IN THE NEWS

Curcumin Shows Promise Against Cold Sore Virus

Curcumin, a component of the curry spice turmeric, significantly inhibits the growth of herpes simplex virus-1 (HSV-1) in cell culture.* HSV-1 is the virus responsible for cold sores.

Cells were cultured and then either pretreated with curcumin or left untreated, followed by administration of HSV-1. Curcumin significantly reduced the growth of HSV-1 in the treated cells, as determined by the number of plaques, size of plaques, and viral counts, compared with untreated cells. The results indicate that curcumin aids cells in resisting HSV-1 infection and slows HSV-1 replication (growth). The antiviral effect is due to suppression of HSV-1 gene expression.

Future research is necessary to determine how curcumin works in vivo (i.e., in humans). The authors note that this “is key to developing curcumin as an alternative drug for HSV-1 treatment... our results can be considered as an early step in elucidating the molecular basis of the antiviral activities of curcumin.” —Laura J. Ninger, ELS


Sleep Loss May Encourage Inflammatory Diseases

Losing sleep for just a portion of one night is sufficient to trigger production of the potent inflammatory mediator, nuclear factor-kappa B (NF-kB), according to a new report. Previous research has linked inadequate sleep with a greater risk of inflammatory diseases, including diabetes, arthritis, cardiovascular disease, and even cancer.1,2

Scientists at the University of California, Los Angeles, monitored blood levels of NF-kB, a transcription factor that serves a crucial role in the promotion of the inflammatory cascade, among 14 healthy men and women after sleep. Subjects' blood levels of NF-kB were repeatedly monitored, following a full night's sleep, recovery sleep, and partial sleep deprivation (a night interrupted by remaining awake from 11 pm to 3 am).1

“In the morning after a night of sleep loss, mononuclear cell nuclear factor-kappa B activation was significantly greater compared with morning levels following uninterrupted baseline or recovery sleep,” wrote the researchers.

These findings help elucidate how sleep disturbances may play a role in inflammatory disorders.

—Dale Kiefer


Green Tea Extract Improves Blood Glucose Control

Supplementation with green tea powder for two months significantly reduces levels of hemoglobin A1c, an indicator of long-term glucose control, in Japanese patients with borderline diabetes.*

Participants were 60 male and female volunteers with elevated blood glucose who were divided into two groups. The early-intervention group drank a supplement of green tea extract (containing 544 mg polyphenols) each day for two months, followed by two months of observation without supplement, and the later-intervention group followed the opposite schedule.

During the study, blood levels of hemoglobin A1c declined significantly in the early-intervention group from baseline (6.2%) to two months (5.9%) and four months (5.8%); levels in the later-intervention group were 6.1%, 6.1%, and 5.9%, respectively. Healthy hemoglobin A1c levels usually range from 4% to 5.9%. Diastolic blood pressure also modestly decreased with supplementation.

These findings suggest that modulating long-term blood glucose control may represent yet another health benefit of green tea extracts.

—Laura J. Ninger, ELS
