

HAWAII JOURNAL WATCH

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Highlights of recent research from the University of Hawai'i and the Hawai'i State Department of Health

DIFFERENCES IN CARDIOVASCULAR DISEASE RISK ACROSS HAWAII'S MAJOR ETHNIC GROUPS

Individuals' demographic and psychosocial risk factors explain a significant proportion of the differences in cardiovascular disease (CVD) risk across the major ethnic groups in Hawai'i. Researchers including Andrew Grandinetti PhD, of the Office of Public Health Studies, conducted a secondary data analysis of the Kohala Health Research Project dataset and calculated Framingham Risk Scores (FRSs) for 1146 individuals in Hawai'i. In the fully adjusted model, which accounted for age, depression, social support, and acculturation, there were no significant differences in FRS across male Native Hawaiians, Filipinos, Japanese, and non-Hispanic whites. Among females, Filipinos had a significantly higher 10-year risk of CVD compared with non-Hispanic whites. The researchers concluded the FRS should be recalibrated for Native Hawaiian and Filipino populations, and that better understanding of the factors that contribute to variation in CVD risk is needed.

- Ing CT, Ahn HJ, Kawakami R, Grandinetti A, Seto TB, Kaholokula JK. Ethnic and gender differences in 10-year coronary heart disease risk: A cross-sectional study in Hawai'i. *J Racial Ethn Health Disparities*. 2020;doi: 10.1007/s40615-020-00851-2.

HOW COVID-19 HAS IMPACTED CANCER RESEARCH

The coronavirus disease 2019 (COVID-19) pandemic has impacted cancer research as well as the care of oncology patients at comprehensive cancer centers. Researchers including Muller Fabbrì, MD, PhD, of the UH Cancer Center detailed the approaches that cancer centers are adopting in order to continue clinical and research activities during this time. Office visits for patients not on active therapy may be conducted by telemedicine. Patients requiring hospital admission are undergoing nasal swab tests for the virus; decisions to proceed with cancer treatments for patients who are positive but asymptomatic are made on a case-by-case basis. Research facilities are limiting the number of scientists present in labs, and many animal experiments requiring complex, intensive regimens have been postponed. The researchers concluded that there have been drastic reductions in preclinical studies, but the pandemic will likely accelerate the integration of digital technologies in cancer care.

- Terracciano D, Buonerba C, Scafuri L, et al. Perspective: Cancer patient management challenges during the COVID-19 pandemic. *Front Oncol*. 2020;10:1556. doi:10.3389/fonc.2020.01556.

ACCURATELY MEASURING BLOOD PRESSURE IN JAPANESE MEN

For Japanese men, blood pressure readings taken at home may differ from those taken at a health care provider's office, even if the office reading is taken after a brief rest. Researchers including Kamal Masaki MD, of the John A. Burns School of Medicine,

analyzed blood pressure readings from 1056 men in Japan, ages 40 to 79. The researchers calculated the difference in systolic blood pressure (Δ SBP) between the home blood pressure measurements taken each day for a week with measurements taken in-office after a quiet, 5-minute rest in chair. Results showed a broad distribution of Δ SBP, with an SD of 13.5 mm Hg. Participants who smoked or had high BMIs had larger Δ SBPs. The findings suggest that both home and office blood pressure measurements, with sufficient rest time, are important to avoid underestimating actual blood pressure levels.

- Kadowaki S, Kadowaki T, Hozawa A, et al. SESSA Research Group. Differences between home blood pressure and strictly measured office blood pressure and their determinants in Japanese men. *Hypertens Res*. 2020; doi: 10.1038/s41440-020-00533-w.

EYE DROPS THAT STAY PUT

An experimental eye-drop formulation that forms a thin layer of gel on the eye allows better absorption of medication and longer contact time between the medication and the eye surface. Researchers including Abhijit Date PhD, of the Daniel K. Inouye College of Pharmacy, developed the formulation using a low concentration of a thermosensitive gelling polymer, which forms a gel at a certain temperature. The hypotonic nature of the formulation caused the eye drops to absorb water upon contact with the eye surface, resulting in a thin, clear, uniform layer of gel. In animal experiments, the topical application of gel resisted clearance from blinking and caused no irritation or toxicity. It also delivered the drug to the posterior part of the eye; currently, drugs can only be delivered to the posterior eye by injections. The researchers concluded that formulations that undergo this type of gelation could also be used to deliver medications to other mucosal tissues.

- Kim YC, Shin MD, Hackett SF, et al. Gelling hypotonic polymer solution for extended topical drug delivery to the eye. *Nat Biomed Eng*. 2020;doi:10.1038/s41551-020-00606-8.

LIVED EXPERIENCES OF WOMEN WITH POSTPARTUM DEPRESSION

The lived experiences of women with postpartum depression (PPD) who experience suicidal ideation can inform the development of preventive measures and interventions. Researchers including December Maxwell, PhD, of the Myron B. Thompson School of Social Work, utilized a research method called qualitative interpretive meta-synthesis, which involves analyzing quotations gathered in previous research, to study women's experiences. Results showed women felt they had to hide their emotions or pretend all was well to adhere to cultural expectations. They also said motherhood was more work than they expected, and they had less help than they expected. Women felt their lack of sleep and sense of losing control over areas of their lives contributed to their suicidal ideation. On the other hand, support from partners, friends, and family helped women cope. From the findings, the researchers developed a model of the Interpersonal Theory of Suicide specific to women with PPD.

- Praetoriusa R, Maxwell D, Alam K. Wearing a happy mask: Mothers' expressions of suicidality with postpartum depression. *Soc Work Ment Health*. 2020;18(4):429-459.