Exercise will help keep DNA young

In addition to the many wellknown benefits of exercise for reducing the risk of chronic disease, evidence has emerged in the past few years suggesting that exercise may slow the aging process at the DNA level.

One fascinating area of research on biological aging centers on regions of DNA called telomeres, non-coding sequences located on the ends chromosomes.

Telomeres are shortened with each cell division until eventually the telomeres becomes too short, preventing the cell from dividing any further (called "senescence").

As more and more cells in a tissue become senescent, its function can become impaired the tissue ages.

Therefore telomere length is used as an indicator of cellular aging, and many studies have investigated potential factors that may contribute to changes in telomere length.

In human studies, shorter telomere length has been associated with hypertension, cardiovascular disease, insulin resistance, type 2 diabetes, oxidative stress, and obesity.

A low level of physical activity contributes to these conditions, and therefore maintenance of telomere length may be one link between exercise, disease prevention and longevitv.

Regular exercise is associated with a longer lifespan, and a number of studies have now documented links between physical activity and longer telomere length in white blood cells or skeletal muscle cells.

Many of these studies have found that those who exercise regularly have "younger" DNA than those who are sedentary. In fact, one study in particular showed that older individuals (ages 55-72) who regularly engaged in endurance training not only had longer telomeres than sedentary people their own age, but also similar telomere length to younger (ages 18-32) endurance trained individuals.

This is promising data that suggests that exercise helps to maintain a longer telomere length over time, contributing to slower cellular aging.

The pathways by which exercise may affect telomere length are still under study, and may be due to alleviating oxidative stress and/or inflammation.

Oxidative stress and inflammation are factors that affect telomere length and also contribute to diabetes, heart disease, and cancer.

Between exercise and a diet based on phytochemical-rich plant foods, we can achieve



substantial protection against cellular aging and chronic disease.

Dr. Fuhrman is a New York Times best-selling author and board certified family physician specializing in lifestyle and nutritional medicine.

Visit his website at Dr Fuhrman.com, or submit questions and comments to newsquestions@drfuhrman.com.

City to host Recycled Art Contest for Earth Day

Buying or Selling? I can help.

In observance of Earth Day, April 22, the Environmental Management Advisory Committee is hosting the Recycled Art Contest.

There are four categories: under 12 years of age, family, adult, and business.

Entry forms are to be turned into City Hall, 250 Highway 101, on Earth Day, April 22.

Art submissions are to be delivered to the Florence Events Center between 8 a.m. and 5 p.m. April 24 or 27.

Art must be constructed out of materials you would place in your recycle bin.

Contest rules and entry forms can be downloaded from the City of Florence website at www.ci.florence .or.us/boardsandcommissions, or may be picked up at Florence City Hall.

Entries will be on view April 24 through May 2, during the Florence Green Fair. For more information, call 541-997-8237.

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FRAA offers watercolor class from Ken Kent

Local watercolor artist Ken Kent will teach a four-week class on the basics of watercolor painting at the FRAA Art Center, 4969 Highway 101, Munsel Lake Plaza No. 4 (just north of Fred Meyer).

The four-week session will meet May 6, 13, 20 and 27, from 1 to 4 p.m. No drawing experience is required.

Kent works with each new student on a one-to-one basis. Cost will be \$60 for the four

sessions, plus a one-time materials and processing fee of \$15. Class will be limited to 12 registered students.

On Wednesday, April 15,

there will be a free meeting at 1 p.m., at the FRAA Art Center.

New students are encouraged to attend, as required supplies and class registration will be discussed.

In the past two years here in Florence, Kent has helped more than 100 artists learn the basics of watercolor painting.

Kent is a graduate of the nationally recognized Chouinard Institute of Art in Los Angeles, as a product designer and space planner.

To register, call 541-902-9691 between 4 and 6 p.m. weekdays.







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