



## Dance For your DOSE of Happiness and Health

Across studies, research suggests that the special combination of hearing reasonably loud, well-liked music, coordinating our bodies to move with the rhythm of the music, and synchronizing our music-infused movements with other people in close proximity—otherwise known as a dance party—uniquely benefits health and happiness. Dancing together immerses us in the present moment, and activates brain pathways that produce and release feel-good, trust-boosting substances. In particular, the role that four neurochemicals Dopamine, Oxytocin, Serotonin, and Endorphins play in dancing together tells the story of why a regular dose of dancing not only feels good to you, but is good for you. Radha Agrawal, Co-Founder, CEO, & Chief Community Architect of Daybreaker, the global dance movement, coined the shorthand DOSE to highlight these four substances and the positive benefits she identified through her extensive research on the science of dance and community for her book, BELONG.

**Dopamine** is the key neurotransmitter for the brain's reward pathway—it gets released when we anticipate, enjoy, or remember pleasurable moments. Purposefully reflecting on the good things that we are grateful for day-to-day also activates the dopamine system. In addition, dopamine incites motivation to explore the unexpected, seek novelty, and innovate. And, it turns out that listening to syncopated, rhythmic music that we like increases dopamine levels. In general, people who routinely activate the dopamine system through real life experiences experience more joy and have a more positive outlook —both core facets of happiness that can be enhanced by dancing. Dopamine also figures importantly in spontaneous and purposeful bodily movements. In fact, several studies have shown that dancing restores motor functioning in patients with movement disorders. The music, movement, and ingenuity of coordinating them together taps dopamine systems in ways that spill into overall happiness.

At the 2017 American Dance Therapy Association conference, professor Sue Carter described how the neuropeptide **oxytocin** underlies benefits of dancing together—by linking affection to perceptions of similarity—even in shared movement. In other words, moving together makes people like one another more. Typically known for its role in reproductive and childrearing processes, a rich body of science now associates oxytocin with fueling interpersonal trust and driving social approach and affiliation. When people share friendly eye contact, genial touch, or mirror each other's movements, everyone's brain releases oxytocin. This dims anxiety and pain and highlights the promise of human connection; people feel more generous, cooperative, and willing to support one another under the influence of oxytocin.

A third neurotransmitter, **serotonin**, which is typically credited with enabling emotional contentment and ease and is concentrated all over the brain, has also been tied to dancing. Specifically, the enduring physical exercise of dancing itself, as any other exercise routine might, increases levels of circulating serotonin. Healthy serotonin levels guard against anxiety and

depression, improve the quality of sleep, and even slow brain aging. As a physical exercise alone, dancing helps maintain serotonin levels that support mental habits of calm, presence, or mindfulness, and leaves us less distracted by mundane worries and hassles.

Finally, dancing activates the **endorphin** system, known for inhibiting feelings of fatigue or discomfort during physical exertion or pain. Like dopamine, endorphins signal pleasure, mainly by getting unpleasantness out of the way and allowing for a positive outlook. Endorphins steer biological reserves away from vigilant, self-defensive responses and free up energy to focus on dancing and connecting amicably with other people.

And interestingly, none of these chemicals work in isolation. They all influence one another in a complex, reciprocal feedback fashion, e.g., dopamine can “upregulate” serotonin, and the combination of simultaneous oxytocin and endorphins is a recipe for love. Together, science suggests, the combination of enjoyable music, coordinated exercise, and affable social interaction that comes with dancing together gives you a DOSE that promotes sustained health and happiness.

## References

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