

# BUILDING EMOTIONAL FITNESS

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fully engaged in daily activities.  
This includes the ability to reach peak  
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and emotionally available  
with family and friends,  
and to shed stress in order  
to sleep well.

BY PAUL J. ZAK, PHD

## Fit for duty

In the last two decades, “fit” has expanded from physical fitness to emotional fitness.<sup>1</sup> While this change recognizes the importance of emotional health, to date, most police agencies have taken a reactive approach. That is, a psychologist evaluates officers and may only see them again after a shooting or egregious injury to themselves or others. This is akin to patching the holes in a sinking boat rather than reinforcing the hull so that leaks are less likely to occur.

The data show that there are copious leaking holes in the police boat. For example, symptoms of post-traumatic stress disorder (PTSD) and depression increase with years on the job.<sup>2</sup> One study reported that every day 26.5% of police officers feel hopeless about their jobs.<sup>3</sup> The 2024 PoliceOne survey of 2,833 sworn officers reported that 39% would be diagnosed with clinical depression, 36% had an anxiety disorder, 35% had symptoms of PTSD and 11% had suicidal thoughts.<sup>4</sup> These symptoms also occur, though with lower frequency, in nonsworn police staff. Mental health struggles also degrade physical health. Members of police

departments have substantially higher rates of obesity and metabolic syndrome, further diminishing officers’ abilities to perform their jobs.<sup>5</sup>

## Science

My laboratory at Claremont Graduate University has been investigating the brain basis for cooperation, effective teamwork and emotional fitness for two decades. As behavioral neuroscientists, we identify the brain mechanisms that promote and inhibit these behaviors. We generally are uninterested in feelings, intentions and other self-reported states primarily because they do not predict individual behaviors or organizational outcomes. The unconscious neurophysiologic responses that we have discovered with funding from the U.S. Department of Defense, the U.S. intelligence community and the National Institutes of Health very accurately and consistently predict behaviors by individuals and groups.<sup>6</sup> Our recent focus is identifying brain responses that result in people performing their best at work, as well as being a fully engaged spouse, parent, friend and citizen.



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This research revealed how the brain values social-emotional experiences. People will do what is valued neurologically, closing the loop from experiences to brain to behavior. I named the brain's valuation network "Immersion," as people get lost in, and deeply enjoy, peak Immersion experiences. Immersion, with a capital "I," is a one-second frequency neuroelectrical data stream that can be captured using expensive laboratory equipment.

In 2017, I founded Immersion Neuroscience to deploy technology to measure Immersion from the smartwatches and fitness wearables that 60% of the U.S. population wear every day. Using a mobile app developed by the company, anyone can measure how much the brain values experiences any place people are working or recreating. Immersion is anchored to neural firing rates which cannot be consciously controlled and, after removing baseline brain activity, are comparable across individuals.

Immersion predicts behaviors with very high accuracy. For example, Immersion predicts who donates to charity with 85% accuracy,<sup>7</sup> hit songs three months in advance with

97% accuracy,<sup>8</sup> and an individual's mood and energy levels with 98% accuracy.<sup>9</sup> This research<sup>10</sup> also revealed how many peak Immersion moments one needs to maintain a positive mood (four) and the number needed to build emotional fitness (six). Emotional fitness increases by inducing neuroplasticity such that the ability to be present and emotionally open improves.

Based on these findings, we created a free app called SIX that continuously and passively quantifies the number of peak Immersion experiences one gets every day. It also links to users' calendars to identify the activities that generate peak Immersion moments so users can choose to spend more time having these neurologically valuable experiences. An AI model uses plain language to guide users to reach six or more peak Immersion moments as they "level up" by building emotional fitness. Importantly, emotionally fit individuals are resilient against the inevitable setbacks that life throws at us. The data are secure and completely private for individual users.

## Emotionally fit individuals are resilient against the inevitable setbacks that life throws at us.

### Definition and role of culture

For clarity, let's define terms and then talk about how to improve performance. Emotional fitness is the ability to expend the metabolic energy to be fully engaged in daily activities. This includes the ability to reach peak performance at work, to be present and emotionally available with family and friends, and to shed stress in order to sleep well. The Immersion brain network that values social-emotional experiences is primarily driven by the actions of the neurochemicals dopamine and oxytocin.

Emotionally fit individuals also maintain their physical fitness, show greater commitment to their jobs and are prepared to deal with unexpected contingencies.<sup>11</sup> For example, 300 police officers in Hong Kong who participated in an emotional fitness workshop had statistically higher professional pride and organizational commitment one year later, and more of both of these than nonparticipants.<sup>12</sup> Physical fitness is built by maintaining a consistent exercise routine that is measurable by one's body mass index, cardiovascular capacity, and musculature. In a similar way, emotional fitness is measurable and specific actions can be taken to sustain emotional health. These actions include techniques like meditation to shed the stress of work, making time to socialize, getting enough restorative sleep, cultivating close relationships with family, friends and colleagues, as well as developing the emotional regulation to forgive others and avoid angry outbursts. Emotional fitness is contagious. Spending time around those who are neurotic, anxious or angry diminishes emotional fitness whereas being with people who are happy, relaxed and motivated improves emotional fitness.

The SIX app gives individuals the power to manage their own emotional fitness by measuring the neural value of each individual's experiences. Peer-reviewed research shows that three consecutive days of significant Immersion troughs result in pre-depressive symptoms, that is, low mood and low energy.<sup>13</sup> In order to counteract such troughs, the SIX app prompts users to take actions to improve their emotional health, from checking in with a friend or colleague to speaking to a therapist or getting more rest. By linking to users' calendars and cataloging the experiences generating the most value for a user, SIX can facilitate discussions with supervisors about obtaining additional training to extend one's work in a valued area. It is human nature: We put in more effort and gain more satisfaction when we do highly valued tasks. Alternatively, officers who seldom have any peak Immersion moments at work should also share this information with their supervisors. They are either un-

der-engaged and are ready for a new challenge or over-worked and unable to perform well.

We do not work alone, and workplace culture directly impacts emotional fitness. Police departments and other organizations can measure if their cultures are promoting or inhibiting performance and well-being by aggregating anonymous data from SIX users. If aggregated data show that police officers are consistently getting at least four peak Immersion experiences per day, job satisfaction will be high and job turnover low. While few people will have six peak Immersion experiences every day, consistency is the key. If staff seldom have peak Immersion experiences, culture and/or leadership interventions can be objectively assessed by determining if aggregate emotional fitness has increased. The return on investments in culture and leadership can, in this way, be rapidly assessed without waiting to see if sick days, infractions or quits have changed months or years later.

### Stress

We have to take a short detour to talk about stress. Stress, or more precisely, physiologic arousal, is not bad. Arousal is the body's metabolic investment and is necessary to reach peak performance. This is the basis for violence of action, but also skydiving, falling in love and hiking up a steep hill. Moderate physiologic arousal improves cognition, learning, athletic performance and critical thinking.<sup>14</sup> We also know that too much arousal inhibits performance, but this can often be managed with techniques like tactical breathing, meditation and cold immersion.<sup>15, 16, 17</sup> Acclimation to high arousal situations is the reason for extensive training — repeated exposure down-regulates arousal responses. A classic study of Norwegian paratrooper trainees found high and sustained arousal hours prior to their first static line exit from an airplane. Moreover, their arousal persisted for hours after they safely reached the ground. After several exits, their arousal was limited to the hour before an exit and an hour afterward. Two weeks into training, arousal was low prior to boarding the airplane and had returned to baseline by the time they reached the ground.<sup>18</sup> The brain adapts.

High levels of physiologic arousal inhibit Immersion by burning neural bandwidth on survival responses. My group developed a real-time neurophysiologic measure called "Safety" that quantifies arousal every second to help users manage stress. To be clear, chronic stress is bad; stress that lasts for two weeks or longer and inhibits activities of daily living, such as restful sleep and appropriate social interactions, is a leak in the boat and should be addressed. But, for most people, physiologic arousal is episodic and resolves on its own. The prerequisite to reaching peak performance is ensuring enough Safety so that officers have sufficient neural bandwidth to perform well.

At the other end of the spectrum, a consistent lack of arousal is also unhealthy: it indicates a failure to thrive



(think of your nephew who sits at home all day playing video games). These individuals are disengaged because they have nothing that “turns them on” and gets them excited enough to jump out of bed and hit the day hard. The key to optimizing performance and health is training oneself to have appropriate arousal responses when needed but also to develop strategies to shed stress when an arousing event concludes. But, stress reduction approaches that work for one individual may not work for someone else. Only by measuring both thriving (the value obtained during key moments) and Safety (low physiologic arousal outside of key moments) can individuals sustain and build emotional fitness.

At the department level, Safety can be increased when supervisors regularly check in with teams and individuals and listen to what they say, when accomplishments are regularly recognized, when mentoring programs are instituted and when interpersonal trust is high.<sup>19</sup> My own research in police departments has shown that culture inventions that raise interpersonal trust directly increase job satisfaction, retention and enjoyment at work, reduce chronic stress, and are associated with a greater sense of purpose among sworn and administrative staff.<sup>20</sup> This research shows there is a direct payoff to measuring and improving police department cultures.

### Five pillars of thriving

Research in positive psychology and behavioral neuroscience has shown that people can live longer, healthier and happier lives when they make five key factors priorities.<sup>21</sup> They are:

1. Eating a healthy diet primarily focused on plant-based foods
2. Get sufficient restful sleep, generally seven to eight hours a night
3. Engaging in regular moderate exercise of at least 20 minutes a day
4. Sustaining a rich social network
5. Having a sense of purpose and acting on it

The first three items — diet, sleep and exercise — are well-known and many mobile apps can track these, making managing them easier. Recent research from Oxford University has shown that about one-half of people’s happiness is due to the quality of social relationships.<sup>22</sup> The SIX app objectively quantifies the value the brain gets from social interactions and gives users goals to ensure they get enough social-emotional experiences to thrive. In addition, knowing

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and acting on one's purpose nearly always involves engaging with others. Thus, the SIX app shows the neural value of purpose-driven activities. These might be coaching a sports team, rock climbing or preparing gourmet meals; nearly all involve sharing one's gifts and passions with others. Emotional fitness is an important component necessarily to live a long, healthy and happy life.

### Key points

Police departments should not depend on employee surveys when seeking to improve performance. While surveys can cause respondents to reflect on feelings and moods which may be useful, they are retrospective and cause "survey fatigue" if done frequently. Analytically, surveys are one's conscious appraisal of feelings that may or may not reflect objective unconscious emotional responses.<sup>23</sup> In addition, people seldom take surveys seriously. For this reason, surveys provide little actionable insights to improve department culture or emotional health.

Conversely, measuring emotional fitness neurologically — for example, using the SIX app or other technologies — empowers individuals by providing continuous measurement and suggestions for improvement. Emotionally fit individuals are less likely to suffer from mental health disorders and are more likely to thrive by following the five pillars of happiness. This is increasingly important as the number of candidates to enter policing has slowed while retirements have accelerated.<sup>24</sup>

The solution is not to wish that policing was less stressful. Rather, police leaders need to commit to providing officers and nonsworn staff the tools to effectively manage their emotional fitness so they can perform at peak levels. This will increase officers' support for each other, increase commitment to the profession and enable rapid stress reduction after work. Emotionally fit individuals have a protective hull around their personal boats but are not emotionally cut off. Their hull is flexible and is able to adapt to any situation.



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### Endnotes

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### About the author

Dr. Paul J. Zak is a professor at Claremont Graduate University and is ranked in the top 0.3% of most-cited scientists, with over 200 published papers and more than 22,000 citations to his research. His two decades of research have taken him from the Pentagon to Fortune 50 boardrooms to the rain forest of Papua New Guinea. Along the way, he helped start a number of interdisciplinary fields, including neuroeconomics, neuromanagement and neuromarketing.

Zak has written three general audience books and is a regular TED speaker. His newest book is "Immersion: The Science of the Extraordinary and Source of Happiness." He is also a four-time tech entrepreneur; his current company, Immersion Neuroscience, is a software platform that allows anyone to measure what the brain loves in real time to improve outcomes in entertainment, education and training, live events, and to help people sustain emotional wellness.