

What We Know: Long COVID Today Handouts



CoachSmart
CONSULTING

Dr. Marla E. Jirak

Researcher, Caregiver, & Long Covid Patient

Terminology

NICE (National Institute of Health and Care Excellence) “Rapid” Guidelines

- **Acute COVID-19**
 - Signs and symptoms of COVID-19 lasting up to 4 weeks
- **Ongoing Symptomatic COVID-19**
 - Signs and symptoms of COVID-19 lasting 4 to 12 weeks
- **Post-COVID-19 Syndrome**
 - Signs and symptoms that develop during or after an infection consistent with COVID-19, which continues for more than 12 weeks
- **Long COVID**
 - Includes both ongoing symptomatic COVID-19 and PostCOVID-19 Syndrome
 - Not explained by alternative diagnosis

CoachSmart Consulting-Dr. Marla E. Jirak

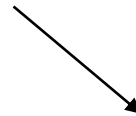
How Does the Covid Virus Impact the Body?



NEUROLOGICAL INJURY
IMPACTING THE CENTRAL AND
AUTONOMIC NERVOUS
SYSTEM

CORRELATED TO
AUTOIMMUNE AND
INFLAMMATORY SYSTEM

PRE-EXISTING "STRAIN" TO THE
RESILIENCE OF THE STRESS
REGULATORY SYSTEM/OR TRAUMA
HISTORY



WOVEN INTO THE ENDOCRINE, IMMUNE, AND INFLAMMATORY RESPONSES IN THE BODY

CENTRAL NERVOUS SYSTEM

- More important of the two systems-- controls receiving, identifying and responding to any stimulus
- Takes in information, processes information, and send out motor signals

Four Main Functions:

1. Controls body's internal environment (e.g., body temperature)
2. Programming of spinal cord reflexes (e.g., stretch reflex)
3. Memory and Learning
4. Voluntary Control of Movement

AUTONOMIC NERVOUS SYSTEM

- Part of nervous system that controls muscles of internal organs and glands
- Contains three anatomically distinct divisions: sympathetic, parasympathetic, and enteric

Five Main Functions (Unconscious):

1. Blood Pressure
2. Heart and Breathing
3. Digestion
4. Production of Body Fluids
5. Urination and
6. Sexual Function

AutoImmune Diseases

--A condition which your immune system attacks your body

- Type 1 Diabetes
- Addison's Disease (Adrenal Glands)
- Rheumatoid Arthritis (RA)
- Psoriasis/Psoriatic Arthritis
- Multiple Sclerosis (MS)
- Systemic Lupus Erythematosus (SLE)
- Inflammatory Bowel Disease (IBD)
--Crohn's Disease --Ulcerative Colitis
- Graves' Disease (Thyroid Glands)
- Sjogren's Disease (Dry Eyes, Mouth)
- Hashimoto's Thyroiditis (Thyroid Production)
- Myasthenia Gravis (Nerve Impulses)
- Autoimmune Vasculitis (Attacks Blood Vessels)
- Pernicious Anemia (Protein Deficiency)
- Celiac Disease (Gluten intolerance)



Symptoms

- ✓ Fatigue
- ✓ Achy Muscles
- ✓ Swelling and Redness
- ✓ Low grade fever
- ✓ Trouble Concentrating
- ✓ Numbness and tingling in the hands and feet
- ✓ Hair Loss
- ✓ Skin rashes

Inflammatory Diseases

--Your body activates your immune system and sends out inflammatory cells - they attack bacteria or heal damaged tissue.

--If not sick, these cells can cause chronic *“inflammation”*

- Alzheimer’s Disease
- Asthma
- Cancer
- Diabetes
- Gout
- Heart Disease
- Lupus
- Rheumatoid Arthritis (RA)
- Psoriasis/Psoriatic Arthritis

Symptoms

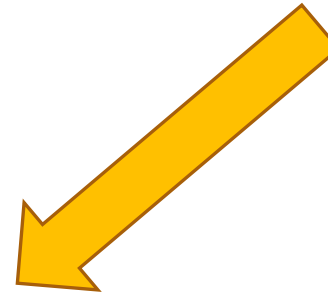
- ✓ Painful joints-pain, redness, swelling, or stiffness
- ✓ Fever
- ✓ Chills
- ✓ Fatigue, loss of energy
- ✓ Shortness of breath
- ✓ Fluid build up on lungs
- ✓ Headaches
- ✓ Loss of appetite
- ✓ Muscle stiffness
- ✓ High blood pressure

Stress-Response Model

STRESS



**ADRENALINE &
CORTISOL**



FIGHT / FLIGHT



**Keeps Stress
Response Going**

Long Term “ON” from Stress Leads to: Low Energy – No Motivation – Illness
--Body Wears Down - Gets Tired & Exhausted Leads to Sickness and Disease

Symptoms from Stress or Trauma



Physical Health

- Neck & Shoulder tightness
- Muscle Tension
- Stomach upset; nausea
- Constant aches or pains, headaches, & cramps
- Weight changes (overeating, undereating)
- Sleep issues
- Fatigue



Cognitive Health

- Forgetfulness
- Difficulty with concentration
- Confusion
- Trouble making decisions
- PTSD



Emotional Health

- Feelings of hopelessness
- Feelings of isolation
- Feelings of guilt, worthlessness
- Constant sadness, feeling blue
- Fear, worry, anxiety
- Crying spells
- Feeling overwhelmed
- Loss of interest in activities, hobbies, sex

Common Long COVID Symptoms

Respiratory

- Cough
- Dyspnea

Cardiovascular

- Chest tightness and pain
- Palpitations

Musculoskeletal

- Joint pain
- Muscle pain
- Muscle weakness

Neurological

- Cognitive impairment
- Dizziness
- Headache
- Peripheral neuropathy
- Sleep disturbance

Gastrointestinal

- Abdominal Pain
- Diarrhea
- Nausea

Other

- Visual Dysfunction
- Hearing Loss

Constitutional

- Altered smell and taste
- Decreased endurance
- Fatigue
- Fever
- Sleep disturbance

Mental Health

- Anxiety
- Depression

Dermatological

- Skin rashes

Self-Management of Symptoms

- **Self-management** - the person's day-to-day management of long COVID symptoms
- **Goal:** Being involved in control over your care w/ health provider
- **Better Self Management**
 - Improved symptom management
 - Improved quality of life

(Grady & Gough, 2014; Newman, et al., 2004)

Self-Management Interventions

- Ask for doctors & others for understanding and support
- Learn “**pacing**” & **activity management** to prevent/reduce fatigue & symptoms
- Identify & receive treatment for “co-morbid conditions” - remember there is not a a magic bullet for the whole illness
- Address severe symptoms sensibly, especially those that are “stressors”
 - Pain and headaches
 - Sleep disturbances
 - Orthostatic intolerance
 - Cognitive impairment
 - Anxiety, grief/loss (especially in the first 1-2 years of illness)
- Build a “toolbox” of rescue medications & strategies to manage symptom flares & get physical conditioning
- Remember other medical problems can occur with Long COVID

Pacing Strategies



Time-based pacing: A schedule or time-based rhythm of activity and rest

1. Do a task for a safe amount of time
2. Rest for a set amount of time, even if not tired
3. Repeat steps 1 and 2 until the task is complete



Goal-based pacing: A goal-focused schedule of activity and rest

1. Identify a goal that you want to achieve
2. Break the goal up into reasonable steps
3. Complete one step of the goal and take a break to rest
4. After the break, begin the next step toward achieving the goal

Long COVID Medical Treatment

- **Cognition & Speech Related Issues:** Cognitive Speech Therapy - improves memory & attention, planning & organization, problem solving, language & naming skills
- **Shortness of Breath:** Breathing exercises & respiratory therapy to improve lung function; visit a pulmonologist
- **Fatigue:** Rehab with physical therapists to encourage patients to pace themselves, prioritize activities, low impact exercises - short duration - increase as tolerated w/o fatigue
- **Abnormal heart rate:** Too high increase in heart rate (mostly women) when moving from lying down to standing; involves autonomic nervous system – exercise gently; visit a cardiologist

Other Treatment Strategies

<p>Avoid Situations That Can Exacerbate Symptoms</p>  <p>Large/Heavy Meals</p>  <p>Heat Exposure</p>  <p>Alcohol Intake</p>	<p>Liberal Intake of Salt and Water</p> 	<p>Sleep With Head of Bed Elevated</p>  <p>Head posts should be elevated 4-6 inches</p>
<p>Use of Compression Garments</p>	<p>Physical Counter Maneuvers</p>	<p>Drinking Water Before Getting Up In The Morning</p>
 <p>Abdominal Binder</p>  <p>Hose</p>	 <p>Leg Crossing Maneuver</p>  <p>Squatting</p>	<p>Drinking a 16 oz glass of water quickly before getting out of bed in the morning or prolonged standing to minimize orthostatic symptoms</p> 

Non-Pharmacological:

Avoid Triggers

- Processed Foods
- Heat
- Minimize/avoid caffeine and alcohol

Hydration

- >3 liters water/day

Salt Intake

- 5-10 grams sodium/day

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