WINE AND CHOCOLATE GOOD FOR THE BRAIN

■ Dark chocolate and red wine help the brain after a stroke, according to research from Johns Hopkins University. The luscious creamy concoction—pure dark chocolate, not milk or candy bars filled with other fun stuff—has epicatechin, a flavonol found in cocoa and tea, which may help increase cellular signals that are already known to protect nerve cells from getting damaged. Epicatechin helps in stimulating two previously well-established pathways, Nrf2 and HMOX1, which are known to protect nerve cells from getting damaged, according to Sylvain Doré, associate professor of anesthesiology and critical-care medicine, and of pharmacology and molecular sciences at Johns Hopkins University's School of Medicine.

Researchers found that mice given epicatechin before being subjected to induced stroke suffered less brain damage than the ones that had not been given it at all. Epicatechin limits neuronal damage when given to mice three and a half hours after a stroke but was ineffective six hours later.

Dark chocolate also helps in regulating blood pressure levels, slows the aging process due to the presence of polyphenol and flavonoid antioxidants, boosts brain function and reduces risk of diabetes by increasing sugar metabolism.

Doré also led a study that found that drinking red wine may protect the brain from damage following a stroke. They fed mice a dose of resveratrol, a compound found in red grapes' skins and seeds, then two hours later induced a stroke. The resveratrol animals also suffered less brain damage.

Doré says that his study suggests that resveratrol increases levels of heme oxygenase, an enzyme already known to shield nerve cells in the brain from damage. When the stroke hits, the brain is ready to protect itself because of elevated enzyme levels. In mice that lacked the enzyme, the study found, resveratrol had no significant protective effect, and their brain cells died after a stroke. **bw**