyretic effect occurs via direct action on the hypothalamic heat-regulating center of the brain.

Proposed rationale of use

Acetaminophen is a commonly used and effective drug for reducing pain associated with root canal treatment.

Potential side effects

Potential side effects include nausea, urticaria rash, hepatotoxicity and hypersensitivity reaction.

Preparation summary

Central Ohio Compounding Pharmacy will make the acetaminophen and ibuprofen combination into capsules that are identical in appearance and label them with random, six-digit numbers so that blinding will be ensured.

Investigational Drugs/Biologics or Investigational/Research Use of FDA Approved Product

You have listed no Investigational Products.

Duration

Estimate the time required from each participant, including individual interactions, total time commitment, and long-term follow-up, if any. For studies with no subject time involvement, such as record review studies with a waiver of consent or observational studies, enter 'not applicable.'*

Approximately 145 minutes. This consists of 120 minutes for emergency root canal treatment and 5 minutes daily for 4 days (includes day 0) to complete pain diary.

Number of Participants

The number of participants is defined as the number of individuals who agree to participate (i.e., those who provide consent or whose records are accessed, etc.) even if all do not prove to be eligible or complete the study. The total number of research participants may be increased only with prior IRB approval.

Provide the total number of participants (or number of participant records, specimens, etc.) for

*

whom you are seeking Ohio State University approval.

120

□ Unlimited participant numbers

Total number of participants* 120

Explain how this number was derived (e.g., statistical rationale, attrition rate, etc.).*

With a non-directional alpha risk of 0.05 and assuming an escape-drug utilization rate of 20% (9) a sample size of 60 patients per group will be required to demonstrate a difference in utilization rate of ±30% with a power of 0.94. For VAS pain scores, assuming a standard deviation of 50.3 (9), a difference of ±30 mm could be detected with a power of 0.9 with 60 patients per group. This sample size would also allow recognition of a difference of ±3 tabs in pain medication use, assuming a standard deviation of 4.3 tabs (9), with a power of 0.96.

Participant Population

Specify the age(s) of the individuals who may be included in the research:*

18-65

Specify the participant population(s). Check all participant groups that apply.*

■ Adults
□ Adults with decisional impairment
□ Children
□ Neonates (uncertain viability/nonviable)
□ Non-English speaking
□ Pregnant women/fetuses – only if pregnant women will be intentionally recruited and/or studied.
□ Prisoners
□ Student research pools (e.g., psychology, linguistics)
□ Unknown (e.g., research using secondary data/specimens, non-targeted surveys, program protocols)

Describe the characteristics of the proposed participants, and explain how the nature of the research requires/justifies their inclusion.*

All will be emergency patients of the College of Dentistry and will be in good health as determined

by a health history and oral questioning. Exclusion criteria will be as follows: subjects who are younger than 18 years or older than 65 years; history of significant medical problem (ASA class II or higher); allergies or contraindications to ibuprofen or acetaminophen; taken CNS depressants or any analgesic medication within the last 6 hours; pregnancy; or are unable to give informed consent.

Will any participants be excluded based on age, gender, race/ethnicity, pregnancy status, language, education, or financial status?*

■ Yes □ No

Explain the criteria and reason(s) for each exclusion.*

The reason for excluding pregnant or potentially pregnant women is an attempt to minimize this population in the study because of the potential risks of using ibuprofen during pregnancy. A urine pregnancy test will be conducted prior to enrollment.

Are any of the participants likely to be vulnerable to coercion or undue influence?*

■ Yes □ No

Describe additional safeguards to protect participants' rights and welfare.*

Some subjects may be students or employees of the College of Dentistry. All subjects will be held to the same inclusion criteria. Any person who is eligible for the study must already have presented to the clinic and given all treatment options. Subjects will be made fully aware that if they do not participate in the study, they are still able to have the root canal treatment. The investigators will answer all questions to the subjects' satisfaction prior to consent. No undue pressure or coercion will be used to induce the subject to participate.

Participant Identification, Recruitment and Selection

Participant Identification

Provide evidence that you will be able to recruit the necessary number of participants to complete the study.*

The Advanced Endodontic Clinic at the OSU College of Dentistry accepts emergency patients five days a week. This results in approximately 5 to 50 patients a week receiving emergency

endodontic treatment. Typically, more than half of these cases are diagnosed as symptomatic irreversible pulpitis, resulting in a large patient pool to draw from.

Describe how potential participants will be identified (e.g., advertising, individuals known to the investigators, record review). Explain how the investigator(s) will gain access to this population, as applicable.*

Patients will be identified from emergency patients of the College of Dentistry. The patients will be referred to the advanced endodontic clinic for endodontic treatment. Once in the clinic, they will be recruited to participate. No advertising will be used. A six-digit random number will identify subjects and this will be kept strictly confidential to unauthorized personnel. The patient study records will be kept in the principal investigator's, or co-investigator's, office in a locked storage file. Only the principal investigator, or co-investigator, will have access to the storage file. Because only six-digit random numbers identify the subjects, their privacy is ensured.

Participant Recruitment and Selection

Select investigator(s) and/or key personnel who will recruit participants or identify records and/or specimens.*

- Melissa Drum
- Alexander Stamos

Describe the process that will be used to determine participant eligibility.*

To qualify for the study, each patient will have a vital mandibular or maxillary posterior tooth (molar or premolar), will be actively experiencing pain, and will have a prolonged response to cold testing with Endo-ice (1,1,1,2 tetrafluoroethane; Hygenic Corp. Akron, Ohio). Patients with no response to cold testing, periradicular pathosis (other than widened periodontal ligament), or no vital coronal pulp tissue upon access will be excluded from the study. Therefore, each patient will have a tooth that fulfills the criteria for a clinical diagnosis of symptomatic irreversible pulpitis.

Describe the recruitment process, including the setting in which recruitment will take place. Enter 'not applicable' if the research involves only record review and no participant interaction.*

The principal investigator, or co-investigator, at The Ohio State University College of Dentistry will recruit patients in the Graduate Endodontic or Emergency Clinics. Prior to the recruitment procedure, patients will be screened in the Graduate Endodontic Clinic or the Emergency Clinic at the College of Dentistry. A careful diagnostic procedure will be performed and the patient

informed of their treatment options. They will decide what treatment will be performed. The patient will then be informed of the nature of the current study, and if they fit the criteria they will be referred to the principal investigator, or co-investigator.

Explain how the recruitment process respects potential participants' privacy.*

Recruitment will be done in a private patient operatory and the patient will have time to review the documents with the investigator and without the investigator present.

Provide copies of proposed recruitment materials (e.g., ads, fliers, website postings, and recruitment letters).

Uploaded Files

No files have been uploaded.

Provide copies of consent materials used during the recruitment process (e.g., oral/written scripts).

Uploaded Files

Stamos Consent Final.doc

Uploaded by Alexander Stamos on 02/04/2016

Incentives to Participate

For more information regarding incentives for participation, see the ORRP policy, Recruiting Methods, Recruiting Materials, and Participant Compensation.

Will participants receive compensation or other incentives (e.g., free services, cash payments, gift certificates, parking, classroom credit, travel reimbursement) to participate in the research study?*

■ Yes □ No

Describe the incentive, including the amount and timing of all payments.*

Patient will receive $20 after the completion of emergency endodontic treatment. Patient will receive another $55 when they return their 4 day pain diary to the investigator.

Alternatives to Study Participation

Other than choosing not to participate, are there any alternatives to participating in the research?*

■ Yes □ No

List the specific alternatives to participation, including available procedures or treatments that may be advantageous to the subject.*

The quality or care will not be affected if the subjects choose not to participate or withdraw from the study. Subjects may still choose to have emergency root canal treatment.

Informed Consent Process

Indicate the consent process(es) to be used in the study. Check all that apply.*

■ Informed Consent - Form
□ Informed Consent - Verbal Script/Online
□ Informed Consent – Addendum
□ Alteration of Consent Process
□ Alteration of Parental Permission
□ Assent - Form
□ Debriefing Script
□ Assent - Verbal Script/Online
□ Parental Permission - Form
□ Parental Permission - Verbal Script/Online
□ Translated Consent/Assent - Form(s)
□ Waiver of Assent
□ Waiver of Consent Process
□ Waiver of Consent Documentation
□ Waiver of Parental Permission
□ Waiver of Parental Permission Documentation

Provide copies of all documents, as applicable.*

Uploaded Files

Stamos Consent Final.doc

Uploaded by Alexander Stamos on 02/04/2016

Select the investigator(s) and/or key personnel who will obtain consent from participants or their legally authorized representatives.*

□ None

■ Melissa Drum

■ Alexander Stamos

Who will provide consent or permission (i.e., participant, legally authorized representative, parent and/or guardian)?*

The participant will provide consent.

□ Not Applicable

Describe the consent process. Explain when and where consent will be obtained and how subjects and/or their legally authorized representatives will be provided sufficient opportunity (e.g., waiting period, if any) to consider participation.*

The principal investigator, or co-investigator, at The Ohio State University College of Dentistry will obtain consent in the Graduate Endodontic or Emergency Clinics. Prior to the consent procedure, patients will be screened in the Graduate Endodontic Clinic or the Emergency Clinic at the College of Dentistry. A careful diagnostic procedure will be performed and the patient informed of their treatment options. They will decide what treatment (extraction or endodontic treatment) will be performed. The patient will then be informed of the nature of the current study, and if they fit the criteria they will be referred to the principal investigator, or co-investigator. The patient will read the consent form and further information will be provided by the investigators. The consent form is written in lay language to enhance subject understanding.

□ Not Applicable

Explain how the possibility of coercion or undue influence will be minimized in the consent process.*

Because the patient will have made the decision to have root canal treatment before recruitment or

consent, there is no coercion to either having the tooth treated endodontically or extracted. The investigators will answer all questions to the subject's satisfaction prior to consent. No undue pressure or coercion will be used to induce the patient to participate. The principal investigator and advanced endodontic clinic direct will monitor the consent procedures to ensure there is no undue pressure of coercion.

□ Not Applicable

Will any other tools (e.g., quizzes, visual aids, information sheets) be used during the consent process to assist participant comprehension?*

□ Yes ■ No

Will any other consent forms be used (e.g., for clinical procedures such as MRI, surgery, etc. and/or consent forms from other institutions)?*

□ Yes ■ No

Privacy of Participants

Describe the provisions to protect the privacy interests of the participants.*

Recruitment will be done in a private patient operatory and the patient will have time to review the documents with the investigator and without the investigator present. The data will be coded with random numbers and kept locked and under password protection. All in person data collection will be done chairside and the privacy protection will be the same as what must be provided for patient care.

Does the research require access to personally identifiable, private information?*

■ Yes □ No

Describe the personally identifiable private information involved in the research. List the information source(s) (e.g., educational records, surveys, medical records, etc.).*

Patients will be required to complete a medical health questionnaire in order to verify that they are medically qualified to participate in the study.

Confidentiality of Data

Explain how information is handled, including storage, security measures (as necessary), and who will have access to the information. Include both electronic and hard copy records.*

The patient study records will be kept in the principal investigator's, or co-investigator's, office in a locked storage file. Only the principal investigator, or co-investigator, will have access to the storage file. Because only six-digit random numbers identify the subjects, their privacy is ensured. Electronic records of data are stored on the College of Dentistry's password protected server that can not be accessed by those not involved in the investigation.

Explain if any personal or sensitive information that could be potentially damaging to participants (e.g., relating to illegal behaviors, alcohol or drug use, sexual attitudes, mental health, etc.) will be collected.*

Patients will be required to complete a medical health questionnaire in order to verify that they are medically qualified to participate in this research study.

□ Not Applicable

Will you be obtaining an NIH Certificate of Confidentiality?

□ Yes	■ No

Explain any circumstances (ethical or legal) where it would be necessary to break confidentiality.*

■ Not Applicable

Indicate what will happen to identifiable data at the end of the study*

□ Identifiable data will not be collected
□ Identifiers will be permanently removed from the data and destroyed (resulting in de-identified data)
■ Identifiable/coded(linked) data will be retained and stored confidentially (as appropriate)
□ Identifiable data will be retained and may be made public with participant consent (e.g., ethnographic research)

HIPAA Research Authorization

PHI is health information that is individually identifiable and created or held by a covered entity. Health information is considered individually identifiable when it contains one or more of the 18 HIPAA identifiers or when there is a reasonable basis to believe the information can be used to identify an individual.

For more information, see 45 CFR Parts 160 and 164 or Protecting Personal Health Information in Research: Understanding the HIPAA Privacy Rule.

Authorization: although similar to informed consent, an authorization focuses on privacy risks and permission to specifically use or disclose PHI.

Partial waiver of HIPAA authorization: permits access to and use of PHI for recruitment purposes, prior to obtaining authorization. Specifically, it allows for the identification and, as appropriate, contact of potential participants to determine their interest in study participation. Note: A partial waiver does not permit retention or other use of the information beyond its original purpose.

Full waiver of HIPAA authorization: waives the requirement to obtain an individual's authorization for the use of PHI for a particular research project (such as a retrospective chart review), or for a specific portion/population of the research (such as a waiver that applies only to review of health records of patients previously treated that are used as controls).

Alteration of HIPAA authorization: allows a change in certain authorization requirements, while still requiring authorization for the use of PHI. Examples include making an exception to the required language in an authorization form or eliminating the requirement to obtain a signed authorization (e.g., authorization provided over the phone).

This information below is un-editable and can only be revised with the submission of an amendment after approval or withdrawal of the continuing review submission.

For more information, please see http://orrp.osu.edu/irb/irbforms/hipaa/.

Is individually identifiable Protected Health Information (PHI) subject to the HIPAA Privacy Rule requirements to be accessed, used, or disclosed in the research study?*

■ Yes	□ No

Indicate how authorization requirements will be met (check all that apply).*

■ Written Authorization
□ Partial Waiver (for identification and recruitment purposes only)
□ Full Waiver (authorization will not be obtained)
□ Alteration (written authorization will not be obtained or all required elements will not be included)

HIPAA Written Authorization Forms

Provide a copy of the authorization form.*

Uploaded Files

HIPAA form.doc

Uploaded by Alexander Stamos on 12/17/2015

Reasonably Anticipated Benefits

List the potential benefits that participants may expect as a result of this research study. State if there are no direct benefits to individual participants.*

The subjects will not directly benefit from this study. Subjects who receive the ibuprofen/acetaminophen combination or ibuprofen alone may benefit by having less pain.

List the potential benefits that society and/or others may expect as a result of this research study.*

Society may ultimately benefit if we find the appropriate regimen to decrease postoperative pain associated with endodontic treatment on teeth diagnosed as irreversible pulpitis.

Risks, Harms & Discomforts

Describe all reasonably expected risks, harms, and/or discomforts that may apply to the research. Discuss severity and likelihood of occurrence. As applicable, include potential risks to an embryo or fetus if a woman is or may become pregnant.*

Ibuprofen or Tylenol may cause stomach upset, diarrhea, or cramps. Although these problems may occur, these medications are used in the majority of patients receiving root canal treatment even if not participating in this study. See appendix F for side effects of ibuprofen and acetaminophen.

Describe how risks, harms, and/or discomforts will be minimized.*

These are drugs that will be recommended for postoperative pain even if patients do not participate in this study. The consent form will list the risks and discomforts of the study and will

be explained to the subjects' satisfaction and signed before the subject begins the study. The principal investigator and co-investigator are trained in CPR and emergency services will be available.

Assessment of Risks & Benefits

Discuss how risks to participants are reasonable when compared to the anticipated benefits to participants (if any) and the importance of the knowledge that may reasonably be expected to result.*

The risks are minimal. Patients will be receiving the same care they would if not enrolled in the study. Patients will also be taking medications that would be recommended if not participating in the study. These medications are also available over the counter.

Monitoring

Does the research involve greater than minimal risk (i.e., are the harms or discomforts described for the study beyond what is ordinarily encountered in daily life or during the performance of routine physical or psychological tests)?*

□ Yes ■ No

Participant Costs/Reimbursements

Are there any additional costs that may result from study participation (e.g., parking, study drugs, diagnostic tests, etc.)?*

■ Yes □ No

Describe any potential costs participants (or their insurers) will incur as a result of study participation.*

Because routine endodontic treatment will be performed, other costs (parking, cost of treatment) will not be reimbursed in this study.

Specify costs to participants that will be covered by the research study.*

The study will cover the cost of the study drugs and urine pregnancy test.

Uploaded Files Review

To access or upload a file, click on a page below.

Grant Applications

No documents have been added for review.

Domestic Site Doc

No documents have been added for review.

International Site Documentation

No documents have been added for review.

Research Protocol

StamosProtocol Final.doc 02/04/2016

Data collection forms and/or other instruments

4dayPainDiary.doc 12/17/2015
Medical History form.docx 01/11/2016

Subject Information

No documents have been added for review.

Surveys and/or questionnaires

Satisfaction Scale.doc 12/09/2015
Corah Anxiety Survey.doc 01/11/2016
Initial Pain Rating VAS.doc 01/11/2016
IANB Injection Pain Rating VAS.doc 01/11/2016
Supplemental Injection Pain Rating VAS.doc 01/11/2016

Drug Labeling & Information

Ibuprofen

No documents have been added to Ibuprofen for review.

Acetaminophen

No documents have been added to Acetaminophen for review.

Recruitment materials (e.g., ads, fliers, website postings, and letters)

No documents have been added for review.

Consent Process

Stamos Consent Final.doc 02/04/2016

HIPAA Research Authorization

HIPAA form.doc 12/17/2015

Other Files

No documents have been added for review.

Other Files/Comments

This page should be used to provide ORRP or the IRB with additional information related to the current submission.

The general comments text area can be used to provide clarification to ORRP staff or the IRB members.

The general upload box below should be used to upload any additional documents necessary for this submission that were not already captured previously in the form. Examples of documents which may be uploaded include the detailed cover letter response for modifications or deferrals, IRB approvals for external sites at the time of continuing review, or a memo to IRB reviewers from the investigator.

Uploaded Files

No files have been uploaded.

Additional comments for this submission.