

ANTECEDENTS

What makes a cancer survivor susceptible to long term fatigue:

Those who have SNP's to produce more inflammatory cytokines = IL1B, TnfA and interleukin 6

A history of lifetime inflammation

TRIGGERING EVENTS

GASTROINTESTINAL

Chemotherapy will disrupt the microbiome = key to inflammatory control and neurotransmitters

MEDIATORS

Omega 3's, probiotics, curcumin, magnesium, carnitine

Coconut water or bone broth during chemotherapy

Milk thistle is helpful after chemotherapy

IMMUNE AND INFLAMMATORY BALANCE

High stress = inflammation = fatigue

ENVIRONMENTAL INPUTS

OXIDATIVE STRESS, ENERGY PRODUCTION

High oxidative stress goes along with inflammation

Support ATP production by supporting the mitochondria

SLEEP/RELAXATION

Pain management = good rest/sleep

EXERCISE/MOVEMENT

Mindful exercise = stretching, gentle yoga, tai chi that helps the patient into a parasympathetic state

Movement helps reduce the chances of blood clots

NUTRITION/HYDRATION

Anti-inflammatory diet full of colors
Eat plants for phytochemicals and anti-oxidants to feed the mitochondria
Drink high potassium-magnesium water during chemotherapy

STRESS/RESILIENCE

More stress will contribute to the inflammation.

Introducing stress reducing exercises builds resilience and helps lower inflammation

RELATIONSHIPS/NETWORKS

Explicitly tell your loved ones what help is and what help isn't. Setting boundaries is important

Patients with a good support system have better outcomes

STRUCTURAL INTEGRITY

A good support system helps reduce stress

DETOXIFICATION

HPA axis is up-regulated

MIND, SPIRIT, EMOTIONS, COMMUNITY

HORMONES, NEUROTRANSMITTERS