

MAPP Newsletter

research network

WORDS FROM OUR CHAIR

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Dear MAPP Participants,

As we begin planning for our next phase of research, I want to take a moment to recognize your amazing efforts and dedication to participation in the studies of the MAPP Research Network.

Our goal of finding the causes of Interstitial Cystitis/ Bladder Pain Syndrome and Chronic Prostatitis/ Chronic Pelvic Pain Syndrome would not be possible without your willingness to take time out of your day and volunteer to participate. Behind every research result and scientific innovation are the people—study participants—that make progress possible. Your involvement is crucial to our success and I'm astounded by the strength you have shown despite struggling with daily chronic pain.

Keeping your interests in mind, we are proud to bring you the first MAPP Research Newsletter. We hope to share our research results with you on a regular basis and keep you informed of our progress in planning for the next stage of the MAPP.

Thank you again for your participation and stay tuned as we continue working towards finding a cause for these syndromes.

Sincerely,

J. Quentin Clemens, MAPP Research Network Chair

Sites all across the United States participated

The MAPP Research Network is composed of numerous sites across the United States. In the first five year study, the MAPP Research Network recruited participants from 9 sites shown in blue in the map below. Some of these sites are continuing their participation in the next phase of the study while others are pursuing their research outside of the network. One new non-recruiting site, Cedars-

Sinai Medical Center in Los Angeles California, will join the Network and will conduct specialized testing on laboratory specimens, along with Queens University and Harvard University's continuing work.

The Data Coordinating Core (DCC) at the University of Pennsylvania coordinates the collection and analysis of data and provides administrative support to the

Network, including the development and maintenance of the MAPP website:

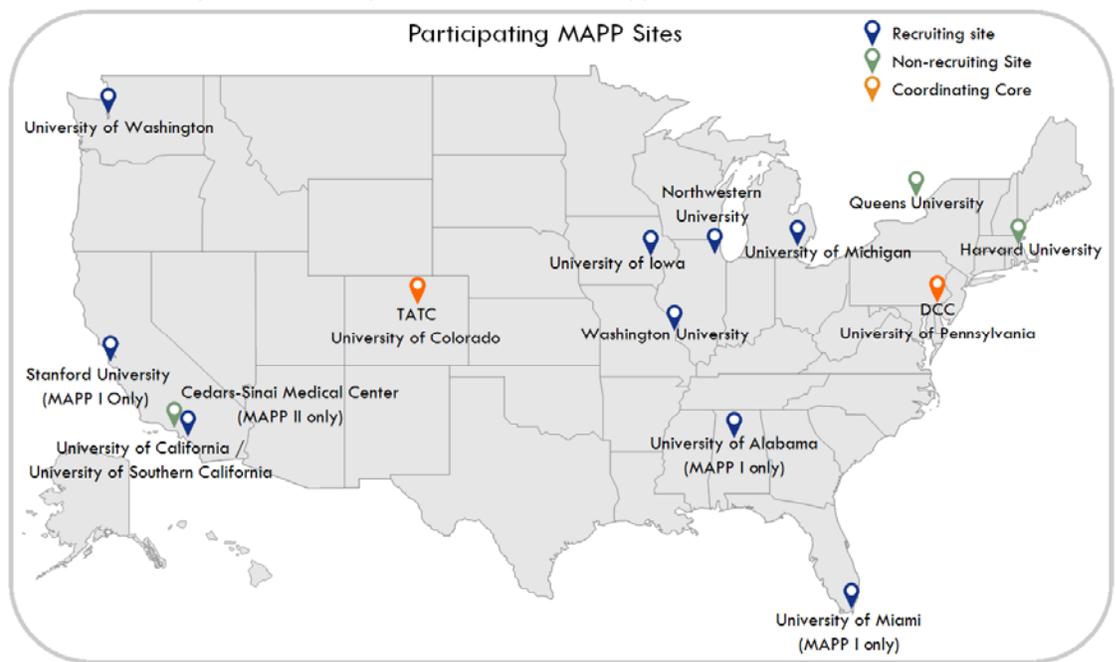
<http://www.mappnetwork.org>. The Tissue Analysis and Technology Core (TATC) at the University of Colorado, coordinates the collection, analysis and distribution of tissue samples across the Network.

Special points of interest:

- Participation in the first five-year MAPP study exceeded expectations!
- MAPP findings support the theory that UCPPS is a disorder of pain processing in some patients, rather than a disorder of the bladder or prostate.
- Planning for the next five-year MAPP study is currently under way!

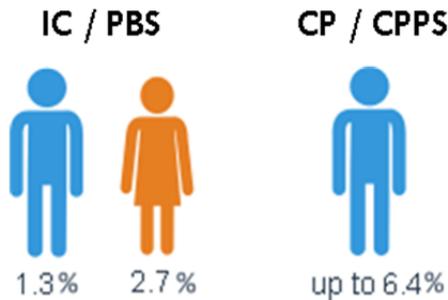
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WHO PARTICIPATED IN MAPP?

UCPPS in the United States

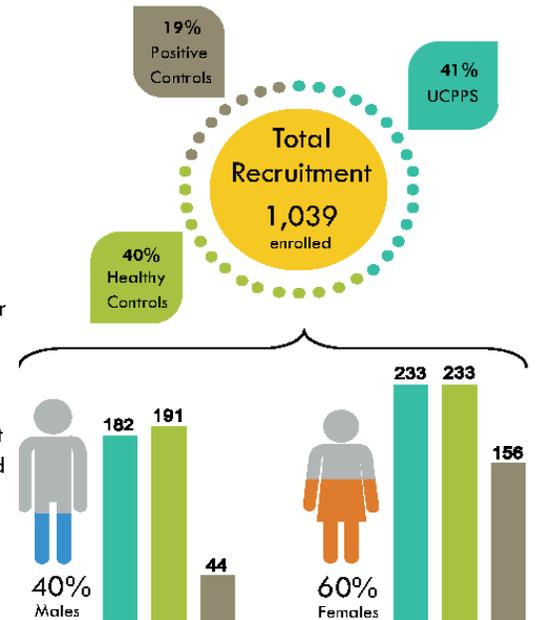


In the United States, it is estimated that IC/BPS symptoms affect 2.7% of women and 1.3% of men. It is estimated that CP/CPPS occurs in between 1.8-6.4% of men in the US. Please refer to page 3 of this newsletter for definitions of UCPS, IC/BPS and CP/CPPS.

A total of 1039 participants were enrolled in the first MAPP Study. Of these, 41% had UCPS symptoms and 40% had no symptoms (healthy controls). Another 19% of participants were positive controls. That means that they met the criteria for one or more of these related chronic pain syndromes: [Fibromyalgia \(FMS\)](#), [Chronic Fatigue Syndrome \(CFS\)](#), or [Irritable Bowel Syndrome \(IBS\)](#).

In order to be included in the study, UCPS participants had to meet the following criteria: 1) symptoms of IC/BPS or CP/CPPS, 2) at least 18 years of age; 3) reporting a non-zero score for bladder/prostate and/or pelvic region pain, pressure or discomfort during the past 2 weeks; and 4) consent to provide a blood or cheek swab sample to test DNA for genes related to the main study goals.

MAPP Participation Totals by gender & enrollment group



MAPP Research: The Why behind the What

In the first MAPP study, we asked you to complete tasks at home and at in-person visits. You may have wondered why we chose those tasks. Why ask certain questions on the questionnaires, or ask for so many samples, or do a pressure test on your thumb? Here's a review of why these tasks were important:

We asked for many different types of samples: blood, urine, cheek cells, and (at some sites) saliva. Sample collection can tell us a lot. As your symptoms change, we can compare samples collected at different points in time to see what changed in your body. We can also look for something in your samples that can identify people with UCPS. These are called biomarkers. In saliva we looked at a stress hormone called cortisol which increases and

decreases throughout the day. In urine samples we looked for any previously unknown infectious factors and in men, substances produced by the prostate. DNA from blood and cheek cells were collected and will be used in the future to look for specific genes that might be related to UCPS and related conditions.

Questionnaires were a large part of your participation. We asked many different types of questions about your pelvic pain and discomfort, so that we can better understand how UCPS affects you. Several questionnaires focused on times when symptoms were worse than usual, known as flares. Because other factors may influence urologic pelvic pain, we also asked about things like personality, moods, stress, fatigue, and sleep. It's repetitive, but asking the same questions

over time allows us to track how your symptoms relate to other factors. We can look at questions like how stress may be related to flares, or how your sleep and fatigue may impact pain, or how flares might be more common after certain behaviors.

The pelvic exams were done to determine the health of your pelvic organs. We can look at the differences in how tender and/or painful the pelvic muscles are in people with UCPS in comparison to controls.

The Pressure Pain Threshold (PPT) test was used to see how people experience painful sensations differently. Many participants were particularly interested in this task, so we included a spotlight on the PPT test in this newsletter.

Some sites conducted MRI scans of the brain to see if there are differences in the brains of

people with UCPS and controls. At one site, participants drank water before entering the scanner. This allowed us to see what happens in the brain as the bladder is filling.

The first MAPP study was a one-year longitudinal study. Such a longitudinal study is powerful because it allows us to track how UCPS change over time. We can take how you felt over one year (captured by questionnaires), what your body showed (captured by the sample collections), and all other tasks, and look for patterns. This gives us valuable data about what might cause symptoms to get better or worse, and informs future studies of UCPS.

SPOTLIGHT ON

Experimental Pain Testing: The “Thumb Squeeze”

One of the goals of the MAPP study is to better understand how pain is felt in people with UCPPS. This will help doctors to develop better treatments to relieve their pain.

People with UCPPS feel pain in the bladder or prostate area. But in many people with UCPPS symptoms, no abnormalities in the bladder or prostate can be found. In addition, many people with UCPPS also have other conditions that cause chronic pain. These chronic pain conditions include disorders such as fibromyalgia, chronic fatigue syndrome and irritable bowel syndrome, among others.

The MAPP study is testing the theory that UCPPS may not always be caused by damage to the bladder or prostate. Instead, it might be caused by problems in the way pain is processed in the central nervous system (the brain and spinal cord). One way to understand how people process pain is by testing their sensitivity to pain.

Some participants in MAPP were given the chance to do the PPT (Pressure Pain Threshold) test. This test uses a special piece of equipment that looks like a joystick with a hole near the top. You were asked to hold it and place your thumb into the hole. A rubber probe inside the hole applied



pressure to your thumbnail for 5-second intervals. The amount of the pressure started off low, and then gradually increased. Using a scale on a little computer, you were asked to show if you felt pressure or pain. If you felt pain, you were asked to rate the level of your pain.

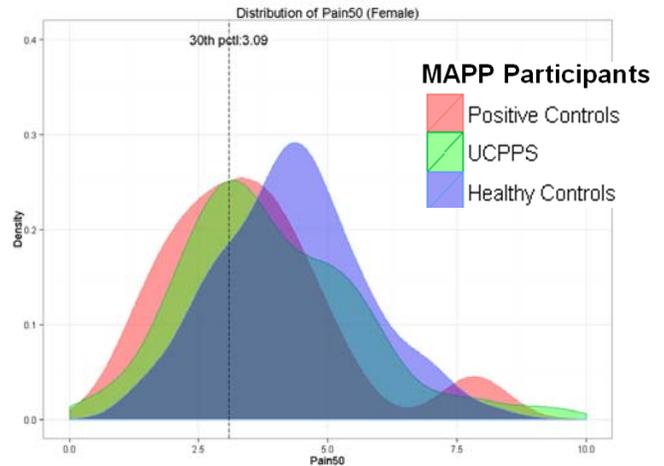
The purpose of this test was to see if people with UCPPS have a different pain threshold and pain tolerance in their bodies than people in the two types of control groups in the study. People who have other chronic pain conditions

(fibromyalgia, chronic fatigue syndrome or irritable bowel syndrome) made up the positive control group. People who do not have any of these pain conditions made up the healthy control group. The pain threshold was the point when the pressure first felt painful. The pain tolerance was the point when you were no longer willing to continue the test because you could not tolerate the pain.

Results of the PPT testing done on female participants at the baseline visit are shown in the figure above. Results for male participants were similar. Each curve shows the average pain sensitivity of one of the groups. These graphs show that:

1. The pain sensitivity of the participants with UCPPS was very similar to that of the positive controls.
2. The healthy controls had less pain sensitivity than the other two groups of participants.

These findings support the theory that UCPPS is a disorder of pain processing rather than a disorder of the bladder or prostate. Although the findings don't prove this is true, they add to the evidence. The results of the PPT testing done in the first MAPP study raise new questions and suggest the need for more research to answer them. As a result, new types of pain sensitivity testing will be done in the next MAPP study.



Terminology used in the MAPP Research Network

Term

MAPP Network Research Definition

Urologic chronic pelvic pain syndrome (UCPPS)

General term to describe idiopathic (of unknown cause) chronic pelvic pain of urologic origin in men or women. In MAPP Network studies, this includes men and women with IC/BPS, or men with CP/CPSS (see below).

Interstitial cystitis/ bladder pain syndrome (IC/BPS)

Chronic unpleasant sensation (pain, pressure, discomfort) perceived to be related to the urinary bladder, associated with lower urinary tract symptoms, in the absence of infection or other identifiable causes.

Chronic prostatitis/ chronic pelvic pain syndrome (CP/CPSS)

Chronic idiopathic (of unknown cause) pelvic pain or discomfort in males, commonly in the perineum, suprapubic region, penis, or testicles, which is often made worse by ejaculation or urination.

How MAPP Began

The Multidisciplinary Approach to the Study of Chronic Pelvic Pain (MAPP) Research Network was established by the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK) (one of the institutes of the National Institutes of Health) to focus on a broader approach to the study of Interstitial Cystitis (IC)/Bladder Pain Syndrome (BPS) in men and women, and Chronic Prostatitis (CP)/Chronic Pelvic Pain Syndrome (CPPS) in men.

Many chronic pain conditions are poorly understood, and treatment is often not helpful. The goals of the first MAPP study were to gain a better understanding of: (1) how pain is felt in people with IC and CP, (2) how these disorders affect people's overall health, and (3) how these disorders relate to other chronic pain conditions such as Fibromyalgia (FM), Chronic Fatigue Syndrome (CFS), or Irritable Bowel Syndrome (BS).

MAPP 2 is coming soon!

We are now finishing up the design of the second MAPP study which will further investigate what causes an improvement or a worsening in urinary and non-urinary symptoms. This will be a three-year long study and will also track UCPPS medications and treatments.

Before participant recruitment can begin, our research protocol has to be submitted for review and approval by the Institutional Review Board (IRB) at each site where participants will be recruited. The purpose of this review is to protect the participants and this review process can take several months. We expect that we will be able to start recruiting participants for the next MAPP study in early 2015.



Peer-Reviewed Publications about MAPP Research

One part of medical research that many people don't see is the process of sharing research results. Before researchers can share what they found, their research methods and results must be reviewed and approved by other scientists. To do this, the researchers write a report, called a research paper or article. The paper describes how

their study was done, shows the data, and explains the results. They send the paper to a peer-reviewed medical journal that specializes in articles about that topic. "Peer review" is the process of evaluating the paper before it can be published. The review is done by a group of experts in the same field (the "peers" of the researchers). The

reviewers carefully look at the paper and decide if the research methods and data are valid. They may have questions, or suggest changes. The process may take a while. But peer review assures that research and published scientific articles meet the highest standards for quality.

Below are two papers about the MAPP study that have

recently been accepted for publication in peer-reviewed journals. These papers describe the MAPP study in great detail.

In each issue of this newsletter we will list new papers that have been published in peer-reviewed journals.

[The MAPP research network: design, patient characterization and operations.](#)

[BMC Urol.](#) 2014 Aug 1;14:58.

[The MAPP research network: a novel study of urologic chronic pelvic pain syndromes.](#)

[BMC Urol.](#) 2014 Aug 1;14:57.

Extended Follow-Up Study Continues!

Many thanks to the 169 MAPP participants who agreed to continue in the MAPP Extended Follow-Up Study. Every four months, these participants spend about 20 minutes completing an online questionnaire that is identical in content and question topics to the bi-monthly questionnaires from the MAPP Study. This is providing us with valuable data about how UCCPS symptoms vary over time.

Send Us Your Feedback

This newsletter is for you! Please tell us what you want to know about MAPP. We will try to answer your questions in future newsletters. And don't forget to let us know if you change your email address.

Please send your questions, comments and suggestions to:

Please note that we cannot guarantee the confidentiality of information sent over email.