

## Afterbirth: Study asks if we could derive benefits from ingesting placenta

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Almost all non-human mammals eat placenta for good reasons -- are we missing something?

A paper by neuroscientists at the University at Buffalo and Buffalo State College suggests that ingestion of components of afterbirth or placenta -- placentophagia -- may offer benefits to human mothers and perhaps to non-mothers and males.

They say this possibility does not warrant the wholesale ingestion of afterbirth, for some very good reasons, but that it deserves further study.

Mark Kristal, PhD, professor of psychology and neuroscience at UB, directs the graduate program in <u>behavioral neuroscience</u>, and has studied placentophagia for more than 40 years. He is recognized as a principle expert in the field.

Kristal's article "Placentophagia in Human and Nonhuman Mammals: Causes and Consequences," will be published in the March 30 issue of the journal *Ecology of Food and Nutrition*, which will be devoted to the subject of placentophagia.

Kristal's co-authors are Jean M. DiPirro, PhD, associate professor, Department of Psychology, Buffalo State College, and Alexis C. Thompson, PhD, research associate professor, UB Department of Psychology and a research scientist in the UB Research Institute on Addictions.



They point out that the benefits of placenta ingestion (as well as the ingestion of amniotic fluid) by non-human mammalian mothers are significant. It provokes an increase in mother-infant interaction, for instance, and increases the effects of pregnancy-mediated analgesia in the delivering mother. It also potentiates opioid circuits in the maternal brain that facilitate the onset of caretaking behavior, and suppresses postpartum pseudopregnancy, thereby increasing the possibilities for fertilization.

"Human childbirth is fraught with additional problems for which there are no practical nonhuman animal models," says Kristal, citing postpartum depression, failure to bond and maternal hostility toward the infant.

He says ingested afterbirth may contain components that ameliorate these problems, but although there have been many anecdotal claims made for human placentophagia, the issue has not been tested empirically.

"If such studies are undertaken," he says, "the results, if positive, will be medically relevant. If the results are negative, speculations and recommendations will persist, as it is not possible to prove the negative."

Kristal says there is a current fad of ingesting encapsulated placenta, which mirrors unverified reports in the 1960s and 1970s of people in back-to-nature communes cooking and eating human placentas. The upsurge in recent anecdotal reports of the benefits of taking placenta by new mothers, irrespective of dose, method of preparation, or time course, suggests more of a placebo effect than a medicinal effect.

"People will do anything," Kristal says, "but we shouldn't read too much significance into reports of such exceptions, even if they are accurate, because they are neither reliable nor valid studies. My own studies found



no evidence of the routine practice of placentophagia in other cultures, findings supported by a recent extensive study by anthropologists at the University of Nevada, Las Vegas.

"The more challenging anthropological question is," he says, "'Why don't humans engage in placentophagia as a biological imperative as so many other mammals apparently do?' because we clearly do not do this as a matter of course today and apparently never have. Perhaps for humans, there is a greater adaptive advantage to not eating the <u>placenta</u>." The paper discusses some possibilities in this regard.

"Whether or not we learn why humans do not do this, it is important for us to search for the medicinal or behavioral benefits of components of afterbirth for the same reasons that we search for plant-based medicinal substances," Kristal says.

"The outcome of such a quest need not be an exhortation for women to eat afterbirth, but for scientists to isolate and identify the molecule or molecules that produce the beneficial effect and use it to design pharmacological tools," he says.

He adds, "In the case of Placental Opioid-Enhancing Factor or POEF and enhanced opioid-mediated analgesia, for instance, we have determined through earlier studies that not only is the effect nonspecific in regard to species, but it is also nonspecific in regard to sex.

"That means that although males, who in all probability do not make the molecule, have the ability to respond to it," Kristal says.

Kristal conducts research and publishes on opioid and hormonal mechanisms underlying periparturitional phenomena and the psychobiology of motivated behaviors. DiPirro's areas of research include psychostimulant-induced neural adaptations in neuropeptide



neurotransmission in the forebrain and experience-induced adaptations in defensive and affiliative behaviors. Thompson's research includes studies of aspects of maternal behavior and behavioral regulation of pain and analgesia.

**More information:** The paper will be available after March 30 at <a href="http://www.tandfonline.com/toc/gefn20/current">http://www.tandfonline.com/toc/gefn20/current</a>.

## Provided by University at Buffalo

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