

Conclusions and Recommendations

In this guide

[In this guide](#)

1. [Science and Research Special Topics Report](#)
2. [Novel formulations of supplement compounds designed to increase oral bioavailability](#)
3. [Physical-chemical properties of novel bioavailable supplement formulations](#)
4. [Mechanisms of increased bioavailability](#)
5. [COT's discussion](#)
6. [Conclusions and Recommendations](#)

Conclusions

Within the supplement market, active ingredients continue to be formulated in novel ways that may have important effects on their bioavailability. This may have implications for the toxicological profiles of the supplements in question. Some of the most observed formulations of the market include lipid-based preparations, including liposomes and micelles. However, there are uncertainties regarding the precise physicochemical characterisation of these formulations. Increases in bioavailability have been demonstrated in the scientific literature for a variety of supplements that are of ongoing interest, including curcumin and CBD.

Recommendations

- Novel formulations and their associated active agents should be assessed on a case-by-case basis.
- The model systems used to assess alterations in toxicokinetics should consider species differences with respect to metabolism.
- The effect of the feeding state (fed vs. fasted) is important to consider when looking at changes in bioavailability.

- Dietary ADIs may not be suitable for characterising the risk from supplements formulated in bioavailable ways.

There are various approaches for considering bioavailability differences in relation to HBGVs that should be addressed on a case-by-case basis.