

CONNECTIONS

MARCH, 2021

VOLUME 7, ISSUE 3

FIRST RESPONDER FOCUS



Addicted to Awake: Sleep Deprivation in the Fire Service

By Jacqueline and Sean Toomey, **Fire Engineering** (Used with the permission of fireengineering.com)

*This is part 2 of 2 of an article that outlines the detriments of not getting enough sleep. Part 1 may be read in the **February 2021** edition of **Connections**.*

While the article focuses on those who work in the Fire Service, the information should be helpful for anyone who has sleep issues.

Cancer, Cardiac Arrest, Suicide

The likelihood of a firefighter getting cancer goes up exponentially when the individual is sleep deprived. According to the *International Journal of Cancer*, sleep deprived women have a 40 percent increased risk of breast cancer, and sleep deprived men have a 50 percent increased risk of prostate and colorectal cancer. This could be because after just one night of sleeping just four or five hours, the body's natural killer cells ("anti-cancer" cells), drop in count by 70 percent. A cancer research center in Seattle, Washington, found that people who slept less than six hours per night before their cancer diagnosis were 1½ times more likely to die from the disease than people who slept 7-8 hours per night. Furthermore, the World Health Organization has officially classified shift work a probable carcinogen.

In forced wakefulness, whether it is staying up to watch a movie or scroll social media, the artificial blue lights, specifically blue spectrum light at night, to which we are exposed disrupt our hormone levels and cause a serious suppression of our sleep hormone: melatonin. However, melatonin is not only a circadian hormone; it has recently been found to play a key role in the body's defense against cancer. Simple mindfulness of nighttime use of fluorescent lights, TV screens, and cell phones can greatly impact our biology. Congruently, darkness and dim or red lighting during evening hours will help boost melatonin production as well as consume melatonin-promoting foods or drinks such as tart cherry juice. This is just one simple way our environment and nutrition can support the body's natural defense system.

Every time we sleep we undergo an emotional reset. Have you ever noticed feeling grumpy the day after no sleep? Tolerance for any disturbance goes down after a long night awake. This is likely because of a lack of rapid eye movement (REM) sleep, the last phase of the 90- to 110-minute sleep cycle through which we should rotate multiple times each night. The REM phase is responsible for processing emotionally heightened events. Because it is the last phase, firefighters are susceptible to never entering that stage of sleep when running calls frequently, such as every 45 to 60 minutes at night. As an individual becomes sleep

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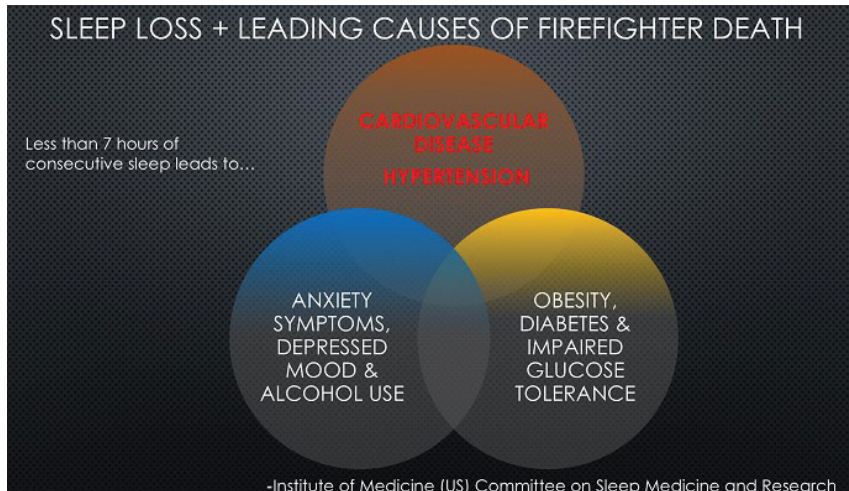
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deprived, the brain's center for rational decision making turns off. When the prefrontal cortex switches off, the emotional centers of the brain become dysregulated and are overtaken by impulsive, irrational behavior. This puts a chronically sleep-deprived individual at a higher risk for suicidal ideation. This is why we should be doing everything we can to improve sleep latency (the time it takes to fall asleep) and enhance sleep efficiency (the quality of sleep we experience).



Research by Michael Perlis, Ph.D., a professor at and director of the Pennsylvania Behavioral Sleep Medicine Program, finds that completed suicides are far more likely to occur at night between the hours of midnight and 4:00 a.m. He states, "Sleep disturbance has consistently been found to be a risk factor for suicidal ideation and behavior," and explains that, "It is likely that being awake at night, when one is biologically prepared to be asleep, may be a risk factor in and of itself. The risk is that at this phase of the 24-hour day we all may be particularly vulnerable to catastrophic thinking and low impulse control."

So, what about cardiac issues relating to sleep? Studies show that if you sleep for less than six hours per night, you'll have a 200 percent increased risk of experiencing a fatal heart attack. The University of Texas's Southwestern Medical Center studied a group of participants with decreased sleep. Researchers concluded that little sleep equates to negative health outcomes such as all-cause mortality, obesity, diabetes, cardiovascular disease, and impaired vigilance and cognition. This coincides with Barger's research which found that the firefighters who screened positive for a sleep disorder were more likely to report having cardiovascular disease, diabetes, depression, and anxiety, and report poorer health status than those who did not screen as positive. Barger identified sleep apnea as the primary sleep disorder from which firefighters suffer. Note that over an eight-year period, men with severe sleep apnea are 58 percent more likely to develop congestive heart failure, linking the connection between poor sleep and heart health.

So, what causes sleep apnea, and how do we prevent it? Although weight issues are often cited as a reason, weight gain is often caused by the chronic state of fight-or-flight, cumulative effects of stress paired with circadian disruption. This heightened state of alarm causes excess production of the hormone cortisol, which leads to visceral abdominal fat, a proven indicator of heart health problems down the road. So, the key question is: how do firefighters lower their cortisol levels?

Your immediate ideas for solutions may be exercise and nutrition, but there is one more vital component to add to our routines. It is absolutely imperative that firefighters commit to proactive practices that engage the parasympathetic nervous system to take our bodies out of the extenuating fight-or-flight state and to counter the effects of adrenaline dumps from running calls through the night. In other words, we need to relax! However, we are not talking about relaxation in the way most people do. Most of us don't even know what true relaxation is because it has been so long since we have experienced it. The relaxation practices we teach are training, similar to the same way you would expect results from a lifting routine at a gym. They take just a few minutes to slow the heart rate and engage a parasympathetic response to relax the body and restore adrenal function; results are consistent with commitment.

Many firefighters with whom we work are in such a chronic state of fight-or-flight that they say after their first Sleep Recovery Practice™ experience that it was the first time they felt relaxed in years. Some revealed they were skeptical at what we had to offer and admit they were surprised by how well it helped them, so much so that they end up sharing it with family members. Practices that relax the body and engage the parasympathetic nervous system are vital for restoring our health and returning circadian rhythms back to a normal pattern. One relaxation technique we teach in the training is a deeply relaxing meditation method that was studied by the United States Department of Defense on veterans who suffer from post-traumatic stress disorder, anxiety, depression, and sleep disorders. It was found so effective that the U.S. Surgeon General endorsed it. We have tailored this specific type of meditation for first responders, and firefighter test groups tailor this transformative program to firefighter culture, not only so that it is well received but so that it is most impactful.

You will die faster from sleep deprivation than starvation. We value eating, so no matter how busy our schedules become, crews make time to sit down and eat. Yet, when our schedules become grueling, the first thing sacrificed is sleeping adequately or enforcing a nap. The glorification of "powering through" on three hours needs to stop! Worse, even when we have downtime, the activities we often choose as a culture compromise our body's natural ability to sleep when it finally comes time.

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Three Steps Toward Sleep Improvement

There seems to be a grave, silent admittance to the onset of these terminal health conditions, treated as some sort of side note after a long career as a pumperman, a truckie, or a technician. However, it does not have to be. There are effective, proven, and easy practices we can incorporate to dramatically change the trajectory of our careers and save lives. Who doesn't want to sleep better, feel better, and have more energy?

Following are three ways to better our sleep habits. Make no mistake, sleep is not to be equated with poor work ethic. If you are in that mindset, you are part of the greater cultural problem: we are addicted to awake. Rest does not challenge work ethic, it optimizes it.

1. Install red lights in every firehouse for evening use to support the circadian rhythm.
2. Departments should ensure a daily rest and recovery time dedicated to unplugging, napping, or doing Sleep Recovery Practices™.
3. Every leader, formal and informal, should shift the dialogue and attitude about rest, promoting sleep hygiene understanding that being rested optimizes performance.

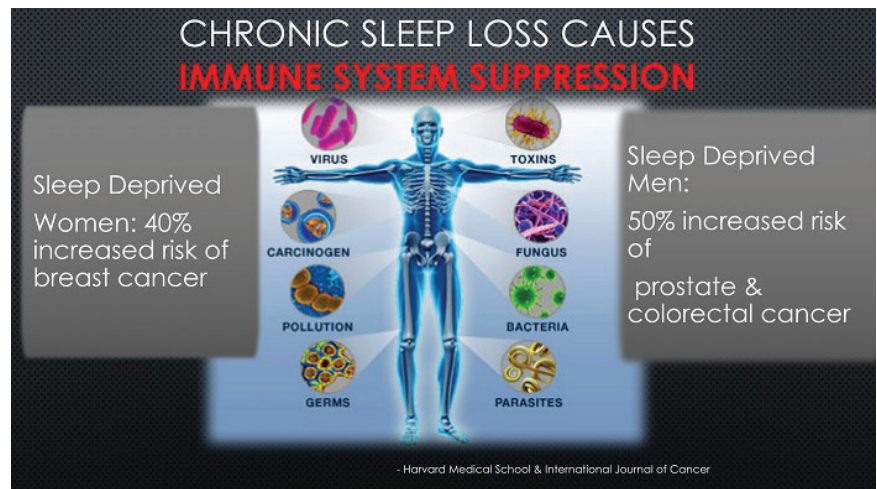
It is time to break our cultural values that glorify this deadly addiction to being awake and begin to value sleep, naps, and healthy practices that support the circadian rhythm. In turn, there will be a substantial decrease in risk for cancer, heart attack, and propensity for psychological problems that lead to suicide. As we make these larger connections on sleep relating to health and we take action together, we must assert what we know to be true: healthy sleep habits do not challenge work ethic, but rather enable and support it, that valuing sleep is not weakness, and sleep deprivation is not strength.

The only way to reinforce the work ethic passed on through generations of the fire service, which is challenged by an ever-increasing call volume, is to optimize performance by implementing structured sleep recovery practices and regimens. These efforts to promote sleep wellness will undoubtedly save lives.

Jacqueline Toomey co-created the First Responder Sleep Recovery Program with her firefighter husband, Sean. She received her BA from Regis University, completed masters-level coursework in education at Metro State University, and trained at the Nutrition Therapy Institute. As a three-time Yoga Alliance certified instructor, Jacqueline also co-teaches sleep deprivation mitigation trainings with Sean.

Sean Toomey is a career firefighter and fire-science instructor. He received two bachelor's degrees from Colorado State University and is employed by the Denver (CO) Fire Department.

The Toomeys teach the First Responder Sleep Recovery Program together at fire departments and conferences nationally.





IT TAKES A VILLAGE

The Silent Pandemic: Depression, Self-Harm, and Suicide

By Azmaira H. Maker, Ph.D., *Psychology Today* (Used with the author's permission)

Teens and kids have had an increase in mental health struggles since COVID-19.

The rapid increase in depression, self-harm, and suicide since COVID-19 in children and adolescents is alarming and requires our immediate attention.

Children have lost their routines, friends, activities, sports, independence, time in nature, travel, and necessary novel stimulation. The losses children are experiencing in this pandemic are significant; for many, these may be the most devastating losses they've ever experienced, and children's resilience has been impacted. Too many children have lost their sparkle and hope, and we see this surfacing in the form of depression and self-harm, even amongst our youngest and healthiest.

Children and adolescents may not be adept at recognizing, expressing, or coping with isolation and with the resulting losses in their lives. As we appropriately and necessarily hold our children in "lockdown," children may experience a deep sense of loss of control, powerlessness, helplessness, and hopelessness, all critical psychological markers for depression, anxiety, self-harm, and suicide.

In my practice, parents are increasingly reporting behaviors that indicate that children and adolescents are suffering deeply. Watch your children for these behaviors:

- Withdrawing to their dark rooms.
- Being sad and tearful.
- Refusing to participate in online school meetings.
- Avoiding and neglecting schoolwork.
- Spending endless hours alone on social media and watching Netflix and YouTube.
- Living "vampire lives"—sleeping all day and staying up all night.
- Being oppositional, irritable, and angry.
- Being "bored," disinterested, and disengaged.
- Refusing to exercise.
- Using vaping and marijuana to numb themselves.
- Cutting and scratching their bodies in self-harm.
- Texting self-loathing or suicidal messages to friends and family.

If your child is exhibiting these behaviors, it is critical to talk to them about how they are feeling and what they need, and you may need to provide them with additional mental health support with a counselor or psychologist.

CONTINUED ON PAGE 5



Tips for Raising Resilient Kids



Tip #2 – Daily Affirmation

Positive affirmations help children gain confidence and help them build inner dialogue. Depending on the age of the child there are different ways to implement daily affirmations from free coloring pages you can print online or even having your child recite a daily affirmation in the mirror each morning (e.g., I am kind, I am brave, etc.). Check out this list of [daily affirmations](#) that you and your child can choose from.

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Although we cannot predict the path of the COVID-19 pandemic, and we are unsure when schools will re-open, we can as parents, educators, and providers, take the initiative to re-empower our children with three vital ingredients: Hope, Creativity, and Fun. This is the moment to think out-of-the-box and re-engage our children in novel and stimulating activities to re-boot their minds and bodies and get their endorphins flowing. Keep in mind, though, that in this process, children must have control and choices; if it is the adult dictating “how to” or “what to,” the positive impact is lost as the activity becomes another burdensome “have to.”

Hope: It is very important for children to have hope; to look forward to something extraordinary, meaningful, and super-exciting. This can be an effective way to help get their minds out of the fog isolation has brought on and into thoughts of the future. Planning future vacations, visits with family and friends, weekend trips, important events (birthdays, anniversaries, future graduations), can create a sense of movement and the realization that one day, the mundane life of daily chores and online school will come to an end.

Creativity: Facilitate creative daily projects that allow children to use their imagination. Arts, crafts, mechanics, woodworking, building computers and cars, gardening, magic kits, water play, costumes, sewing, and culinary arts are all good choices to offer your child. Create long lists of options, and create spaces in your garage, bathrooms, kitchens, and backyards for your children to immerse themselves in creative play. For instance, I had one client whose parents described their daughter as a “ghost of a child”; severely depressed and disengaged, she refused to leave the house for days. The parents thought out-of-the-box and had her collect tadpoles from a nearby lagoon. She built “ponds” for them in the backyard to watch them grow into frogs. The child was overjoyed and spent delightful hours with her “new friends.” Creativity is the source of light and joy and can be incredibly therapeutic for children and adolescents.

Fun: Children need to have fun to stay resilient, active, engaged, and hopeful. From a child’s perspective, daily fun is essential. Craft structured or spontaneous daily fun activities with the family, a few trusted friends, and teachers to re-energize your children with enthusiasm and laughter. Treasure hunts, scavenger hunts, balloon tosses, slip and slides, sprinklers, magic and talent shows, and costume parties are simple but fun ways to breathe life back into kids. For teenagers, support their small social circles, their romantic relationships, safe outdoor sports such as surfing, running, hiking, and camping to gradually re-infuse them with motivation and engagement. If adolescents are connected, motivated, and engaged in fun activities, they are far less likely to use substances or self-harm to escape and cope with their depression and helplessness.

The benefits of containing the pandemic are great—many lives have been saved—but we must also recognize that it has come at a huge cost to our children. With no end in sight and schools indefinitely closed, children are struggling with a silent pandemic of their own, and depression, self-harm, and even suicide rates will continue to rise unless we, as parents, educators, and mental health professionals, recognize and address this silent pandemic. Ensuring that our children’s days are infused with hope, creativity, and fun will go a long way toward ensuring that our children remain healthy and resilient. For those children whose suffering is not relieved by these efforts, connecting them with professional mental health care is imperative.

If your child is struggling with mental health issues, your EAP can help. Call 266-6561 for a referral to a mental health professional who works with kids/teens.



A Simple Way to Feel Good This Year

By Paula Widish, reprinted with permission from **Selene River Press**

There are those who believe that when you focus on something, you bring more of it into your life. For the most part, I believe it too. When I get in a rut with questionable habits, I don't feel at my best until I start making better choices. On the other hand, when I am focusing on the things I desire in my life, it's easier to move through each day with a sunnier disposition, which is where I like to spend the majority of my time.

Taking my one word for 2021 into consideration, I searched for a simple way to feel good this year. When I came across an idea that was an instant YES for me, I knew I wanted to share it with all of you. Not only is it simple, but I happen to think it's quite brilliant.

Grab a vessel of some sort—something beautiful that makes you happy. The vase that held the flowers you were given by a loved one. That cool jar you found at the flea market a couple of years ago. Whatever it is, place it somewhere not quite out of the way, maybe on top of a bookcase or your mantel, where it's just prominent enough that you can admire it every day.

Next, you'll need scraps of paper. If your vessel is clear, you may as well get your scraps from paper that's beautiful or fun. They can be from the stack of brightly colored construction paper your kids haven't used in years or from those odd-shaped swaths of wrapping paper that pile up over the holidays. Make sure your scraps are large enough to write on but small enough to fold up and put in your vessel. (You can store the paper in a drawer or box, but keep it at the ready.) Oh, and don't forget some lovely pens you enjoy writing with. I'm also a believer that not all pens are created equal.

At the end of each week, write down one good thing that happened on your scrap. Fold up that piece of paper and store

it in your beloved container—henceforth known as the Good Feelings Jar. (I also suggest writing down the date or week of the year on your paper. You'll know why in a moment.)

The grand finale happens when you sit down with your Good Feelings Jar on New Year's Eve. As you pull out each little scrap of paper and read it aloud or to yourself, you'll be overwhelmed with good feelings. You won't remember that thing that happened the third week of February, but you'll go right back to the joy you experienced on December 31st. Whoosh, good feelings magnified.

Here's what I predict will happen when you get started with this simple ritual: your family members will start asking questions and eventually want to join in. Suddenly, your one good thing each week will turn into multiple good things. The idea of our Good Feelings Jar filling up that much quicker almost makes me giddy!

Hopefully this goes without saying, but in case you're a rule follower by nature I'll say it anyway—these are loose guidelines. If something exciting happens on a Tuesday but you don't normally put anything in the jar until Saturday, make an exception! Encourage family members to grab a scrap of paper, write their own good thing down, and get it in that jar ASAP. If you're struggling in the middle of June, reach deep into the jar and bring back some good feelings from earlier in the year. It won't make them less impactful when you read them again in December.

Of course, there are lots of ways to feel good, especially if you make it a priority. We've shared lots of them with you over the years here at SRP:

- Concentrate on gratitude. This can be a real life-changer. If the Good Feelings Jar is a bit too public for you, a private gratitude journal is just as beneficial. Even if it feels like you're forcing it at first, accentuating the positive things in your life only changes your world for the better, both psychologically and physiologically. Gratitude helps you feel good more easily and more often.
- Laugh as often as possible. Maria Atwood really nailed it with her post "[Laugh More: A Winning New Year's Resolution](#)." Maria not only shares the health benefits of laughter, but she also offers resources on how to become a funnier person yourself.
- Focus on nutrition. Nutrient dense foods play a bigger role in our outlook on life than most of us realize.
- Reduce stress. We should all know by now that managing our stress levels can make each day more enjoyable.

Let's all resolve to find simple ways to feel good this year. While some moments will seem tougher than others, shining a spotlight on even the smallest win can encourage a shift in the right direction.



What is 'COVID Brain' and What to do About It?

By Philip Chard, **Shepherd Express** (Used with the author's permission)

You don't have to catch the coronavirus to suffer "COVID brain." Many of us staggered over the 2020 finish line with this mental malady clogging up our psyches. So, what is it?

The main features of COVID brain involve impairments to the executive functions of the mind, including emotional self-control, focused attention, working memory, decision-making and problem-solving. Regarding that first element on the list, those with diminished self-control are prone to emotional outbursts, impulsivity, substance abuse, aggression and, in extreme cases, physical violence, particularly of the domestic variety. Unfortunately, this often underlies the irrational behavior of so-called COVIDiots; those who minimize the pandemic threat and act in ways endangering themselves and others. Their angry defiance or "What, me worry?" indifference reflects a messed up executive function in the brain.

What's more, when it comes to focused attention and working memory, which are closely related, this condition results in distractibility, more errors, accidents, lower productivity and forgetfulness. When these three functions (self-control, attention, memory) go awry, then decision-making and problem-solving suffer. We make poorer choices and struggle to handle difficulties that, previously, proved more manageable.

Chronic Stress

At first glance, the pandemic may seem the clear cause for COVID brain. However, the real culprit is actually the stress it engenders, and lord knows we've had plenty of that. Until recently, psychologists believed mild to moderate stress actually improved the executive functions of the brain, enhanced emotional resilience and kept the mind on its toes. Not. New research suggests that, except in a small subset of the population, even mild stress undermines the brain's higher order capacities. What's more, when that stress persists over a long period of time and gradually intensifies, as it did throughout most of 2020, this impairment becomes chronic and worsens cumulatively.

This unfolding dynamic explains, in no small part, the wave of psychological, emotional and social suffering that is following closely behind the surges and crests of the pandemic itself. When the brain's executive functions become clunky, all manner of unpleasant consequences may ensue. Family conflicts, too much booze, depression, domestic violence, anxiety, withdrawal, agitation . . . the list is long. Basically, this condition clouds the mind, dulls the senses and simply feels crappy. With so many folks afflicted with COVID brain and its consequences, mental health providers are swamped. Given that demand exceeds supply, what can we do to reduce the underlying, persistent stress saturating our brains?

The science here is clear. Most of us can dial down stress and COVID brain by adopting a few simple behaviors. Even among those highly stressed, such as families stricken by COVID and frontline workers, these approaches offer a modicum of relief. With those less directly affected, they can be a game changer. Consider doing the following:

- Check your breathing often. When stressed, we "stutter breathe," meaning our inhalations are shallow and our chests constricted. A minute of deep breathing lowers cortisol (a stress hormone), relaxes tight muscles and oxygenates the brain.
- Engage in short bursts of exercise several times a day; push-ups, crunches, sprinting in place, jumping jacks and such. Stress inhabits our physiology, and these micro-exercises release it.
- Grow a grateful mindset. Keeping a gratitude journal where we inscribe our blessings, large and small, is scientifically proven to lower stress. The good news is that, to obtain this benefit, we only need to write in the journal every few days.
- Hang with chill animals and spend time each day in natural settings rather than glued to the news. Right now, the human world is crazy-making. Zen-like pets and nature offer interludes of sanity. Can't go out? Even nature photos, videos and sounds reduce stress.

For most of us, the first place to look for someone with COVID brain is in the mirror. After that, we'll find plenty of others similarly handicapped in our midst. Treat it for what it is—an illness of mind and body. Do what you can to keep it at bay.

For more, visit philipchard.com.

UW Health shares tips for managing psychological impact of COVID-19



Caring for Our Loved Ones as They Age

Caregivers are the cornerstone of our society. According to a recent study, more than 1 in 5 U.S. adults are providing unpaid care for an aging loved one.

For many caregivers, this gesture of love is also a physical, emotional and financial strain. If you are a caregiver or may become one, here are a few important tips to help you navigate this journey.

Communicate before there's an emergency. Start early by having ongoing discussions with your loved one, where both parties are open and honest about their preferences.

Know when to intervene. For most people, aging is a gradual process, and common warning signs can get overlooked. If your loved one is showing any of the following symptoms, it may be time to intervene:

- No longer able to maintain their home, personal appearance or hygiene
- New dents or scratches on their car
- Signs of forgetfulness, such as unpaid bills or missed appointments
- No longer socializing or participating in activities

Prepare for what's ahead. Eventually, most caregivers will need additional support. Start investigating other options, such as bringing in outside help or having your loved one move into a long-term care facility. As you consider these choices, keep in mind the risks and precautions surrounding COVID-19.



NEED HELP?

Your EAP can provide additional guidance and resources.

2021 WEBINAR
SERIES

MARCH 17, 11:00am CT

Senior Housing Options in the Age of COVID

REGISTER

This webinar will provide a broad overview of options. We'll discuss the pros and cons of long-term care facilities, and the difference between assisted living and nursing homes. We'll also look at "aging in place" and hiring private care, and issues related to social isolation and protection from COVID-19.

Presented by **Lucille H. Deutsch, CALA, CMC**
Founder and President
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FEI Work-Life Services Now Available

Announcing expanded EAP services through the City of Madison's external EAP provider!

Call 1-800-236-7905 and identify yourself as a City of Madison employee to arrange consultation on financial, legal, and dependent care issues. Callers with legal or financial concerns have access to one telephone consultation and/or in-person 30 minute consultation per legal matter with no limit on the number of different legal matters; and one consultation per financial matter with no limit on the number of financial issues.

Work-Life Services provide unlimited telephone consultation and referral for dependent care issues, including child care/parenting, adoption, educational resources, dependent adult and elder care.

For counseling services, City employees and their family members may continue to access their benefit by calling the internal EAP at 266-6561 or may call FEI directly for a referral at 1-800-236-7905. Four counseling sessions will be covered for each incident for each eligible individual.

For more information, visit www.feieap.com and type user name *Madison*.

The graphic features the FEI Workforce Resilience logo on the left. To the right, a blue banner reads "Expanded EAP Services". Below this, four colored buttons list services: Counseling (green), Financial Services (blue), Legal Consultation (light blue), and Work-Life Benefit (grey). On the right side of the graphic is a photograph of a smiling woman wearing a headset, representing a customer service representative.

*Thanks for reading,
we hope you found the information useful!*

**You can reach any of us by calling the
EAP Office at (608) 266-6561**

**External Available 24/7:
FEI Workforce Resilience (800) 236-7905**

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