Drug Monitor

Blood Pressure Lowering: For Adults of All Ages

In the past, observational studies have suggested that blood pressure (BP) control may be less beneficial to elders compared with younger adult patients. But findings from a recent study conducted by researchers from the Blood Pressure Lowering Treatment Trialists' Collaboration at the University of Sydney, Sydney, Australia dispute this notion, concluding that drugs that lower BP are likely to benefit both younger and older adults.

The researchers performed meta-analyses and meta-regression analyses on 31 trials that investigated the effects of BP lowering drugs. In order to quantify how the drugs affected the risk of major cardiovascular events in younger and older adults, the researchers split the trials' combined 190,606 patients into a group aged younger than 65 years and a group aged 65 years and older. The former group contained 96,466 patients, whose mean age was 57 years, and the latter group contained 94,140 patients, whose mean age was 72 years.

The analyses indicated that BP reduction provided similar degrees of protection from cardiovascular events to patients in both age groups and that neither group did better with a particular drug class. Patients aged 65 or older benefited from BP lowering in almost all cases and did not seem harmed by it in any case.

In fact, the researchers assert that older adults may receive greater absolute benefits from BP lowering than younger adults, since elders are at greater risk for cardiovascular events. Additionally, while some guidelines recommend prescribing particular classes of BP lowering drugs to particular age groups, the new results suggest that clinicians would do best to focus on tolerability and cost—rather than patients' age—when deciding which drug classes to prescribe. All in all, the researchers say, these findings, should "greatly simplify decision making for millions of clinicians around the world."

They note, however, that their findings are limited by the relatively small difference between the mean ages of the patients in the two groups (only 15 years)—a fact that highlights the scarcity of data on patients under age 50 and over age 80.

Source: *BMJ.* 2008;336(7653):1121–1123. doi:10.1136/bmj.39548.738368.BE.

Fighting Cognitive Decline with Vitamins and NSAIDs

It's known that the use of either antioxidant vitamins or nonsteroidal anti-inflammatory drugs (NSAIDs) is associated with a lowered risk of Alzheimer disease (AD) and less cognitive decline in elderly people. But do elders derive an added benefit from taking both antioxidant vitamins and a nonaspirin NSAID, which act on different pathways involved in neurodegeneration?

To find out, researchers from Johns Hopkins University and LifeBridge Health Brain & Spine Institute, both in Baltimore, MD; Duke University Medical Center, Durham, NC; Khachaturian & Associates, Inc, Potomac, MD; Utah State University, Logan; and University of Washington, Seattle analyzed data on 3,376 elderly participants. These data included the participants' scores on up to three Modified Mini-Mental State examinations (3MS) taken over a period of eight years; their use of supplements and medications at baseline; and whether they carried the apolipoprotein (APOE) e4 allele, which increases the risk of AD and impaired cognitive function. The researchers compared changes from baseline on 3MS scores among participants in five groups: those who used NSAIDs only; those who used vitamin E and vitamin C; those who used vitamin E or vitamin C with or without NSAIDs; those who used vitamin E, vitamin C, and NSAIDs; and those who did not use any of the three studied agents. In making these comparisons, the researchers also looked at whether the participants carried one or more APOE e4 alleles.

They found that only the combined use of vitamin E, vitamin C, and NSAIDs at baseline seemed to improve participants' performance on the 3MS over time; the participants who used this combination retained 0.32 points per year compared with participants who didn't use either of the vitamins or any NSAIDs. This improvement, however, was evident only in participants who carried APOE e4 alleles. Among participants who did not carry these alleles, there was no difference in the 3MS scores over time for any of the groups.

The researchers conclude that the combined use of vitamin E, vitamin C, and NSAIDs is associated with less cognitive decline among elderly people who carry APOE e4 alleles. They add, though, that the possible benefits of the combination will have to be weighed against the potential cardiovascular or mortality risks that may be associated with these compounds.

Source: *Alzheimers Dement.* 2008;4(3):223–227. doi:10.1016/j.jalz.2008.01.004.

Disulfiram vs. Topiramate for Alcoholism

Disulfiram is an acetaldehyde dehydrogenase inhibitor that reacts to ethanol by causing uneasiness, flushing, nausea, and vomiting. Topiramate is an anticonvulsant that may decrease dopamine activity in the brain after alcohol intake. Studies have shown that both drugs can be effective in treating alcohol dependence—but which one is better?

Researchers from Get Well Clinic and Nursing Home, Mumbai, India investigated this question through an open trial of 100 men, between ages 18 and 65 years, who lived in stable family environments (to help ensure adherence and encourage study completion) and had been diagnosed with alcohol dependence. The patients were assigned randomly to receive either disulfiram 250 mg once per day or topiramate 50 mg three times per day after meals, followed up weekly for three months, and then followed up biweekly for six months more. At each follow-up, patients were assessed for alcohol consumption, alcohol craving, and adverse drug effects. Patients who consumed more than five drinks or 40 g of alcohol in 24 hours were considered to have relapsed. All patients were provided with group psychotherapy during the trial, and some were prescribed duloxetine for depression or zolpidem for insomnia.

Although 46 patients in each group completed the study, 90% of the patients in the disulfiram group had not relapsed by the study's conclusion, compared with 56% of patients in the topiramate group. In addition, patients in the disulfiram group went an average of 133 days without relapsing, while patients in the topiramate group went an average of only 79 days. The better reduction of relapse and alcohol intake in the disulfiram group came despite the fact that patients in this group reported more alcohol craving. Nausea was more common in the disulfiram group (4%) than in the topiramate group (1%), but adverse effects were uncommon in both groups.

These results indicate that disulfiram is more effective than topiramate in treating alcoholism, the researchers say. They note, however, that the study was not blinded and that early outcomes might have influenced investigators to focus more on ensuring adherence in the disulfiram group. They also emphasize that, in general, disulfiram has no specific effect on treating alcoholism unless it is offered and monitored by professionals or family members are involved in supervising adherence. ●

Source: *J Subst Abuse Treat.* 2008;34(4):460–463. doi:10.1016/j.jsat.2007.05.012.