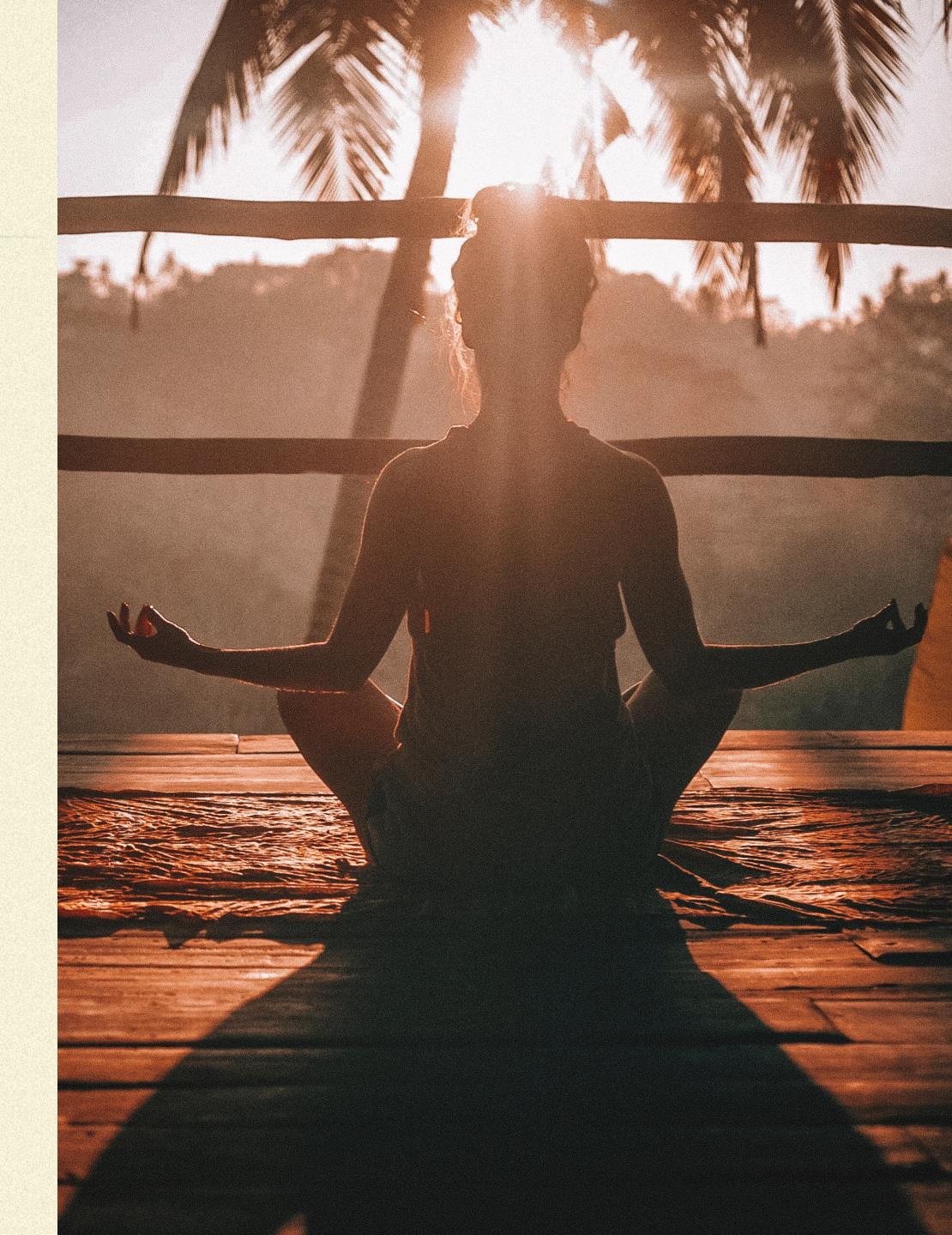
Mindful Healing

# Health and Mindfulness



There are many physiological, biological, and psychological impacts of mindfulness.

Thoughts and emotions have immediate and important effects on our physiology and health. Below is a compilation of the current body of literature supporting the undeniably positive impact of mindfulness practice on health and healing.

# Neuroplasticity

The brain is an organ of ongoing experience. It continues to change and reshape itself across our entire life span in response to experience. Mindfulness techniques have been proven to promote positive change in the brain pathways involved in stress, focus and attention, cognition, memory, and mood<sup>1/2/3</sup>. Some research has found that a consistent practice of mindfulness over a period of time can physically change brain structures long term, including age-related brain degeneration<sup>4</sup>. Mindfulness has also been shown to alter neuronal response to pain and fear<sup>5/6</sup>.

## Immune Functioning

There are important connections between the brain and the immune system. A plethora of studies show that our thoughts, emotions, and stressful life experiences can influence the activity of our immune system, affecting our susceptibility or resistance to disease and infection<sup>7</sup>. An increase in stress has been connected to a decrease in immune functioning as well as a decrease in natural resistance to cancers and tumor growth<sup>8</sup>. A mindfulness practice can lead to a decrease in physical and psychological stress. It has been shown to positively influence healing processes, lower blood pressure, and enhance immune functioning<sup>970</sup>.

## Longevity

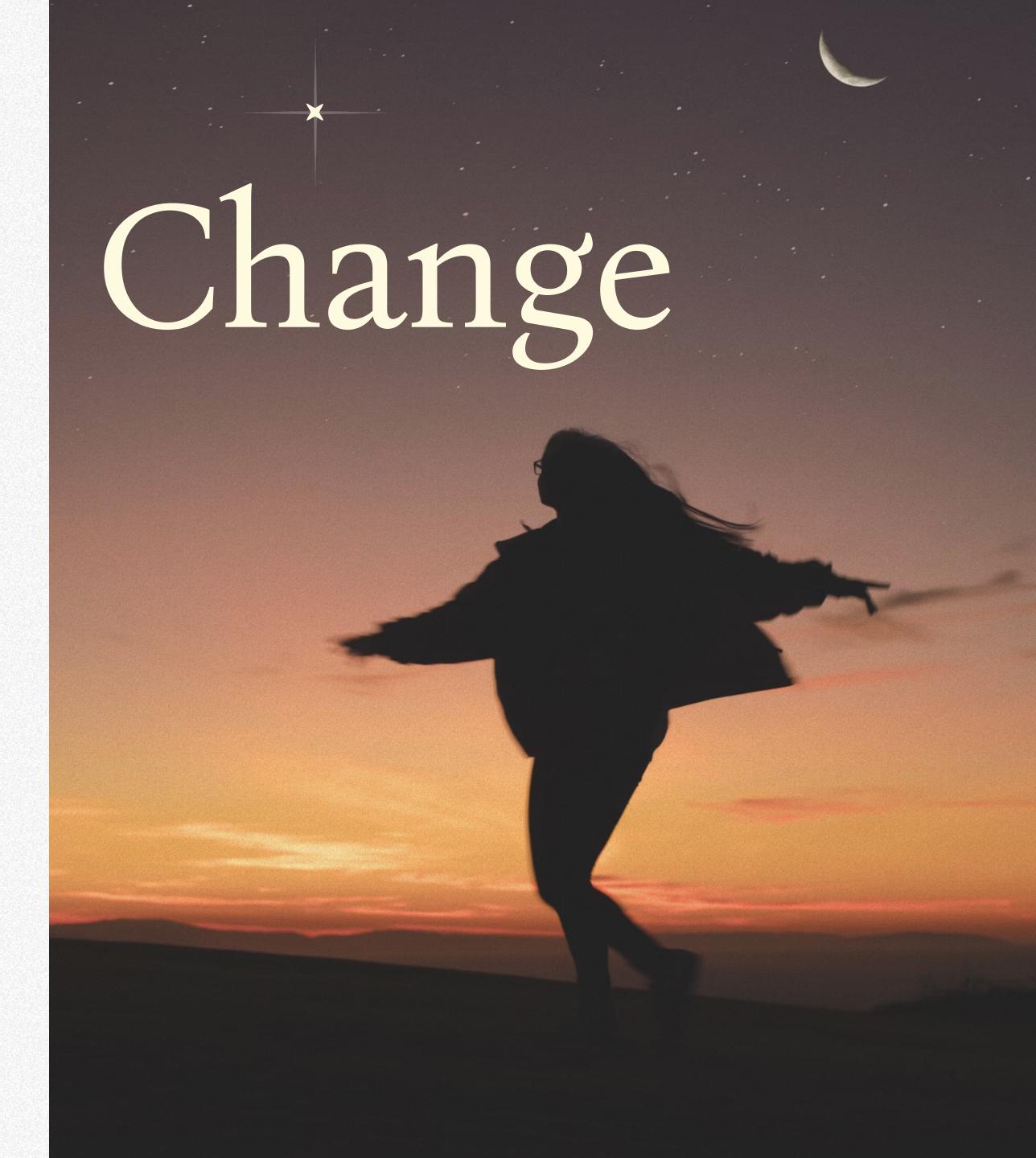
Telomeres, the sequences at the tips of all our chromosomes that are essential for cell division, shorten more rapidly under conditions of chronic stress. It has also been shown that how we perceive that stress makes all the difference in how quickly our telomeres degrade and shorten – which determine how healthy we are and even in how long we might live". In other words, it has been shown that our thoughts and emotions, especially highly stressful ones, appear to increase the rate at which we age. With the use of mindfulness, we don't have to make the sources of stress go away – we can change our attitude and relationship to our circumstances, in ways that can make a difference in our health and well-being, and possibly to our longevity<sup>12</sup>.

#### Epigenetics (GeneExpression)

Epigenetics is a field of study that explores in detail how our experience, our behaviors, our lifestyle choices, and even our attitudes can potentially influence which genes in our chromosomes are turned on and which are turned off. We are not entirely prisoners of our genetic inheritance in the way we classically thought we were. We can work with our genetic inheritance in ways that can modulate its expression and potentially influence our susceptibility to particular diseases. Mindfulness has great potential for curbing stress-induced epigenetic modifications as well as support for environmental and behavioral changes<sup>13</sup>.

#### Behavioral Change

Initiating and maintaining behavior change is key to the prevention and treatment of most preventable chronic medical and psychiatric illnesses. The cultivation of mindfulness often results in transformative health behavior change<sup>14</sup>.



# Emotional Intelligence

It has been shown that the electrical activity in areas of the brain associated with emotional expression shift in mindfulness meditators<sup>15</sup>. The brain activity has been shown to shift in a direction that suggests meditators handle emotions such as anxiety and frustration more effectively.

#### Pain

Research on the use of mindfulness in the presence of a pain condition suggests that we can ease pain by the way we pay attention to it<sup>16</sup>. Researchers have found that the brains of meditators respond differently to pain, and mindfulness is often recommended as an effective treatment for pain.



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