

LETTERS

What about bioavailability of oral curcumin?

There seems to be a fundamental error in the research by Garg and colleagues.¹

Both turmeric and curcumin have extremely poor oral bioavailability.² Extensive research has been published on the oral availability of curcumin. There have been efforts to develop self-nanoemulsifying drug delivery systems and to combine the molecule with lipid carriers to improve bioavailability of curcumin.³

On a cultural level, Ayurvedic practitioners and Indian households have historically used turmeric (curcumin) in combination with fat (i.e., coconut oil — homestyle lipid complexes!), and black pepper (which vasodilates the gastric mucosa, enhancing absorption) with ginger, cinnamon and cardamom (similar effects). A quick check on the ingredients in Blume turmeric lattes as well as the “immune enhancer” tea at my local Iranian pharmacy reveals all these ingredients to be present in combination. There may be cultural wisdoms pertaining to these combinations that the authors did not investigate.

One expects rigorous scientific methods to be applied to a study of this size. In reviewing the methods, I found no mention or discussion of oral bioavailability, yet the curcumin “drug” was administered orally. To illustrate, one would not expect orally administered neomycin to treat any condition systemically as it is not orally absorbed. Much time, energy and funding were spent on this study. How could such a basic background question not be addressed? Would not one do a literature search to learn all one could? Would not one be curious as to the

topic of oral bioavailability since the study participants were taking curcumin orally?

Root causes for this apparent oversight may include unfamiliarity with the entity curcumin and a bias against “natural health products.” Another problem may be the inherent structural application of a single variable (curcumin) as opposed to a multivariable study (i.e., turmeric with all its friends). If curcumin were a drug, its pharmacology would have been addressed.

The harm this type of neglect does is much clearer in the linked editorial.⁴ I see it as subtly shaming a basic cultural practice that uses turmeric (along with its complementary fats and spices) daily as well as the earnest reaching for health of many of our patients and communities who are exposed to these cultural practices in their yoga studios, with friends and cross-cultural pollination, trips to India and so on.

Could anyone reading the editorial now order their turmeric latte (in which the active ingredients are undoubtedly better absorbed and active) without feeling a bit ridiculous or subtly shamed? Could any researcher now seriously ask for funding for studies regarding the potential of turmeric to help prevent Alzheimer disease, which we are increasingly learning has roots in inflammation?

We owe it to our profession and community to practice rigorous scientific methods and to respect our subject, or we risk losing respect and alienating people. We also lose out on opening valuable new doors (e.g., prevention of familial colon cancer and mitigating the tolerance to morphine in patients with burns) and

potential treatments for “fatty liver.” Let us work to mitigate unconscious bias in our work.⁵⁻⁹

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