

# Understanding Placentophagy: An Informed Response Discussion

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## INTRODUCTION

Placenta encapsulation involves stripping the membranes and umbilical cord from the placenta, dehydration, grinding the placenta and putting the ground dried placenta into capsules for maternal ingestion. Increasingly in midwifery practice, women in care are asking what the recommendations are regarding placenta encapsulation. Placentophagy is the maternal consumption of the placenta by humans. The placenta may be eaten raw, incorporated into other foods, made into tinctures or encapsulated. A 2013 survey of 189 women who had consumed their placentas concluded that women had a positive experience and would repeat the process again.<sup>1</sup> Interest in placentophagy is on the rise. A 2014 internet study demonstrated that 66% of those surveyed had heard about this practice.<sup>2</sup>

## BACKGROUND

Placentophagy discussions are becoming mainstream and may be seen on CNN, Huffington post and a wide range of internet source. These are a part of the context in which the woman as a health care consumer is “socially situated”.<sup>3</sup> Twenty three percent of women discover placentophagy through the media, while for others its through word of mouth or discussions with care providers and doulas.<sup>2,7,8</sup> Websites dedicated

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to the preparation of placentas for consumption and the sale of placenta encapsulation services claim to have a range of health benefits. Promised benefits include reduced fatigue, balanced hormones, decreased post-partum depression, increased milk supply, and decreased post-partum bleeding.<sup>9,10</sup> The advocates use terms such as natural, safe, powerful and blissful to engage women on the topic.<sup>11</sup> One claims to “work with smart, independent women”.<sup>10</sup>

When the sources of information on these sites are reviewed they often refer to other sites, and may contain outdated or inaccurate sources.<sup>9,10,11,12</sup> This practice is on the rise in Western society and in particular among middle class women.<sup>13</sup> If midwives are to respond to their client’s decision to consume their placenta and/or their questions on this topic in an open, informative and respectful manner, they should recognize that they “live their lives in the midst of many relationships: with the fetus, her doctor, midwife, partner, family, friends and society as a whole”.<sup>3</sup> These interconnected relationships within a woman’s life inform the decision making process. Social media, websites, new technologies, and the way women gather and share information needs to be considered in order to provide a truly relational approach to answering this question while respecting client autonomy.<sup>3,4</sup>

The following informed response discussion recognizes that women come to decisions and bring their questions to us in the context of complex social lives and that an informed choice discussion in which a predetermined set of options are discussed, information is disseminated and a decision is made may not be ideal in this case.<sup>3,4</sup> Instead, an informed response recognizes that woman will come to their midwife having done their own research and decided on their plan of action. The response is designed to answer questions with sound information that is relevant, current, research based and demonstrates and understanding of where health care consumers are now gathering information.<sup>3,4</sup>

## REVIEW OF AVAILABLE LITERATURE

A literature search was done between May 2015 and Jan 2017. *PubMed*, *Ovid*, *Science Direct* and scholarly articles were searched using keywords such as placentophagy, placentophagia, maternal, postpartum, placenta and placenta encapsulation.

For the context of this review all articles were considered from 1918 to present. The review of articles follows the flow a midwifery consumer might follow from her internet search of internet sites on this topic to the literature they are citing. Scholarly peer reviewed articles were then reviewed to research risks and benefits of placentophagy.

As a starting point for the informed response, internet sources were considered. Multiple websites explaining the value of placenta encapsulation, “how-to” sites for encapsulating the placenta and offers of placenta encapsulation services were easily found. A quick scan of the reference lists demonstrated that they were often short or absent. However, most reveal one article in common. This article is entitled “Placenta as a Lactagogen”.<sup>14</sup>

There are several serious flaws with this study. It involved only 21 women and was conducted in 1954. It is based on the premise that ‘if all animals consume their placentas, shouldn’t we as well?’. To its credit, this investigation used an experimental design but one with questionable ethics in that women were given ‘lactofer’ powder, dried, ground human placenta, without being told what it was they were actually consuming. The control group were given powdered beef. The two outcomes studied were possible improved lactation and the levels of placental hormones in the urine of women who consumed “lactofer”. The women given the lactofer were chosen based on an assumption that “trouble nursing was anticipated for women with flat or aglandular breasts or mutiparae who after previous deliveries had nursed badly or not at all.”<sup>14</sup>

The results, rated as negative, good or very good were given based on a 20g rise in the quantity of milk in the early postpartum period, a time when the milk would normally come in, and on women’s subjective evaluation of the size and tenderness of their breasts. While no placental hormones were found in urine samples of women consuming lactofer, the authors concluded that there was a subjective increase in the milk supply reported by the women who received lactofer as compared to the control group.

This small and very dated study with subjective reporting of results brought up some interesting questions despite its dubious design and ethics. It also highlighted a need for further research to

examine which, if any, hormones may be present and available through placentophagy. A current study which attempted to answer this question was done in 2000. This cross-sectional study looked at 30 heat-dried human placentas and concluded that hormone levels were low when compared to normal daily levels.<sup>15</sup>

The next most frequently cited article found on references lists was “*Human Maternal Placentophagy*.”<sup>16</sup> This 2013 survey from a nutrition journal sought to understand why women were interested in consuming their placentas. The results of this online survey indicated that women interested in this topic were primarily North American with a mean age of 31, living in the U.S and 93% Caucasian. Of these, 90 percent were married with a mean income of 50,000.00 USD per year or more with over 33% being university educated.<sup>16</sup> This survey also revealed that women who chose placentophagy did so “for improved mood [34%], general unspecified benefits [12%], because it was recommended by a placentophagy supporter [10%], to restore hormones or nutrients [8%], to improve lactation [8%], and to aid in recovery from birth [7%]”.<sup>16</sup> Eighty percent of the women in the survey used placenta encapsulation as a means to ingest their placentas. While 75% of women surveyed said this was a positive experience some side effects such as headache and unpleasant belching were noted.<sup>16</sup> This article concludes by stating that more research on this topic is needed before we can fully understand the benefits or potential harm from consuming placental tissue.

Interestingly, this same journal has three additional articles, less often cited, that look more deeply into this issue. A cross cultural survey *In Search of Human Placentophagy: A Cross-Cultural Survey of Human Placenta Consumption, Disposal and Cultural Beliefs*, questioned why so many placental mammals consumed their placentas and why humans generally do not? The over 4000 mammal species that consume their placentas include non-human primates. The results of this survey showed that of 179 societies studied only one mentioned placentophagy.<sup>17</sup> A third study in this journal points out that animals can ameliorate the pain of labor and birth by consuming the amniotic fluid and placental tissues and that it facilitates

bonding to the newborn.<sup>17, 18, 19</sup> Additionally it may serve to avoid of predators, clean the nesting site and relieve generalized hunger.<sup>20</sup> The authors questioned why this widespread animal behavior is so rare among humans. It was theorized that perhaps we don't need to ingest placentas for pain reduction thanks to our own endogenous opioids. Or that our evolved social networks work to ensure that our newborns survive instead of bonding hormones in the consumed placenta.<sup>19</sup> More ominously, it was proposed that there is potential harm for humans from ingesting raw placental tissue thus its elimination via natural selection.<sup>20</sup>

Consideration should be give to the role of the placenta. The placenta is an organ composed of connective tissue, capillaries, placental membranes and the umbilical cord. It contains proteins, hormones and growth factors and its functions are metabolic,

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endocrine, immunologic and for transport.<sup>20, 21</sup> The placenta serves multiple functions one of which is to serve as a filter. “The placenta does not provide complete protection from toxicants, pathogens and other contaminants. Some developmentally harmful substances pass through the placental barrier easily, others are nearly completely filtered out and remain locked in placental tissue”.<sup>20</sup>

There are contemporary studies that examine environmental contaminants found in maternal tissues and the placenta such as lead, cadmium, mercury, chromium, phthalates and bisphenol A. One study found that 46 persistent organic pollutants could be found in up to half of the placentas studied.<sup>22</sup> A comprehensive study done in Canada found that women's exposure to BPA and

phthalates as seen in urine results is higher than what was reported in the literature to date.<sup>23</sup> “Due to in utero or post-birth contamination bacteria or viruses may remain in post-term placental tissue. The potential adverse effects of these components of the placenta on the postpartum consumer and nursing infant are unknown.<sup>24</sup> How many of these toxins, contaminants and potential pathogens are being concentrated in placental tissue is still largely unknown. Discussions of these potential risks also need to consider issues such as “meconium stained placenta, chorioamnionitis, delayed cord clamping and maternal smoking.<sup>13</sup>

A recent research study presented in the January 2017 supplement to the *Journal of Obstetrics and Gynecology* (“Placentophagy: comparison of plausible biologically active compounds”) that might support this practice, analyzed the protein, iron, and cortisol content of processed placentas.<sup>25</sup> Ten placentas from healthy women were subjected to the same treatment they would get for the encapsulation process including refrigeration, freezing, dehydration, grinding and encapsulation. The samples were analyzed using standard assays. They found that cortisol, total protein and iron were present in the samples but at a level that when compared to recommended dosages, was not likely to have clinical benefit. The authors concluded that the iron in the processed placenta, when consumed at 6-12 capsules per day, did not meet the RDA for iron. Limitations of this study are small sample size, and capsule size was not specified.

Another recent research study evaluated hormone concentrations in human placental tissue.<sup>26</sup> Young et al used liquid chromatography and tandem-mass spectrometry to assess the concentration of 17 hormones in processed placental tissue. The placentas of 28 healthy 20- 38 year old women were collected within 4 days of delivery, refrigerated or frozen, rinsed, stripped of placental membranes, dehydrated and ground in a food processor. Results of the analysis showed that 15 of the 17 hormones analyzed were detectable. Researches could not conclude from these results that the level of hormone present could produce a physiologic response in women consuming encapsulated placental tissue.<sup>26</sup> They state they could not rule out whether estradiol, progesterone and allopregalone levels might reach

therapeutically active levels if women consume the 3300 mg/day as some encapsulation guidelines suggest. They point to the need for further research to examine dose related effects. One possible limitation and conflict of interest present in this study was the funding source which is Placenta Benefits LTD, a placentophagy internet based website and encapsulation service.<sup>26</sup>

## FURTHER RESEARCH

Further research is needed on the proposed health benefits as well as the possible risks. Very little research exists on preparation methods such as steaming vs raw consumption, dosage, storage methods, and health concerns related to infection control techniques during preparation. Future research needs to also consider if risks are posed by contributing factors such as meconium staining, chorioamnionitis or medications. For future studies to be useful they will need to be rigorous such as a “double blind RCT with careful monitoring and descriptions of the preparation, method and timing of consumption, and dose administered.<sup>13</sup>

Research is lacking in all areas on this topic. “Research priorities should include studies that investigate mechanisms of action for proposed benefits and potential risks using valid and reliable measure of effect, with sample sizes large enough to detect rare events such as thromboembolism”.<sup>27</sup>

One of the possible benefits that needs further consideration is whether or not the placenta offers a bioavailable source of iron. Multiples articles cite this as a key research question. Might improved iron levels in post-partum women result in increased energy, and decreased post-partum depression when it is understood that non anaemic women with unexplained fatigue could possibly benefit from iron supplementation and “many women enter pregnancy with insufficient iron reserves and lack of access to iron rich food or iron supplementation”?<sup>8,28,29,30</sup>

A recent RCT double blind placebo controlled study published in 2016 addressed this issue. Their conclusion was that the consumption of placenta capsules did not significantly improve post-partum iron status compared to a beef placebo.<sup>8</sup> Dosage of consumption was two 550mg capsules per day, three times per day for days 1 to 4, two 550 mg capsules two times per day for days 5 to 12 and one per day

from day 13 until the study concluded. Important findings from this study include the discovery that bioavailable iron in human processed placenta is not significantly greater than that of the beef capsule and that placenta capsules may provide an inadequate amount of iron for women with iron deficiency.

The authors note that future research needs to consider therapeutic effects based on dosage, and preparation techniques. This study was limited by small sample size, delayed placenta consumption for some participants due to delay in placenta preparation.<sup>8</sup> This most recent research identifies areas of future research including the need to study women with iron deficiency anemia that controls for those taking prescription iron supplements.

When considering risks and benefits and the need for further research, possible late onset Group B Strep infection linked to consuming placenta capsules was brought forward in 2016. This article, "Notes from the Field: Late-Onset Infant group B Strep Infection Associated with Maternal Consumption of Capsules Containing Dehydrated Placenta", and the media attention it received demonstrates the importance of understanding the current research in order to answer questions on this topic.<sup>31</sup>

## **MIDWIFERY PERSPECTIVE**

To best provide clients with information on the risk and benefits of placentophagy, it must be remembered that "absence of evidence does not mean that it is not beneficial and credible theories support placentophagy and womens' knowledge and experiences should not be ignored."<sup>28</sup> It could be considered that requests for information about placenta encapsulation might be a subtext for concerns about post-partum depression or potential breastfeeding challenges. Placenta encapsulation could, in this context, be viewed as a pill or simple solution to a more complex issue. Listening to our clients questions and responding to their decisions about the plan to encapsulate and consume their placenta, with a fully informed response will also provide an opportunity to discuss alternative solutions and options. Our discussions of placentophagy might include an educational component for clients which discusses "criteria to consider when choosing a placenta preparer or

when preparing the placenta themselves."<sup>27</sup> Topics might include safe handling practices, preparation methods and certification of the placenta preparer.

Midwives providing front line maternity care are uniquely situated to better understand this new and growing interest in placentophagy as clinicians, educators and researchers. We can guide women to reliable sources of information. We can understand the basic risks and potential benefits from our own research and literature reviews. We can begin to answer some of these questions through our own research.

## **CONCLUSION**

The rise in interest and increasing practice of consuming encapsulated placenta with reports of positive experiences continues despite a lack of evidence. When clients raise this topic with their midwives it is an opportunity to listen to ensure an informed response crafted to their needs. We may then listen deeper than the surface question, to what it is women are hoping to gain from placenta encapsulation. From there, we can try and understand their concerns and motives. Only then will we best support their needs with a fully informed response.

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# HUMANITIES

## Artist Representations of Breastfeeding

**Elaine Carty, CM**

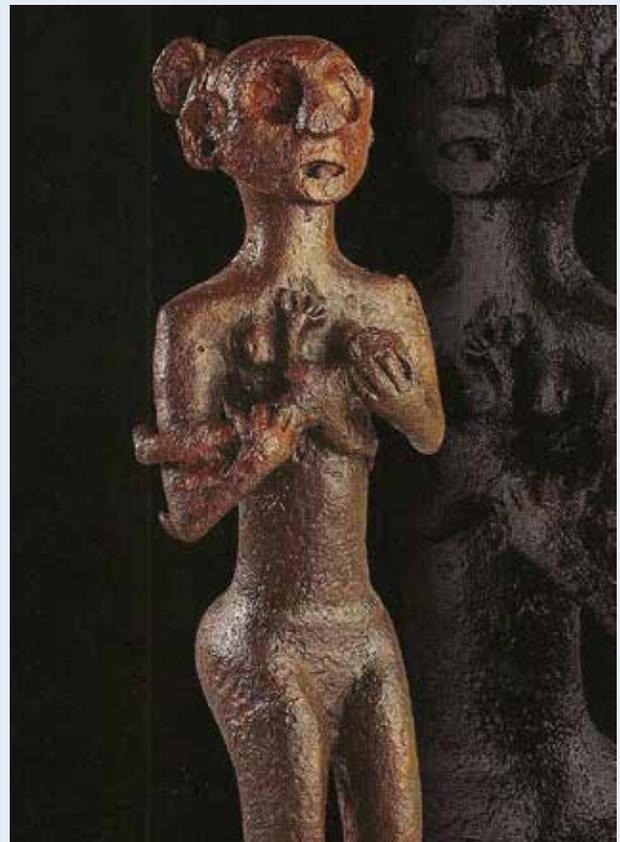
Professor Emerita. University of British Columbia

Marilyn Yalom<sup>1</sup>, the author of an intriguing book titled *A History of the Breast*, asks with serious tongue in cheek, “who owns the breast”? Is it the child whose life is dependent on its mother’s milk?.. the person who fondles it?..the artist who represents it?...the fashion/bra industry of training, athletic, cleavage bra production?...the doctor who mammograms it, the surgeon who enlarges it, the pornographer,,,or the woman for whom breasts are part of her body? These are rhetorical questions obviously, but indicate the complex social and psychological issues that accompany a decision to breastfeed. Representations of babies at the breast of their mothers have existed for hundreds of years. The earliest sculpture I have personally seen was from the early Bronze Age and was located in the Museum of Anatolian Civilizations in Ankara Turkey.

Artists have continued throughout time to illustrate the baby at breast. A look at social media today, in particular Instagram and Pinterest, searching with the hashtag breastfeeding, will reveal thousands of images. The representations in this article span hundreds of years and different cultures.

<sup>1</sup> Yalom, Marilyn. *A History of the Breast*, New York, Alfred Knopf, 1997.

**Figurine of Woman Breastfeeding Baby from a grave in Horoztepe**  
Ankara Turkey, early bronze age  
[2000 – 1500 BCA]  
Museum of Anatolian Civilizations





▲ **The Birth of the Milky Way**  
*Rubens, Peter Paul (Flemish),*  
ca. 1637  
Prado Museum, Spain

Hercules was born from one of Jupiter's affairs with a mortal. Though loved and protected by his father, he was repudiated by the latter's wife, Juno. In order to insure his son's immortality, Jupiter placed him in the goddess's arms so that he could suckle while she was sleeping next to her chariot pulled by peacocks. When, in his enthusiasm, Hercules bites her, Juno awakens and brusquely pulls him away from her. The milk spilling out of her breast turned into the Milky Way.

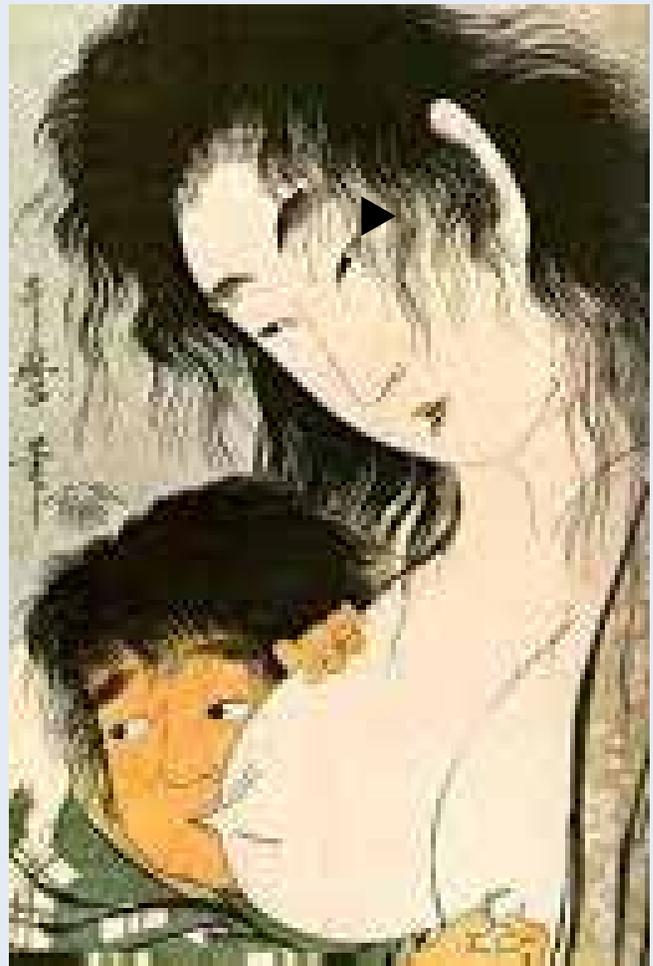
<https://www.museodelprado.es/en/the-collection/art-work/the-birth-of-the-milky-way/c7369ad2-f0ae-4d5d-bb23-21f51bd3283c>

Utagawa Kuniyoshi (1798-1861)  
Woodblock print  
Japan

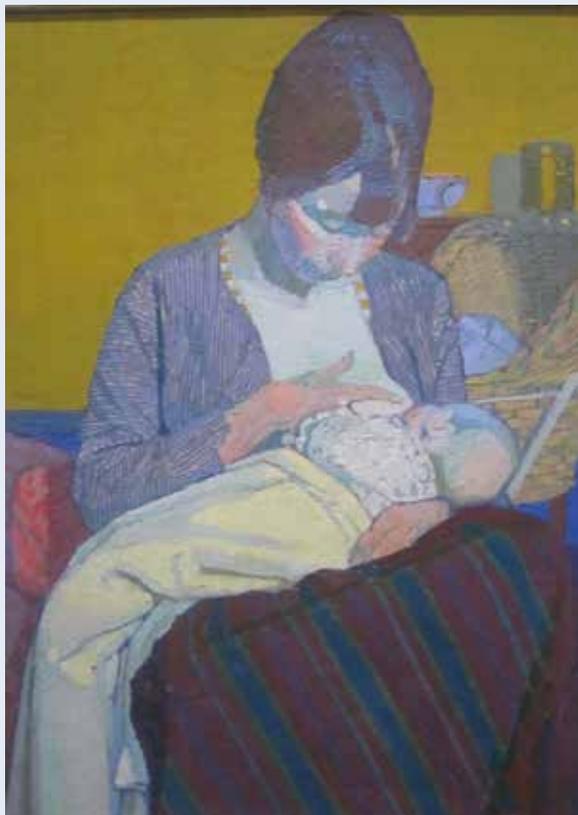


Utagawa Kuniyoshi [1798-1861] was one of the last great masters of the Japanese ukiyo-e style of woodblock prints and painting.

The range of Kuniyoshi's subjects included many genres: landscapes, beautiful women, Kabuki actors, cats, and mythical animals. [Wikipedia]



**Mother and Child**  
Harold Gilman  
1918  
Auckland Art Gallery



Gilman was influenced by the paintings of Gauguin and Van Gogh which he first saw at a post-impressionist exhibition in London in 1912. This is a painting of his wife Sylvia and son John.



**Nursing**

Alex Grey

from the book: Wayman R.

Spence, *The Healing Arts:*

*The Best American Artists*

*Look at Medicine Today*, W.R.S.

Publishing - Texas, USA, 1996

Grey's artwork incorporates the subtle energies of the human spirit by creating images that communicate "soul to soul". His paintings move the mind from detailed rendering of body systems to spiritual/energy systems that define its living force. Nursing shows the bonding of mother and child as a miraculous outpouring of unobstructed love channeled through the mortal coil.

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- may not be the best idea. [Internet]. Huff Post Parents Canada. 2016 [cited 2016Dec15]. Available from: [www.huffingtonpost.ca](http://www.huffingtonpost.ca)
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