



Energy & vitality during perimenopause and beyond

Guest speaker

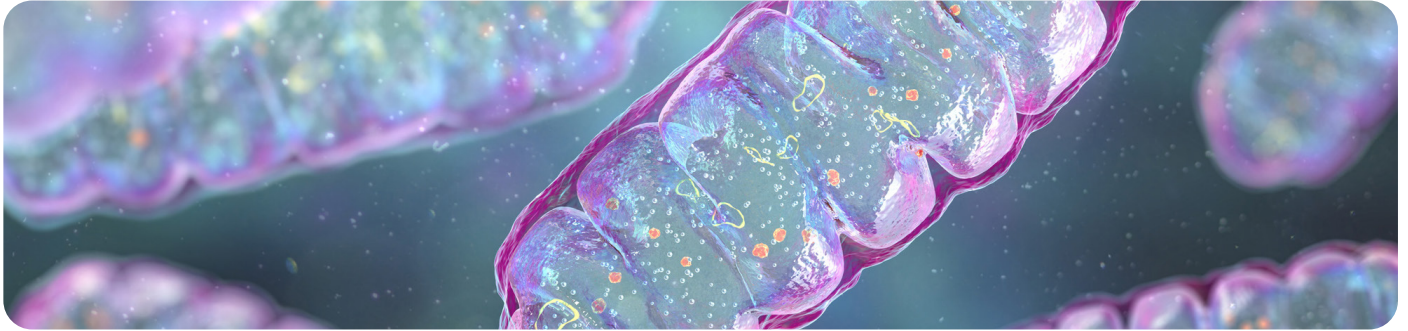
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What's in this handout?

1. Mitochondrial support
2. Sarcopenia
3. Post exercise window fuelling
4. Macronutrient considerations
5. Supporting heart rate variability and the nervous system
6. Herbal considerations for adrenal and nervous system support
7. Sleep hygiene
8. Key takeaways to consider implementing



1. Mitochondrial support

Supporting Mitochondria

- Healthy insulin levels
- Oestrogen and progesterone
- Adequate melatonin production
- Healthy thyroid function
- Exercise/movement
- Intermittent fasting
- Circadian rhythm alignment
- Adequate sleep/rest

Damage to Mitochondria

- Alcohol, smoking
- Pesticides, antibiotics
- Statins, paracetamol
- Lack of exercise, loss of muscle
- Vegetables oils (diet high in Omega 6)
- Overeating, high fructose corn syrup consumption

Nutrients to consider when supporting the mitochondria

| | | | |
|------------------------------|--|----------------------------|---|
| Coenzyme Q10 | Cellular respiration, mitochondrial function, reduce ROS, antioxidant, membrane stabiliser | Glutathione | Antioxidant and mitochondrial health |
| Curcumin | Reduce chronic and acute inflammation, cox 1 and 2 inhibitor | Alpha lipoic acid | Antioxidant, cell metabolism that leads to ATP production |
| Magnesium and taurine | | Vitamin C | Antioxidant and biosynthesis of carnitine |
| Probiotics | microbiome, gut, immune support | Omega 3 fatty acids | Mitochondria membrane phospholipid component |
| Carnitine | Fatty acid metabolism within the mitochondria | Zinc | Inhibits mitochondrial ROS generation |
| B12 | Energy production and red blood cells | Selenium | Antioxidant |
| | | Polyphenols | |



2. Sarcopenia & mitochondria

- Loss of muscle means loss of mitochondria
- Maintain muscle mass = maintain mitochondrial numbers and function, slows the aging process
- Periodized aerobic training in a low carb state (1-2 times per week) can activate mitochondrial biogenesis pathways (Bartlett et al., 2015)
- Strength training 2-3 times week to maintain muscle
- HIIT, sprint, plyometric, yoga, stretching walking etc.
- Adequate protein intake to maintain muscle mass
- Exercise benefits glucose and lipid metabolism, skeletal muscle function and growth, maintain bone density and assists insulin sensitivity in adipose tissue
- Protein intake 1.6-2.0gm/kg/day or higher to maximally stimulate MPS
- Leucine at >4.5gm per day in conjunction with strength training
- Creatine, adequate vitamin D and Omega 3's



Resistance training is the most potent and cost-effective treatment to prevent sarcopenia

3. Post exercise fuelling window

- 1-2 hours, optimum is approximately 30 minutes
- Glycogen replacement, glucose control
- Muscle recovery and synthesis (MPS)
- Catabolic to anabolic
- Decreases cortisol
- Supports microbiome
- Reduces risk of low energy availability (LEA)
- Supports immune system
- Eat a meal not a snack
- 3:1 or 2:1 ratio of Carb:protein



4. Macronutrient considerations

A- Carbohydrates

Rest days/light exercise 2-2.5 grams/kg/day

Exercise of 1-2 hours 2.5-3grams/kg/day

Exercise of 2+ hours 3-5grams/kg/day

Focus on intake pre and post exercise

B- Protein

1.6-2.2grams/kg/day

Higher amounts on strength days or weight loss

Lower end on endurance or light exercise days

30-40grams with in 30-45 minutes post training

With every snack

C- Fats

.75-1.25grams/kg/day

Depends on exercise volume, body fat goals and body type





5. Supporting heart rate variability and the nervous system

Breathing exercises

8 hours of sleep, rest and naps

Hydration, less alcohol,

Healthy diet (leafy greens),

Work life balance, gratitude,

Time in nature, yoga, stretching,

Meditation, weighted blanket

Whoop band, Oura ring etc.

Sunlight and outdoor exercise

Breakfast, especially protein by 10am

Vagal nerve tone (sing, hum, gargle, chewing gum)

Herbs for the nervous system such as; Withania, passion-flower, ziziphus, lemon balm

Zinc, B complex, magnesium, taurine and glycine





6. Herbal considerations for adrenal and nervous system support

| | |
|---------------|------------|
| Skullcap | Rhodiola |
| Ziziphus | Rhemania |
| Motherwort | Ginsengs |
| Passionflower | Codonopsis |
| Valerian | Astragalus |
| Mellissa | Mushrooms |
| Schisandra | Liquorice |
| Withania | |

7. Sleep Hygiene

7.5-8 hours

Circadian alignment

No/low alcohol and caffeine

Magnesium bisglycinate

Digestive herbs/Vata tea

Sleep herbs

Melatonin rich foods or supplement

Bed before 10 (Ayurvedic clock)

Bath before bed

Cool room, dark, white noise

No blue light/screens



8. Key takeaways to consider implementing

- Exercise – cardio, weights, HIIT, strength training
- Eating before and after training
- Address hormones and insulin resistance
- Cyclical/intermittent dieting
- Eating by 10am even if doing IF (cortisol)
- 3 meals, no snacks

- Continual blood glucose monitor (www.freestylelibre.com.au)
- Fibre intake (30+ grams)
- Deal with gut issues/microbiome health
- Food diary, apps, tracking, buddy system
- Check for food allergies and sensitivities
- High vegetable and anti-inflammatory diet
- Sleep (7.5-8 hours), nap
- Circadian rhythm alignment (wake and to bed)
- Stress reduction/cortisol control

- Optimum protein and leucine intake
- Protein threshold theory – eat protein first
- Larger meals at breakfast/lunch, smaller at dinner
- Know your calorie and macro needs

- Track your heart rate variability
- Nature therapy/forest bathing
- Learn your somatotype
- Supplements/herbs to assist in weight loss, adrenals, nervous system and mitochondrial health
- Analyse cravings, deficiencies and habits
- Change up your exercise (SAID/specific adaptation to imposed demands)
- Cold thermogenesis/showers/bathing/less clothing