

Donors Needed to Prevent Blood Shortage

Red Cross,
Warner Bros.
Discovery
partnering to
encourage blood
donations

The American Red Cross continues to see a concerning trend – blood donations are being sent to hospitals faster than they are coming in. The Red Cross has collected about 50,000 fewer blood donations than needed over the last two months. Donors are asked to make an appointment to give blood or platelets now to avoid a looming blood shortage.

To help head off a more serious situation, the Red Cross is teaming up with Warner Bros. Discovery for the 35th anniversary of Shark Week and the theatrical release of *Meg 2: The Trench*.



Two Red Cross Donors. Photo courtesy of redcross.org

The public is encouraged to celebrate a summer of sharks and help shore up the national blood supply by giving in July.

In thanks for helping, the Red

Cross is offering several incentives to donors who come out to give blood or platelets in the coming weeks. Additionally, in response to the great need for

blood, those who hurry in to help by coming to give July 1-16 will receive a limited-time bonus \$15 gift card by email to a merchant of their choice.

- July 1-11: All who come to give will get an exclusive Red Cross dry bag, while supplies last.

- July 12-Aug 12: Those who come to give will be automatically entered for a chance to win a three-night New York getaway for two with a private shark dive adventure at Long Island Aquarium.

- July 17-31: Presenting donors will receive an officially licensed Shark Week T-shirt, while supplies last. Donors will also be automatically entered for a chance to win a three-night New York getaway for two with a private shark dive adventure at Long Island Aquarium.

By scheduling and keeping appointments in July, donors can help provide for those in immediate need of lifesaving care. To schedule an appointment to donate, download the Red Cross Blood Donor App, visit RedCrossBlood.org or call 1-800-RED CROSS (1-800-733-2767).

THC Use Linked to Fetal Development Changes

Researchers
Warn of Potential
Impacts on Brain
Development and
Long-term Health

BY NICOLE RIDEOUT

Oregon Health & Science University researchers showed that consuming THC while pregnant could potentially affect development of the fetus and lead to life-long health impacts for offspring. The preclinical study was published today in the journal *Clinical Epigenetics*.

Delta-9-tetrahydrocannabinol, or THC, is the main psychoactive ingredient in cannabis, a substance growing in popularity and availability in the United States. The prevalence of cannabis use in pregnancy is also rapidly increasing, especially during the first trimester — a time when the fetus is most vulnerable to environmental exposures — to mitigate common symptoms like morning sickness. However, the potential effects of prenatal cannabis use on fetal development remain inconclusive, in part due to a lack of safety data. This study aimed to identify the potential long-term health impacts of THC use during pregnancy.

In a non-human primate model, OHSU researchers found that exposing a pregnant subject to THC altered the placental and fetal epigenome —including the chemical



OHSU researchers in a preclinical study confirm consuming THC while pregnant could potentially affect the development of the fetus and lead to life-long health impacts for offspring. (Getty Images)

modifications to DNA responsible for gene regulation and expression, that is telling genes what, where and when to do something. Researchers also found that that these changes to gene regulation and expression are consistent with those seen with many common neurobehavioral conditions, including autism spectrum disorder.

“Cannabis is one of the most commonly used drugs and is widely available across the country, so there is a common perception that its completely safe to use,” said the study’s lead author Lyndsey Shorey-Kendrick, Ph.D., a computational biologist in the Division of

Neurosciences at OHSU’s Oregon National Primate Research Center, or ONPRC. “The reality is that cannabis still carries many health risks for certain populations, including those who are pregnant. If we’re able to better understand the impacts, we can more effectively communicate the risks to patients and support safer habits during the vulnerable prenatal period.”

In a model using nonhuman primates, researchers administered THC in a daily edible and compared its effects to a group receiving a placebo. Specifically, researchers evaluated the epigenetic changes in several key areas

that indicate healthy prenatal development: the placenta — the disc of tissue that connects the umbilical cord and uterus — and fetal lung, brain and heart.

When looking at these areas, analyses showed that THC exposure altered the epigenome, meaning a process in which the information encoded in a gene is turned into a function or observable trait. Genes — the segments which make up DNA — are all specifically coded to contribute to different functions of the body and brain, so any impact on epigenetic processes due to drug exposure is concerning, especially

during a critical developmental window such as pregnancy.

Researchers found that significant changes involved genes associated with common neurobehavioral disorders, including autism spectrum disorder and attention deficit hyperactivity disorder. These conditions are linked to adverse health outcomes in childhood and adolescence, including poorer memory and verbal reasoning skills, and increased hyperactivity, impulsivity and inattention.

The research team, which includes Eliot Spindel, M.D., Ph.D., Elinor Sullivan, Ph.D., Owen McCarty, Ph.D., and Jason Hedges, M.D., Ph.D., hopes findings from this study will add to the limited existing literature on THC use during pregnancy, and help guide patient counseling and public health policies focused on cannabis in the future.

“It’s not common practice for providers to discuss cannabis use with patients who are pregnant or trying to conceive,” said the study’s corresponding author, Jamie Lo, M.D., M.C.R., associate professor of obstetrics and gynecology (maternal-fetal medicine), OHSU School of Medicine, and Division of Reproductive and Developmental Sciences at the ONPRC. “I hope our work can help open up a broader dialogue about the risks of cannabis use in the preconception and prenatal period, so we can improve children’s health in the long run.”