

# CPS-3 Summer 2023 Newsletter



## A Note from the Principal Investigator

The greatest inspiration for my day-to-day work is YOU! When we launched CPS-3 in 2006, it was one year before the release of the first iPhone, and “innovation” meant offering an online survey option in addition to a paper survey. Since then, thanks to your generous time and commitment to CPS-3, we have been able to do so much more to improve our understanding of cancer and accelerate our science. For example, almost 70,000 CPS-3 participants are registered on the portal; over 20,000 participants took part in the Accelerometry sub-study; and we are more than halfway toward completing saliva and stool collections from 10,000 participants. You can read more about these sub-studies and other scientific updates in this newsletter.



In addition to all the great science underway, our Population Science team has also been developing our next comprehensive follow-up survey, which will be sent to all active and fully-enrolled participants in early 2024. You may recall that this is the long survey we send out every three years to update previously reported information and to collect data on topics where there are new scientific questions to explore.

The vision of the American Cancer Society is to end cancer as we know it, for everyone. Our team is so proud of the work we are doing toward that vision, and our work is possible because of YOU! Thank you for all that you have done and continue to do for CPS-3 and cancer research.

Sincerely,



Alpa V. Patel, PhD  
Principal Investigator, CPS-3

## Summer 2023

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# Study Updates

## Accelerometry



We have reached our goal of collecting research-grade accelerometry data on 20,000 CPS-3 participants. Over the last four years, participants were randomly selected to participate and wear a physical activity device on their hip for seven days. This is the largest collection of this type of data in the US, and it will allow us to precisely understand how physical activity and sedentary behaviors affect cancer risk and overall health. We would like to thank all our Accelerometry sub-study participants. Without your efforts, we would not have been able to complete this amazing research.

## Gut & Oral Microbiome Sub-study



As of June 2023, over 6,000 participants have completed their participation in the Gut and Oral Microbiome sub-study by

collecting a stool and saliva sample and completing an online questionnaire. We are more than halfway toward our goal of collecting samples from at least 10,000 participants. Invitations will continue to be sent out on a rolling basis into September to ensure we meet our goal, and every sample returned will allow us to study how bacteria that live in the mouth and gut may be related to cancer risk.

## HEALED



The HEALED team is happy to announce that the year-long physical activity intervention sub-study called Health and Energy through Active Living Every Day (HEALED) is coming to an end. July marked the end of this study as we wrapped up our fourth and final data collection. We are extremely grateful to our 400 participants for their ongoing commitment to this study and for providing data through activity monitors, physical activity surveys, and interaction on our HEALED website.

## Study Shows Older Age and Smoking Are the Most Important Risk Factors for Developing Any Cancer

A recent study combining data from CPS-II and CPS-3 found that older age and smoking are the two most important risk factors associated with a relative and absolute five-year risk of developing any cancer. This study, published in the journal *Cancer*, was conducted by Alpa Patel, PhD, and colleagues and studied 429,991 CPS participants with no prior personal history of cancer who were followed for cancer for up to five years. During that time, 15,226 invasive cancers were diagnosed.

This study examined the risk (or likelihood) of developing any cancer for one group of people compared to another group (called “relative risk”). Through this comparison, we may learn if a particular group is more or less likely than another to get cancer.

Of all the factors examined, the highest relative risk of developing cancer was seen for men and women who currently smoke cigarettes as compared to lifelong nonsmokers. In addition, for men, alcohol intake, family history of cancer, red meat consumption, and physical inactivity were also associated with higher cancer risk. For women, higher body mass index (BMI), family history of cancer, physical inactivity, and a history of type 2 diabetes, hysterectomy, high blood pressure, or tubal ligation were associated with higher cancer risk.

This study also examined the “absolute risk” of developing cancer; that is, given age and other factors, how likely is it that someone will develop cancer within the next five years. Absolute five-year risk was highest among nearly all persons greater than 50 years old. Among individuals age 45-49 years, those who currently smoke or formerly smoked had an absolute five-year risk of developing cancer that was even higher than most people age 50-54 years. Additionally, individuals age 45-49 who had a BMI greater than 25 (e.g., individuals who are overweight or obese) or had a first-degree family history of cancer also had a higher absolute risk of developing any cancer.

These findings suggest that in addition to age, clinicians should consider smoking history, high BMI, family history of any cancer, and several other factors to help patients determine if they may benefit from enhanced cancer screening or prevention interventions. Dr. Patel shares that “Our findings are encouraging, as we work to define subgroups in the general population who could benefit from greater communications and support for cancer screening and prevention.”

## New Cohort Study



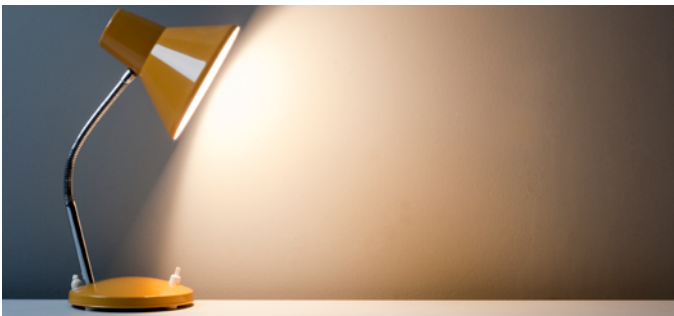
Black Americans have the highest death rate and shortest survival of any racial/ethnic group in the US for most cancers, and Black women experience pronounced disparities in breast cancer survival rates.

Although there are more than 10,000 Black women in CPS-3, there is inadequate representation of Black women in research as a whole. Therefore, to better

understand the health of Black women and what may contribute to the cancer disparities such as those seen for breast cancer survival, we need additional Black women involved in our research efforts.

The American Cancer Society will launch a new cohort of 100,000 Black women in the fall of 2023. We will start by piloting an enrollment process in Atlanta and Virginia first, then will open enrollment in more states starting in 2024. We look forward to sharing additional information about this study in the future.

## Understanding the Light Environment in CPS-3



Our light environment (i.e., the kind and intensity of light we're exposed to at different times of day) can affect our chances of developing diseases, including cancer. Our bodies' circadian system helps determine when to sleep and eat, and it is strongly affected by the light around us. Extreme changes to the circadian system, such as those experienced with night shiftwork, can increase the risk of cancer. However, less is known about more moderate changes in the light environment that most people experience.

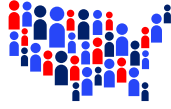
Currently, there is no standard way to measure light in a large population. In a recent study led by W. Ryan Diver, MSPH, we tested a novel survey question in 732 CPS-3 participants, which asked about their light environment (darkness, outdoors in daylight, indoors with natural light only, kitchen light, other household light, restaurant/hotel light, and other non-residential light) for every hour of the day. Participants answered these questions about their typical light exposure at the start and end of the one-year study, and also filled out one-week light diaries in each season throughout the year. Additionally, 170 participants wore a meter, which measured the light that most strongly stimulates the circadian system.

Participant responses about their light exposures were consistent at baseline and at the one-year follow-up. The weekly diaries also generally matched what people reported at the beginning and end of the year. These results show that the light environment is stable for most people, and this novel survey question will accurately measure overall light exposure. It was noted that consistency was better on workdays than non-workdays, and that some environments (such as restaurant/hotel and kitchen light) were not reported as well as other environments (such as other household light and other non-residential light).

This study led to an improved version of the light survey question that was included in the CPS-3 questionnaire in 2018. In future research, we will calculate the amount and timing of circadian-stimulating light to assess whether that light is related to cancer risk. Now that it has been validated, this unique survey question will be useful for large population studies and is available for research on many diseases in addition to cancer. Diver hopes that "Designing and validating a light survey tool was only the first step in our research. Using that tool to understand how the light environment affects cancer will be the real value."

### Key takeaway:

- The measured indoor light of many household environments was below the recommended daytime levels. Spending time outdoors in daylight may be needed to fully activate the circadian system.



**Cancer Prevention  
Study-3** research today for a  
cancer-free tomorrow

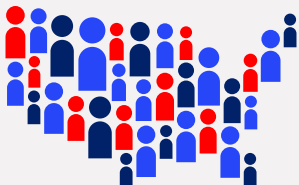
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## Did you know?

- CPS-3 surveys are administered every three years to capture new and updated information. We will launch the next follow-up survey online in March 2024 and mail the paper version in June 2024.
- CPS-3 data will be used to identify ways to improve quality of life in cancer survivorship.
- CPS-3 is committed to incorporating the latest technologies into every aspect of our research, including data collection and analysis, participant engagement, results delivery, and data security.
- You can follow along for study updates and highlights on our Facebook page at [facebook.com/supportCPS3](https://facebook.com/supportCPS3)



**Summer 2023**

## Contact Us:

For any questions related to CPS-3, including change of address or other contact information, please call us at **1-888-604-5888** (Monday-Friday 9 a.m. – 5 p.m. ET) or email us at [cps3@cancer.org](mailto:cps3@cancer.org).

We're also available at [cancer.org/cps3](https://cancer.org/cps3) and [facebook.com/supportCPS3](https://facebook.com/supportCPS3).

For the latest information and answers, visit our website at [cancer.org](https://cancer.org) or call us at **1-800-227-2345**.

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