CFUW-ONC Speaker Series November 30, 2019

Morning plenary:

**Brain Health and Aging: Pathways to Aging Well** Dr. Andrea Wilkinson, PhD.

We chose the theme for today’s Speaker Series on Aging because the topic crosses all demographics—we are all aging!! In addition, younger members likely have aging relatives, so sharing knowledge might help provide tools to help support our relatives. Lastly, though the theme appears at first glance to target personal development, we can also use the knowledge about health to support our advocacy work targeting support for basic income for all people in our communities. By providing better basic income for healthy food, safe and appropriate housing with social interactions built in for ongoing support, not only are we doing the right humane thing, it also makes economic sense in the long run.

With charisma and knowledge, Dr. Wilkinson shared the fundamentals of brain plasticity (the brain’s ability to change itself) and the science behind how to optimize our brain health and cognition as we age.  Andrea discussed the four key pillars of brain health: physical fitness, food & nutrition, socializing, as well as mental considerations (including sleep, stress management, and mental challenges). This talk was a positive look at how we age because she stressed lifestyle modifications we can do to optimize brain and cognitive health.

**Fitness**

We know that fitness is important to maintain muscle mass as we age: at age 60, muscle mass begins to decrease by 3% annually, which can lead to an increase in frailty and a significant increase in the risk of falls.

**Research:** Strength training exercises 3x/week (for 12 weeks) = an increase in strength & skeletal muscle mass and decrease in body fat in older women.

Research is showing that lifestyle changes can also slow cognitive decline and lifestyle can maintain a healthier brain and body!

**Exercise & Cognition –**What is the connection?

**Neurogenesis** is the growth of new brain cells. Brain Derived Neurotrophic Factors (BDNF) produced in your brain plays a vital role in neurogenesis: it helps existing brain cells survive, and encourages growth of new brain cells in HIPPOCAMPUS

Exercise increases BDNF levels in your brain; levels of BDNF increase with weight and resistance training.

Neurogenesis in the hippocampus the part of the brain responsible for MEMORY and LEARNING, is particularly important because otherwise we loose brain cells causing a significant decline in brain function as we age.

**Food & Nutrition**

Higher intake of optimal nutrient combination is linked to slower cognitive decline.

WHAT? E.g., Fruit, vegetables, whole cereals (whole grains), fish, poultry

WHY?

Antioxidants reduce damage to the brain from free radicals

Adequate protein helps maintain the integrity & function of the brain

Vitamin D is linked to the production of brain-derived neurotrophic factor (BDNF)

Neurotransmitter release influences inflammatory processes

**Socializing** is a complex brain activity.

*Social engagement is a predictor of positive cognitive health as you age*

People who engage in regular social interaction with other humans show:

Increased performance on cognitive tests

Greater memory

Better attention

Higher levels of empathy

Greater emotion recognition and regulation

Improved impulse control

Reduced risk of mortality

**Mental Considerations**

Sleep—not too little and not too much.

Stress—constant stress produces cortisol, which is damaging to the brain on long-term exposure.

Mental Challenges—are good to keep the brain active

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