

# THE SYSTEMS OF THE HUMAN BODY

## AND THEIR RELATIONSHIP TO ME/CFS/FM

**Always follow up on new symptoms with your GP. Get advocacy if necessary. Ask for referrals and second opinions if you are not satisfied.**

Understanding the different systems of our body, and how they can be affected by ME/CFS/FM, can assist us to support these systems back to better states of health and wellness.

**All systems are interconnected and work together in a harmonious way to maintain optimal functioning in the human body.**

With ME/CFS/FM, many, of the systems, in the body are functioning **sub-optimally**. Symptoms are cues to let us know that something is out of balance. Our job is to discern which systems need support, and how best to do this. This is an overview of the 11 different systems in our body, how they relate to ME/CFS, and some simple, cost-free things that you can do to help yourself. As mentioned above, please talk to your GP if any new symptoms arise.

<b>The Nervous System</b>	<b>Possible ME/CFS/FM Symptoms:</b>	<b>Possible Steps to Wellness:</b>
<ul style="list-style-type: none"> <li>- Consists of the brain, spinal cord, sensory organs, and all of the nerves that connect these organs with the rest of the body</li> <li>- Together, these organs are responsible for the control of the body and communication among its parts</li> </ul>	<ul style="list-style-type: none"> <li>- Maladaptive stress response – constant state of high alert affecting many of the body systems</li> <li>- Irregular sleep patterns</li> <li>- Insomnia</li> <li>- Word-finding difficulty</li> <li>- Slow/disjointed/poor speech</li> <li>- Poor concentration, 'brain fog'</li> </ul>	<ul style="list-style-type: none"> <li>- Calm the nervous system through Healthy Maintenance Practices</li> <li>- Work through stressors</li> <li>- Relaxation</li> <li>- Acceptance rather than fighting 'what is'</li> <li>- A healing and supportive environment</li> <li>- Optimum hydration, nutrition and breathing to assist oxygen and nutrients to get to the brain</li> <li>- Adequate sleep</li> <li>- Gentle movement to assist circulation</li> </ul>
<b>The Cardiovascular/Circulatory System</b>	<b>Possible ME/CFS/FM Symptoms:</b>	<b>Possible Steps to Wellness:</b>
<ul style="list-style-type: none"> <li>- Made up of heart, blood vessels, and blood</li> <li>- Approximately 5l of blood is transported per minute</li> </ul>	<ul style="list-style-type: none"> <li>- Inefficient pumping from the heart</li> <li>- Low blood pressure</li> </ul>	<ul style="list-style-type: none"> <li>- Regular fluid and salt intake (if you don't have high blood pressure). Include potassium rich</li> </ul>

<p>via the blood vessels - even in a restful state</p> <ul style="list-style-type: none"> <li>- The Cardiovascular system is responsible for transporting oxygen, nutrients, hormones and the removal of cellular waste products to maintain optimal functioning</li> </ul>	<ul style="list-style-type: none"> <li>- Decreased blood volume (up to 1/3)</li> <li>- Poor circulation</li> <li>- POTS</li> <li>- Heart palpitations</li> <li>- Light-headedness (insufficient blood getting to the brain)</li> <li>- Heart and pulse dysregulation (which affects the overall circulation/detoxification process that works to rid waste and replace damaged cells)</li> </ul>	<p>foods i.e. bananas and kiwifruit (Potassium is lost when you have a high salt intake)</p> <ul style="list-style-type: none"> <li>- Relaxation and breathing practices (to help circulate oxygen around the blood)</li> <li>- Treatment for depression may be applicable (as depression can slow down circulation)</li> </ul>
<p><b>The Musculoskeletal System</b></p>	<p><b>Possible ME/CFS/FM Symptoms:</b></p>	<p><b>Possible Steps to Wellness:</b></p>
<ul style="list-style-type: none"> <li>- Includes the bones, joints and muscles</li> <li>- The bone matrix and bone marrow produce blood cells and store calcium and iron.</li> <li>- Over 650 muscles attach to our skeleton</li> <li>- Muscle tissue is found inside the heart, digestive organs, and blood vessels and they serve to move substances throughout the body. The mitochondria (the energy producing part of every cell in our body) power our muscle cells to make our muscles move and work</li> </ul>	<ul style="list-style-type: none"> <li>- Musculoskeletal tension</li> <li>- Aches and pains</li> <li>- Fibromyalgia</li> <li>- Migraines</li> <li>- Headaches</li> </ul>	<ul style="list-style-type: none"> <li>- Gentle movement of joints or gentle massage to promote healthy circulation</li> <li>- Warm Epsom Salt baths help relaxation</li> <li>- Application of heat and/or ice packs to the affected painful areas</li> <li>- Movement and light exercise – approached with caution</li> <li>- For pain management please discuss your options with a GP to establish the <b>most effective pain relief</b> for you</li> <li>- Consider sleep medication, as poor sleep patterns are part of the pain cycle</li> </ul>
<p><b>The Digestive System</b></p>	<p><b>Possible ME/CFS/FM Symptoms:</b></p>	<p><b>Possible Steps to Wellness:</b></p>
<ul style="list-style-type: none"> <li>- Comprises a group of organs working together to convert food into energy and basic nutrients to feed the entire body</li> <li>- Six major functions take place in the digestive system: ingestion, secretion, mixing and movement, digestion, absorption and excretion</li> </ul>	<ul style="list-style-type: none"> <li>- Malabsorption</li> <li>- Intolerance/allergies</li> <li>- Indigestion/reflux</li> <li>- Irritable bowel syndrome</li> <li>- Nausea, vomiting and diarrhoea</li> <li>- Associated with: <ul style="list-style-type: none"> <li>• Gastrointestinal infections</li> <li>• Ulcers (H.pylori)</li> <li>• Colitis</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>- Calming the stress response/stress reduction</li> <li>- Improving gut health (bone broth, prebiotics, probiotics etc) – refer to Nutrition Workshop</li> <li>- Consider elimination or rotational elimination diets with care (if symptoms become worse under elimination diet protocols consider a simple</li> </ul>

	<ul style="list-style-type: none"> <li>• Bloating</li> <li>• Appendicitis/diverticulitis</li> </ul> <p>(NOTE: Alternative perspectives suggest these are caused by leaky gut, candida, parasites)</p>	<p>moderate diet taken regularly)</p> <ul style="list-style-type: none"> <li>- Eat small regular meals to reduce pressure on the body (enormous amounts of energy are needed to digest food).</li> <li>- Decrease fluid intake with meals to assist the digestive process</li> </ul>
<b>The Endocrine System</b>	<b>Possible ME/CFS/ FM Symptoms:</b>	<b>Possible Steps to Wellness:</b>
<ul style="list-style-type: none"> <li>- Includes all glands of the body and the hormones produced by those glands</li> <li>- Processes regulated by hormones are: Cellular metabolism, reproduction, sexual development, sugar and mineral homeostasis, heart rate, and digestion</li> </ul>	<ul style="list-style-type: none"> <li>- Hormone imbalance</li> <li>- Metabolism issues (thyroid)</li> <li>- Hypoglycaemia</li> </ul>	<ul style="list-style-type: none"> <li>- See GP for testing</li> <li>- Regular small meals containing protein for hypoglycaemia</li> <li>- Improving sleep</li> </ul>
<b>The Respiratory System</b>	<b>Possible ME/CFS/ FM Symptoms:</b>	<b>Possible Steps to Wellness:</b>
<ul style="list-style-type: none"> <li>- The cells of the human body require a constant stream of oxygen to stay alive. The respiratory system provides oxygen to the body's cells while removing carbon dioxide, a waste product that can be lethal if allowed to accumulate</li> </ul>	<ul style="list-style-type: none"> <li>- Hyperventilation Syndrome (shallow rapid breathing)</li> <li>- Shortness of breath (dyspnoea)</li> <li>- Sleep apnoea</li> </ul>	<ul style="list-style-type: none"> <li>- Learning to breathe properly, breathing techniques/diaphragmatic breathing, relaxation</li> <li>- Stress management</li> <li>- Sleep studies</li> </ul>
<b>The Immune and Lymphatic System</b>	<b>Possible ME/CFS/ FM Symptoms</b>	<b>Possible Steps to Wellness:</b>
<ul style="list-style-type: none"> <li>- These two systems share several organs and physiological functions. The immune system is our body's defence system against infectious pathogenic viruses, bacteria, and fungi. It works to protect the body against harmful agents in our environment and attacks agents that enter the body</li> </ul>	<ul style="list-style-type: none"> <li>- Highly active and/or inefficient immune system</li> <li>- Chemical sensitivities</li> <li>- Allergic reactions</li> <li>- Recurring Human Herpes Virus (HHV)</li> <li>- Excess fluid causing Oedema (fluid retention)</li> </ul>	<ul style="list-style-type: none"> <li>- Immunological testing</li> <li>- Treat underlying infections</li> <li>- Avoid chemical exposures</li> <li>- Lymphatic drainage (gentle) massage</li> <li>- Dry Brushing</li> <li>- Adequate hydration</li> <li>- Movement</li> </ul>

<ul style="list-style-type: none"> <li>- The lymphatic system plays an integral role in the immune system. It is made up of a network of tissues and organs that help rid the body of waste and other unwanted materials.</li> </ul>		
<p><b>The Urinary System</b></p>	<p><b>Possible ME/CFS/ FM Symptoms:</b></p>	<p><b>Possible Steps to Wellness:</b></p>
<ul style="list-style-type: none"> <li>- Consists of the kidneys, ureters, renal pelvis bladder, and urethra</li> <li>- The kidney and urinary systems act like a plumbing system and helps the body eliminate liquid waste called urea. It also acts to maintain the balance of potassium, sodium and water.</li> </ul>	<ul style="list-style-type: none"> <li>- Oedema (fluid retention)</li> <li>- Urinary tract infections</li> <li>- Irritable bladder (causing frequency of urination)</li> <li>- Reduced renal blood flow</li> </ul>	<ul style="list-style-type: none"> <li>- See GP to explore orthodox and/or alternative avenues to support the Urinary System</li> <li>- Balanced diet and adequate fluid intake</li> <li>- Bladder retraining exercises</li> <li>- High protein diet to increase renal blood flow</li> <li>- Possibly diuretics for oedema</li> </ul>
<p><b>The Reproductive System</b></p>	<p><b>Possible ME/CFS/ FM Symptoms:</b></p>	<p><b>Possible Steps to Wellness:</b></p>
<ul style="list-style-type: none"> <li>- Involves the interplay between hormones and the organs specifically involved in reproduction: <ul style="list-style-type: none"> <li>• Vagina, uterus, ovaries and fallopian tubes for women</li> <li>• Penis, scrotum, testes, epididymis, vas deferens, prostate, and seminal vesicles</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>- Reproductive and hormonal dysregulation</li> <li>- Endometriosis</li> <li>- ME symptoms worsened at certain times of the month for women</li> <li>- Loss of libido</li> </ul>	<ul style="list-style-type: none"> <li>- Learning how our hormones work to make sense of why symptoms are worsening at certain times.</li> <li>- Hormone support (orthodox and alternative methods)</li> <li>- Regular check-ups, particularly if new symptoms develop</li> </ul>
<p><b>The Integumentary System</b></p>	<p><b>Possible ME/CFS/ FM Symptoms:</b></p>	<p><b>Possible Steps to Wellness:</b></p>
<ul style="list-style-type: none"> <li>- Consists of hair, scalp, skin, and nails</li> <li>- Skin is the largest organ helps to protect the body from damage and infections</li> <li>- Regulates body temperature and moisture content</li> <li>- Produces melatonin and Vitamin D from sunlight</li> </ul>	<ul style="list-style-type: none"> <li>- Eczema and psoriasis because of increased intolerances and allergies</li> <li>- Hair loss</li> <li>- Temperature dysregulation</li> </ul>	<ul style="list-style-type: none"> <li>- Diagnose skin conditions to treat and reduce irritation</li> <li>- A sensible amount of unfiltered light directly to the skin each day (for vitamin D absorption and melatonin release)</li> </ul>