The Stress of Separation and Social Isolation with COVID-19

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In 1968, Dr. George Engel, a medical researcher at the University of Rochester, presented the remarkable story of Charlie and Josephine (Engel, 1968). Charlie and Josephine had been a couple for 13 years. One day, Charlie was shot in full view of Josephine during an altercation with police at a park. As Charlie fell to the ground, Josephine ran to him and, bending over him, collapsed on the ground. Others ran to Josephine, but within minutes she was dead. This is a tragic but not entirely unfamiliar story. Many people have heard of instances in which one partner in a long-term relationship dies and shortly later the other partner dies as well. In this case, Dr. Engel was tricking us a bit because after he finishes his story, he lets us know that Charlie and Josephine are in fact, not human but rather two llamas in a zoo! Apparently, they had escaped the zoo; Charlie was quite aggressive and had to be shot. Josephine then collapsed in sudden death.

Dr. Engel contributed significant research on the importance of how psychological factors influence our physical health. In fact, he developed the very famous biopsychosocial theory that emphasizes that illness is not just influenced by biological factors but by psychosocial factors as well (Engel, 1977). Today, we face a biologic threat, a coronavirus, which calls for physical distancing. However, we must also be mindful of the psychosocial threat of human separation and isolation, which has its own morbidity and mortality and, without proactive self-care, can increase our vulnerability.

Our need for physical and social connection begins at birth. Harry Harlow, a famous psychologist, performed some of the earliest studies showing the impact of social separation and isolation on our health (Harlow, 1958). There was great controversy in the 1950s as to whether the need for food/breast milk drove the fundamental social connection between infant and mother. However, Harlow showed through his research with rhesus monkeys that, beyond the need for food, we need a connection to warmth, comfort, and safety. Harlow sought to prove this by separating rhesus monkeys from their mothers at birth and raising them in isolation. These monkeys grew up to have significant behavioral and physiological problems. They withdrew, didn't eat, were agitated and irritable, and could not bond in social connections with other monkeys. Famously, Harlow created two surrogate mothers, one made of wire and another made of a soft cloth. The rhesus monkeys clung to the soft cloth preferentially. If the wire monkey had the food, the infant monkey would go to the wire monkey only temporarily to eat and quickly retreat to the cloth surrogate monkey. Harlow's findings were strong evidence for our need for social connections to survive and be healthy.

John Bowlby, another well-known psychologist, also felt that we are driven to attach within a social connection (Bowlby, 1969). Our need for comfort, safety, and social nurturance through connection is a basic, biological, homeostatic need. That is, the need for social connection in order to maintain physiologic equilibrium is equal to our need for food, temperature, sleep regulation, and general chemistry equilibrium, such as with glucose or the proper balance of salt and water. Our early social attachments are internalized in our brain development.

One area of the brain that is influenced is the hypothalamic-pituitary-adrenal (HPA) axis, the seat of our hormonal stress response. Researchers such as Myron Hofer (Hofer, 1984, 1994, 1995) have emphasized that we are not born with our autonomic nervous system already completely programmed. Our early attachment shapes our fundamental stress regulation nervous system. Hofer has shown that we have "maternal regulators" within our brain internalized from neuroplastic changes in early attachment that automatically regulate our neuro-endocrine and even immune systems. We carry our early relational history within our brains through a process called neuroplasticity, which is basically that neurons that fire together wire together (Hebb, 1949). These regulators can be activated in and over-laid by other long-term relationships. We need continued relationships for fundamental co-regulation of stress, emotion, and physical well-being. We are not built by evolution for the kind of social dis-connects that COVID-19 imposes.

The HPA axis is also essential for our ability to fight off and respond to illness. It is intricately connected to our immune regulation. Studies have shown that isolation leads to impaired immune response and increases our chances of getting ill. In fact, Julianne Holt-Lunstad and Associates have shown that social isolation is a risk factor equal to smoking 15 cigarettes per day and greater than the risk of obesity or alcohol use disorder (Julianne Holt-Lunstad, 2017; J. Holt-Lunstad, Smith, Baker, Harris, & Stephenson, 2015; Julianne Holt-Lunstad, Smith, & Layton, 2010). This, of course, is even more important in a time when we are surrounded by a threatening virus. Immune response to that virus is extraordinarily important and may play a role in the individual disease severity.

This research speaks to the need for continued social connections for healthy stress regulation. This is even more important to our vulnerable loved ones who might be elderly or have other illnesses. It also emphasizes the need to proactively modulate our stress. Our stress will be automatically increased given the significant level of environmental threat of this pandemic. Our HPA axis and deep stress response happens very fast on a bodily level—at least twice as fast as our ability to consciously perceive the stress. Therefore, we have to be proactive.

There are four things one can do now to help modulate stress:

1. Be aware of how stress manifests in our bodies. Often it occurs silently as we go about our lives without recognizing it. To stay on top of it, we need to stop, step back, and reflect. We need to consciously label the feelings of increased tension, worry, and the tendency for our bodies to go into automatic avoidant behaviors such as over-buying and hoarding supplies, drinking or eating too much or withdrawing and isolating even more.

2. Manage our tendency to compulsively be consumed by media intoxication. Constant exposure to media will increase those deep brain stress and arousal systems more than we can possibly realize.

3. Maintain a healthy routine of exercise, proper nutrition, and downtime. In our downtime, consider learning and practicing certain evidence-based stress reduction skills such as mindfulness. Mindfulness is a way of intentionally, nonjudgmentally, calmly observing our internal and external experiences in the present moment without being pulled into them. A good metaphor for mindfulness is that if our stress is like a waterfall, and we stand in the waterfall then we will be pummeled, but if we step back just 1-inch, we can watch the waterfall gently in front of us

4. Above all, maintain social connections! Recognize that when stress dysregulation surpasses coping strategies, we need a higher level of help. If you have persistent insomnia, can't turn your brain off, or start to fall into isolation, withdrawal, negative thoughts about living, or have compulsive behaviors such as drinking or drugs that can't be controlled, get professional help.

In general, the persistence of impairing symptoms for a couple of weeks is an indication that a medication or evidence-based therapy may be required to help us return to ground zero. Or, if you have a predisposing history of a mind-brain-body disorder, then you may be at higher vulnerability.

At MindPath Care Centers, we offer medications that will stabilize the dysregulated autonomic nervous system as well as evidence-based therapies that can increase skills of coping and self-regulation. MindPath also has had a telehealth platform here in the state for several years. This is a professional, well-developed system that offers mindcare from the comfort and safety of your home. Many people are hesitant to engage a mental healthcare specialist because of stigma, which is, unfortunately, alive and well. However, today's neuroscience is quite clear: mind, brain and body are connected, and together they need appropriate self-care and professional care for optimal health. When symptoms become impairing, the mind and brain need attention as much as a physical heart attack.

We are experiencing an extraordinarily stressful time. To stay healthy, we must recognize that we are wired to connect socially. We must continue to stay connected. Look around to see the many creative ways people are engaging each other—through social media, smiling and waving to each other on walks, conversing from porch to porch, or singing from balconies like in Spain and Italy. Through it all, we must remember that social isolation and loneliness increase stress and body inflammation and make us more vulnerable to illness. When we feel stress, we must recognize it and take steps to nurture our psychosocial self. Discuss your feelings with a friend or family member, maintain healthy routines, avoid media intoxication, and stay connected with support networks. Our biology and health depend on it.

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