

Integrative Health for the Plastic Surgery Nurse

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Overview

- ◆ Areas related to integrative health care
- ◆ Integrative approaches and patient education
- ◆ Applications for Plastic Surgery Nurses
- ◆ Mindfulness/imagery demonstration

Integrative Approaches to Health and Lifestyle

- ◆ Guided Imagery, Hypnosis and Mindfulness
- ◆ Lifestyle enhancement and balance
- ◆ Body work
- ◆ Biofeedback and Use of Apps
- ◆ CBT (ACT, DBT, MI, BA)
- ◆ Nutrition and diet
- ◆ Exercise and movement
- ◆ Stress management
- ◆ Supplements, essential oils, wound care
- ◆ Sleep

Guided Imagery, Hypnosis and Mindfulness

- ◆ Guided imagery- involves use of imagery to bring about healing and change and is used for:
 - ◆ Relaxation
 - ◆ Sleep
 - ◆ Pain and anxiety
- ◆ Hypnosis- guided relaxation, intense concentration, and focused attention to achieve a heightened state of awareness that is sometimes called a trance.
 - ◆ Pain and anxiety
 - ◆ Mood
 - ◆ Habit control
 - ◆ Motivation

Guided Imagery, Hypnosis and Mindfulness

- ◆ Mindfulness/meditation

- ◆ Reduces:

- ◆ Anxiety

- ◆ Blood pressure

- ◆ Sleep problems

- ◆ Perceptions of stress

- ◆ Pain

- ◆ Skin disorders

- ◆ GI problems

- ◆ Rumination

- ◆ Hot flashes

- ◆ Cravings/addictions

Guided Imagery, Hypnosis and Mindfulness

- ◆ Enhances:
 - ◆ Feelings of well being
 - ◆ Focus and attention
 - ◆ Healing
 - ◆ Immune response
 - ◆ Meta-cognitive processes
 - ◆ Memory
 - ◆ Energy
 - ◆ Emotional regulation
 - ◆ Mood

Lifestyle Enhancement and Balance

- ◆ Spiritual involvement
- ◆ Work/life balance
- ◆ Making healthy choices
- ◆ Finding passion

Lifestyle

- ◆ Breath work
- ◆ Sleep
- ◆ Diet and weight
- ◆ Smoking cessation
- ◆ Movement/exercise
- ◆ Stress management
- ◆ Pacing

Body Work

- ◆ Reiki- a healing practice that originated in Japan. Reiki practitioners place their hands lightly on or just above the person receiving treatment, with the goal of facilitating the person's own healing response.
- ◆ Healing touch- is a nursing continuing education program developed in 1989. The practitioner gently uses the hands in a variety of techniques both on and off the body. The goal is to restore wholeness, balance and harmony in the energy system to enhance self-healing.
- ◆ Massage-is one of the healing modalities that uses the body's own processes for repair, renewal and well-being. Therapeutic massage is useful for pain and muscle tension.

Biofeedback and Use of Apps

◆ Biofeedback

- ◆ Mindfulness based Biofeedback (Stress)
- ◆ Thermal Biofeedback (headaches, Renaud's, CRPS)
- ◆ EMG Biofeedback (muscle tension, pelvic floor)
- ◆ Heart Rate Variability (HRV) Biofeedback (Heart Math)

◆ APPs

- ◆ Relaxation
- ◆ Exercise/fitness
- ◆ Mindfulness
- ◆ Diet and weight
- ◆ CBT
- ◆ Smoking cessation
- ◆ Biofeedback

Cognitive Behavior Therapy (CBT)

- ◆ CBT
- ◆ A form of therapy that uses the link between thoughts and behaviors to change feelings, practices or behaviors.
- ◆ One of the most useful empirically validated therapy modalities.

Variations of CBT

- ◆ Acceptance and Commitment Therapy (ACT)
- ◆ Dialectic Behavior Therapy (DBT)
- ◆ Behavioral Activation (BA)
- ◆ Motivational Interviewing (MI)

Nutrition and Diet

- ◆ Weight Management
 - ◆ Obesity
- ◆ Dietary Approaches
 - ◆ Dash
 - ◆ Mediterranean
 - ◆ Anti-inflammatory
- ◆ Supplements
 - ◆ Macro-nutrients
 - ◆ Micro-nutrients
 - ◆ Vitamins and minerals

Weight

- ◆ Obesity- primary source of the obesity epidemic is the over consumption of refined sugars and grains combined with a sedentary lifestyle.
- ◆ **A protective role against weight gain is noted for:**
 - ◆ Higher intake of dietary fiber and nuts.
 - ◆ Higher intake of whole grains, cereal fiber, high-fat dairy products
- ◆ **A protective role against increased waist circumference is seen for:**
 - ◆ Higher fiber and fruit intake
 - ◆ Lower intake of refined (white) bread and high energy density foods
- ◆ **Less protective role and higher prediction of weight gain for:**
 - ◆ High meat intake
 - ◆ Higher intake of refined grains, and sweets and desserts

Diets for Healthy Living

- ◆ The Dietary Approaches to Stop Hypertension (DASH)
 - ◆ DASH is a diet high in fruits, vegetables, and low-fat dairy foods, and low in saturated fat, total fat, and cholesterol.
 - ◆ Cholesterol- reductions in total cholesterol and increase in HDL
 - ◆ Blood Pressure- reduced by 16.1/9.9 mm (DASH plus weight management); 11.2/7.5 mm (DASH alone); and 3.4/3.8 mm (usual diet controls)
 - ◆ Weight loss – associated with weight loss and improved nutrition.
 - ◆ Glucose - Dash diet for 8 weeks fasting blood glucose levels and A1C decreased after adoption

Diets for Healthy Living

- ◆ Mediterranean diet: The Mediterranean-style diet is inspired by the dietary patterns generally consumed by individuals living in the countries that border the Mediterranean Sea.
- ◆ Mediterranean-style diet has the following general characteristics:
 - ◆ Primarily plant-based: high intake of vegetables, fruits, bread and cereals, beans, nuts and seeds
 - ◆ Olive oil as the primary source of fat
 - ◆ Moderate to high intake of fish
 - ◆ Low intake of dairy products, poultry, and red meat
 - ◆ Low to moderate consumption of wine

Benefits of Mediterranean Style Diet

- ◆ Mediterranean-style diet has been shown to decrease biomarkers of inflammation and improve endothelial function.
- ◆ Mediterranean-style diet has been associated with a reduction in recurrent cardiac events.
- ◆ A study of >22,000 adults in Greece showed that through 44 months of follow-up, adherence to the Mediterranean diet correlated with a 25% reduction in total mortality and premature death.
- ◆ LDL: Total cholesterol reduced by 13.9 mg per deciliter at six years.
- ◆ Glucose: decreased fasting glucose levels seen at two years in diabetic patients.

Phytonutrients

- ◆ Herbs and spices:
 - ◆ Cinnamon- Stabilizes blood sugar levels.
 - ◆ Turmeric –Anti-inflammatory (needs black pepper to increase bioavailability)
 - ◆ Ginger – Ginger reduced fasting plasma glucose, A1C, insulin, triglyceride, total cholesterol and CRP significantly compared with placebo group. (Arablou, 2014). Good for nausea.
 - ◆ Tea - Both green and black teas contain high levels of antioxidants—even more than most vegetables and fruits.
 - ◆ Chocolate- research demonstrates a cardiovascular-protective properties and beneficial effect of cocoa on blood pressure, insulin resistance, and platelet function (Khan, 2014; Corti, 2009; Almoosawi, 2010).

Vitamins

◆ Fat soluble

- ◆ **Vitamin A** – Fat-soluble retinoid, which plays an important role in vision, reproduction, cell division, cellular differentiation, and immune function.
 - ◆ Can interact with several medications and other supplements.
- ◆ **Vitamin E**- As a lipid-soluble antioxidant, participates as a free radical scavenger that is an important component of the cellular antioxidant defense system.
 - ◆ Keep dosage of vitamin E within the recommended RDA or to a maximum 200-400IU/day
 - ◆ Vitamin E should not be recommended for the prevention of cancer and cardiovascular disease.
 - ◆ At higher doses, vitamin E can interact with medications, especially anti-coagulants.
- ◆ **Vitamin D** – Primary functions includes maintaining normal calcium and phosphorus blood levels and calcification of the bones. These are vital for many cellular processes, including nerve function, immune health, and bone growth.
 - ◆ The role of vitamin D in bone strength and prevention of osteoporosis is well described.
 - ◆ Vitamin D has been associated with several clinical conditions, including cardiovascular disease, diabetes, depression and cancer.

Vitamins

◆ Water soluble

- ◆ **Folate** - role in the prevention of neural tube defects (NTDs) and an **association between depression and low concentration of folate.**
- ◆ **Vitamin B 6** - The American College of Obstetrics and Gynecology (ACOG) recommends 10-25 mg of vitamin B6 every eight hours as first-line therapy for nausea and vomiting in pregnancy (ACOG, 2004).
- ◆ **Vitamin B 12** - Clinicians should hold a high index of suspicion for vitamin B12 deficiency for those over the age of 50, those with gastrointestinal disease, taking PPIs, or metformin and those who are vegetarians or vegans.
- ◆ **B vitamins** - useful for stress.
- ◆ **Vitamin C** - Vitamin C is required for the synthesis of collagen norepinephrine, carnitine, hormones, and various amino acids.
 - ◆ Humans are unable to synthesize vitamin C and must obtain from diet

Minerals

- ◆ Calcium - Calcium is an essential component for many metabolic functions and appears to play a role in reducing the risk and burden for many chronic diseases, including osteoporosis, obesity, hypertension, cancer, and metabolic syndrome.
 - ◆ Daily requirements for calcium vary according to age and medical condition - usually somewhere between 1000-1300 mg/day.
 - ◆ The body cannot handle more than 500 mg calcium, so divide larger doses and take at least 8 hours apart.
 - ◆ Consider recommending calcium with magnesium to help reduce the constipating effects of calcium.
- ◆ Zinc - Medical conditions such as HIV, sickle cell disease, cirrhosis, depression, hemodialysis, Alzheimer's disease and inflammatory bowel diseases may have a concomitant subclinical zinc deficiency and benefit from repletion. May be useful for wound healing.
- ◆ Magnesium - Magnesium is a mineral that is necessary for a multitude of reactions in the human body.
 - ◆ Canadian Headache Society gave magnesium citrate a strong recommendation for migraine prophylaxis (Pringsheim, 2012).

Common Supplements

- ◆ Omega 3 fatty acids - The omega-3 fatty acids are essential nutrients for humans.
 - ◆ Studies indicate that diets rich in omega-3 fatty acids are associated with decreased cardiovascular morbidity and mortality (Kang, 2004; Psota, 2006).
 - ◆ Benefit of omega-3 fatty acid supplementation in patients with depressive illness (Appleton, 2010).
- ◆ Melatonin –plays a central role in managing circadian rhythms and nighttime neuroendocrine physiology. In addition melatonin has been shown to have significant anti-oxidative and anti-inflammatory activity.
 - ◆ Melatonin generally has a good safety profile.

Exercise and movement

- ◆ Exercise and movement reduces risks for many chronic diseases including obesity, diabetes, hypertension, hyperlipidemia, cardiovascular disease, osteoporosis, various cancers and neurodegenerative diseases (Kravitz, 2007; Jeon, 2007).
- ◆ Current recommendations from the [US Center for Disease Control and Prevention](#) include:
 - ◆ **Children and adolescents:** 60 minutes or more each day.
 - ◆ **Adults 18-64 years:** 150 minutes or more of moderate intensity aerobic activity per week, and muscle strengthening activities on 2 or more days per week that work all major muscle groups.
 - ◆ **Adults 65 and older:** the same as long if they are generally fit.

To increase movement

- ◆ Wear a step counter
- ◆ Take stairs when possible
- ◆ Join a class
- ◆ Be musical
- ◆ Get a buddy make it fun
- ◆ Try yoga or Tai Chi – frequency beats duration

Stress

- ◆ The Stress Response- the central nervous system up-regulates to a state of arousal, vigilance, and focused attention and inhibits non-essential systems such as digestion, growth, and reproduction.
- ◆ Release of the stress hormones occurs within seconds.
- ◆ Stress disrupts cognitive function, fear/anger and reward systems, the wake-sleep center of the brain, reproductive and thyroid hormones, and the gastrointestinal, cardiorespiratory, metabolic and immune system.

Relaxation

- ◆ Relaxation Response - a physiological response that is opposite of the fight or flight response, which results in decreased metabolism, heart rate, blood pressure, respiratory rate, and slowed brain waves.
- ◆ Reduces the impact of prolonged stress.
- ◆ Components:
- ◆ Two steps are usually required to elicit the relaxation response:
 - ◆ **Repetition:** The repetition of a word, sound, prayer, phrase or muscular activity.
 - ◆ **Passive Return:** When thoughts unexpectedly intrude, there is a passive return to the repetition.

Ways to Mitigate the Effects of Stress

- ◆ Self care – Sleep, diet, activity, healthy relationships, life balance.
- ◆ Spirituality and self growth – Gratitude, acceptance, expectations, flexibility and good boundaries.
- ◆ Optimism – Being mindful, avoiding catastrophizing,, restorative practices, exposure to positives and avoidance of negatives.
- ◆ Environmental- Avoid toxins, avoid clutter and noise, time in nature.

Guided Imagery, Hypnosis and Mindfulness

- ◆ Generally pleasant and entertaining.
- ◆ Easy to participate in for most patients.
- ◆ Guided Imagery and Hypnosis
 - ◆ Involves guiding patient through use of imagination to relax and reduce pain.
- ◆ Mindfulness
 - ◆ Involves learning to calm the mind without judgment.
 - ◆ Literature is sound regarding pain.

Essential Oils

- ◆ Widely used in Europe. England is championing many essential oil clinical studies within hospitals and the use of aromatherapy there is often encouraged and largely administered by nurses.
- ◆ The use of essential oils, widely known as Aromatherapy is gaining attention in integrative care practice
 - ◆ They are pleasant to use
 - ◆ They have high compliance due to their aromatic scents
 - ◆ Oils are safe when administered properly
 - ◆ Oils have biologically active constituents

A Few Well Recognized Oils

- ◆ Lavender is the quintessential first aid remedy; it is among the safest and most widely used essential oils.
 - ◆ Animal and human studies suggest anxiolytic, mood stabilizing, sedative, analgesic properties for lavender (Koulivand, 2013).
- ◆ Tea Tree – Tea tree oil has been a staple of Australian first aid kits for many decades. It is among the most studied of all essential oils with over 360 articles according to Pubmed. During World War II the Australian military provided a bottle in every soldier's first aid kit.
 - ◆ Tea tree oil exerts antioxidant activity and has been reported to have broad-spectrum antimicrobial activity against bacterial, viral, fungal, and protozoal infections affecting skin and mucosa. It also accelerates wound healing (Pazyar, 2013).

The Issue of Sleep

- ◆ Sleep disorders are of epidemic proportions with more than 40 million Americans struggling with insomnia.
- ◆ Sleep disorders are very common in women (Pavlova, 2011), and affect up to 25% of children (Vriend, 2011).
- ◆ It is estimated that 80% of psychiatric patients have sleep disorders.
- ◆ Insomnia is a common prodromal symptom of both depression and anxiety disorders.

Causes of Sleep Problems

- ◆ Medical conditions: gastro-esophageal reflux disease, restless leg syndrome, and chronic pain.
- ◆ Other common contributors are caffeine (adults, adolescents, and children), alcohol (teens and adults) prescription and over-the-counter drugs, and shift work.
- ◆ Rebound insomnia upon discontinuation of sleep medications is also common.
- ◆ Hyper-arousal
- ◆ Light, noise and stress
- ◆ Shift work

Strategies to Improve Sleep

- ◆ Rhythms of activity and rest
 - ◆ Light and energizing activity to wake up
 - ◆ Use of meditation and breathing through the day
 - ◆ Keep schedule even on weekends
 - ◆ Develop ritual as bridge to sleep
- ◆ Use light and dark to the advantage
 - ◆ Simulate dusk
 - ◆ Use blue light reduction technology before sleep (amber glasses)
 - ◆ Melatonin consideration
- ◆ Calm “Body Noise”
 - ◆ Check medications for side effects
 - ◆ Alcohol is not a sleep aid
 - ◆ Avoid caffeine, sugar and adrenalin surges

Strategies to Improve Sleep

- ◆ Create a safe sleep retreat
 - ◆ Cool, dark and safe
 - ◆ Removed clocks and devices
 - ◆ Make sleeping space “green”
- ◆ Surrender to sleep
 - ◆ Avoid chemicals – consider natural
 - ◆ Practice letting go of wakefulness
- ◆ Don't fight night time waking
 - ◆ Go to bed when feel sleepy
 - ◆ Avoid clock watching, get up and sit until feeling sleep again
 - ◆ Use wakefulness as an opportunity to pray or meditate
- ◆ Arise mindfully
 - ◆ Get morning light exposure
 - ◆ Explore memories of dreams
 - ◆ Set intentions for the day

The Plastic Surgery Nurse and Integrative Approaches

- ◆ Using simple empirically supported approaches
 - ◆ Imagery, diet, sleep, stress, etc.
- ◆ Making appropriate referrals
 - ◆ Integrative providers
 - ◆ Mental health, nutrition, PT/fitness, massage, etc.
- ◆ Training in Integrative Medicine/Health
 - ◆ Reiki, healing touch, mindfulness, etc.
 - ◆ More specific training such as Duke University, US Davis, University of Arizona, etc.

Demonstration

- ◆ Imagery
- ◆ Mindfulness
- ◆ Breathing

Thank you

 Questions