



# The healthy aging Corner

Part of Parke County's Healthy Aging and Cancer Prevention Initiative

## Successful Aging Starts Early

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*A growing body of evidence links adverse childhood experiences with poor adult health outcomes*

When you think about healthy aging, it's natural to focus on the following: your mobility, your memory, what your cholesterol numbers look like, and whether you passed your mammogram or PSA test with flying colors. And if you're satisfied with your successful aging trajectory, you tend to praise good genes, good life choices, or a bit of both. But a growing area of research is looking beyond these factors as the sole determinants of good or bad health. Instead, the research says that a lifetime of good health begins early in a healthy home. The imperative is clear: our children must not be dealt too many ACEs.

The ACEs that I am referring to are not of the spades or diamonds variety. I am talking about Adverse Childhood Experiences (ACEs). For a decade, a research team led by Dr. Vincent Felitti has gathered detailed information from adults on their exposure to 8 categories of stressful, traumatic childhood experiences. These 8 categories are: emotional, physical, or sexual abuse; a dysfunctional household with divorce, battered mother, household substance abuse, mental illness or attempted suicide, or incarceration. This groundbreaking work is showing that persons with a high ACE score often engage in health-compromising behaviors. For example, there is a strong association between ACEs and the early initiation of smoking which is continued throughout adulthood. In one study, people with 6 or more ACEs were 7 times more likely to smoke regularly by the age of 14.

The research findings also support the notion that cumulative exposure to ACEs may accelerate the onset and progression of disease, leading to premature mortality. In one study, people with 6 or more ACEs were 2.4 times more likely to die before 65 years than people who experienced no ACEs. It appears adversity in childhood can trigger a whole constellation of disease conditions. From liver disease, diabetes, and ischemic heart disease to skeletal fractures and chronic lung disease – all have been linked to holding too many ACEs.

What about cancer? Investigators have begun to look at the association between ACEs and cancer, specifically lung cancer. Analysis of data from more than 17,000 adults showed that persons with 6 or more ACEs were 3 times more likely to develop lung cancer than persons who were ACE-free. Also, they died from lung cancer earlier – nearly 13 years sooner than ACE-free folks stricken with the same disease. In my mind, these findings are expected because ACEs favor early smoking, and cancer-causing chemicals in cigarette smoke strongly contribute to the development of lung cancer.

But the investigators did not stop there. They looked deeper. And as a cancer scientist searching for fresh clues, here is where I personally find the story gets most interesting. The investigators repeated the analysis after adjusting for differences in smoking status and second-hand smoke exposure. They discovered that ACE-induced smoking behavior could not fully explain the cancer susceptibility of ACE-exposed persons. I believe these tantalizing results are pointing us to look more closely at how early life events might upset the body's overall resistance to cancer. Is it possible that childhood stress may re-wire how you react to the stresses you encounter throughout your life, favoring cancer development?

The take home message is this: We should apply a life course perspective to our search for what it takes to age successfully. Just studying old mice or old people just won't do, because the origins of too many adult health outcomes are shaped significantly by early events, early experiences. How gracefully we age in our 40s, 50s, and beyond has been set in motion by the quality of our childhood environment. More effective than any anti-aging pill, when we do everything we can to protect our children from stressful and traumatic experiences, we are writing a prescription that will favor their chances of experiencing a longer, healthier life.

*Sources: Brown et al, Adverse childhood experiences and the risk of premature mortality. Am J Prev Med 2009, 37: 389-96; Brown et al, Adverse childhood experiences are associated with the risk of lung cancer: a prospective cohort study. BMC Public Health 2010, 10:20.*

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