

California Teachers Study Digest **A+**

Autumn Has Arrived

Here's how the California Teachers Study spent the summer

For the past few summers, the California Teachers Study (CTS) team has had the opportunity to mentor young scientists who are interested in learning more about epidemiology—the study of how and where disease occurs among populations.

These high school, university, and medical students join our team for approximately 8 to 10 weeks, during which they design and implement a research project under the guidance of a CTS Steering Committee member.



Working with summer students has quickly become one of the most rewarding parts of our year. These students add so much to the CTS. Every year they bring fresh perspectives, contribute unique research interests, and remind us all how research can transform lives.

We've updated our study blog to include a separate section dedicated to these students' work, and we are delighted to highlight three of our summer students' projects in this newsletter.

Cardiovascular Complications in the CTS

A CTS summer study on participant conditions

Cardiovascular diseases (CVDs) include a number of conditions that affect the heart and blood vessels, including stroke, myocardial infarction (heart attack), and coronary heart disease. CVD

remains the leading cause of death in the United States, surpassing cancer.

Ms. Julie Macias, an undergraduate student who is majoring in biomedical engineering, joined the CTS this summer to examine how common CVD is among CTS participants. Under the leadership of Dr. Sophia Wang, Ms. Macias identified the hospital diagnoses and procedures associated with various cardiovascular complications; she also examined the relationship between participant characteristics and risk of CVD. Her initial findings suggested that risk of cardiovascular complications increases with age. You can read more about Ms. Macias' project on our [study website](#).

Problems Post-Cholecystectomy

A CTS summer study on gallbladder surgery outcomes

Cholecystectomy—the removal of the gallbladder—is a common and routine surgery. After completing her surgical rotation for medical school, Ms. Vi Lam became especially interested in the outcomes after this surgery.

When she joined the CTS as a summer student, Ms. Lam wanted to take her personal surgical experience and apply it to our cohort study. She was particularly interested in which individual- and hospital-level characteristics might contribute to a patient's risk of problems post-surgery. Using CTS data, Ms. Lam explored the characteristics of participants who had gallbladder surgery and their surgical outcomes. Read more about Ms. Lam's project by [clicking here](#).

Medicinal Cannabis Use

A CTS summer study using questionnaire data

In 1996, California legalized the use of marijuana for medicinal purposes. Until now, the use of medicinal marijuana in the CTS has not been well characterized or understood.

Mr. Landin Stein, an undergraduate student majoring in the sciences, worked with Dr. Jim Lacey to investigate how medicinal cannabis has been used by CTS participants. The purpose of this summer research project was to begin to understand the relationship between self-reported quality of sleep and medicinal cannabis use. Using data from Questionnaire 6 (2017-2019), Mr. Stein began to examine patterns of medicinal marijuana use and participant characteristics. You can read more about Mr. Stein's project on the [CTS blog](#).

Study Findings: Physical Activity

Physical activity from menarche-to-first pregnancy & breast cancer risk

Windows of susceptibility (WOS) are key periods of development in an individual's life when a person may be more susceptible to exposures that affect health outcomes. One of these WOS is the window between a woman's first menstrual period, also known as menarche, and her first pregnancy. Having a longer WOS from menarche-to-first pregnancy may be associated with greater risk of developing breast cancer. Previous research has also established that physical activity is a preventative risk factor for breast cancer, meaning that physical activity can reduce an individual's risk of developing breast cancer.

This study used CTS data to examine whether physical activity during the menarche-to-first pregnancy WOS was associated with risk of breast cancer. The researchers found that women with higher physical activity levels during the period from menarche-to-first pregnancy had a lower risk of certain subtypes of breast cancer, specifically invasive breast cancer and triple-negative subtype.

To read about other research results, visit our [study findings page](#).

Have You Moved?

We want to stay in contact with you!

If you've moved or changed your phone number or email address, please let us know!

To update your contact information, please use the [Contact Us form](#) on our study website.

Your continued participation in the CTS is what makes all this research possible.



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