

Human placentophagy, or consumption of the placenta, is defined as, "The ingestion of a human placenta postpartum, at any time, by any person, either in raw or altered (e.g., cooked, dried, steeped in liquid) form." Numerous historical occurrences of have been recorded throughout the world, whereas modern occurrences of placentophagy are rare since most contemporary societies do not promote its practice. Since the 1970s, however, consumption of the placenta believing that it has health benefits has been a growing practice among clients of midwives and alternative-health advocates in the U.S. and Mexico.

Placentophagy can be divided into two categories, maternal placentophagy and non-maternal placentophagy.

Maternal placentophagy

Maternal placentophagy is defined as, "a mother's ingestion of her own placenta postpartum, in any form, at any time." Maternal placentophagy most frequently occurs among animals, particularly placental Eutherian (as compared to monotreme and marsupial) mammals. Of the more than 4000 species of Eutherian mammals, there are only a handful that do not regularly engage in maternal placentophagy, including modern humans.

Non-maternal placentophagy

Non-maternal placentophagy is defined as, "the ingestion of the placenta by any person other than the mother, at any time." Such instances of placentophagy have been attributed to the following: a shift toward carnivorousness at parturition, specific hunger, and general hunger. With most Eutherian mammals, the placenta is consumed postpartum by the mother. Historically, humans more commonly consume the placenta of another woman under special circumstances.

Historical occurrences of human placentophagy

Human placenta has been used traditionally in Chinese medicine, though the mother is not identified as the recipient of these treatments. A sixteenth-century Chinese medical text, the *Compendium of Materia Medica*, states in a section on medical uses of the placenta that, "when a woman in Liuqui has a baby, the placenta is eaten," and that in Bagui, "the placenta of a boy is specially prepared and eaten by the mother's family and relatives." Another Chinese medical text, the *Great Pharmacopoeia of 1596*, recommends placental tissue mixed with human milk to help overcome the effects of Ch'i exhaustion. These include, "anemia, weakness of the extremities, and coldness of the sexual organs with involuntary ejaculation of semen. Dried, powdered placenta would be stirred into three wine-cups of milk to make a Connected Destiny Elixir. The elixir would be warmed in sunlight, then taken as treatment. It is not known exactly how traditional this remedy was, nor exactly how far back it dates.

Ober also identified many cultures known to have practiced placentophagy for medicinal purposes, and one for its flavor:

Medicinal purposes

The Araucanian Native Americans of Argentina dried and ground a child's umbilical cord, giving the child a little of the powder when it was sick.

In Jamaica, bits of placental membranes were put into an infant's tea to prevent convulsions caused by ghosts.

The Chaga of Tanganyika place the placenta in a receptacle for two months to dry. Once dry, it is ground into flour from which a porridge is made. The porridge is served to old women of the family as a way of preserving the child's life.

In Central India, women of the Kol, Tribe eat placenta to aid reproductive function. Consumption of placenta by a childless woman, "may dispel the influences that keep her barren."

Modern placentophagy

Modern practice of placentophagy is rare, as most contemporary human cultures do not promote its consumption. Despite a general cultural avoidance, however, instances of placentophagy have been recorded among certain modern cultures. In the 1960s "male and female Vietnamese nurses and midwives of Chinese and Thai background consum[ed] the placentas of their young, healthy patients" for reasons unspecified, as reported by a Czechoslovakian medical officer in at the Hospital of Czechoslovak-Vietnamese Friendship in Haiphong. Placentas were stripped of their membranous parts and fried with onions before being eaten

A more recent cross-cultural ethnographic study by the University of Nevada, Las Vegas Department of Anthropology surveyed over 179 contemporary human societies, and identified only one culture (Chicano, or Mexican-American) that mentioned the practice of maternal placentophagy. This account, centering on Chicano and Anglo midwifery in San Antonio, Texas, stated, "cooking and eating part of the placenta has...been reported by a couple of midwives. One Anglo mother ... was reported to have roasted the placenta." This instance, however, may not be indicative of any larger cultural trends, as no other records of placentophagy were found in the Chicano culture. This same study also recorded three references of non-maternal placentophagy:

- Traditional Gullah medicine dictates that when a baby is born with a caul, having a placenta positioned over their face at birth, the placenta is made into a tea and then

consumed by the child to "prevent them from seeing spirits that would otherwise haunt [them]."

- Practice of paternal placentophagy was identified in the Malekula of Melanesia. "In Espirito-Santo, the new father [eats] a pudding made from the cooked placenta and blood."
- Oral administration of the placenta was reported in Sino-Vietnamese medicine to aid the recovery of those suffering from tuberculosis

In a follow-up study, the UNLV researchers were joined by colleagues at the University of South Florida, who surveyed new mothers, and found that about 3/4 had positive experiences from eating their own placenta, citing "improved mood", "increased energy", and "improved lactation".

Recent examples of placentophagy in the popular media include Time Magazine's "Afterbirth: It's What's for Dinner", and USA Today's "Ingesting the placenta: Is it healthy for new moms?"

Current beliefs among placentophagists

Nutritional benefits

The placenta transports nutrients to the fetus during gestation, as well as producing and regulating hormones and opioids. Proponents of modern placentophagy argue that the placenta retains some of these substances after delivery, and that consumption of the placenta by the mother will help her recover more quickly following childbirth by replenishing nutrients and hormones lost during parturition. One birthing website run by two Minnesota doulas lists possible health benefits including replenishing lost nutrients, increasing milk production, curbing postpartum depression and slowing postpartum hemorrhage.

In addition to protein and various vitamins, placenta contains high levels of CRH (corticotropin releasing hormone), known to reduce stress. Though CRH is normally secreted by the hypothalamus, during pregnancy production of CRH by the placenta dramatically increases levels of CRH in the blood stream, which peak at delivery. Even postpartum, the placenta still contains very high levels of CRH, and some believe eating it can bring the mother's CRH levels back to a healthy range

Consumption of the placenta is also believed to cause the release of the chemical oxytocin in the brain. Oxytocin stimulates uterine contractions leading to the onset of labor, and after childbirth can also cause the uterus to contract and sooner reach its pre-pregnancy size.

Preparation

One common method of preparation is encapsulation. An encapsulated placenta is steamed, dehydrated, and ground before being put into pills. Less commonly the placenta is drunk raw in a smoothie. Other recipes include lasagna, spaghetti, stew, and pizza.

Placentophagy protocol in management of postpartum care

"Giving...placenta to a new mother following birth has become standard protocol among a growing number of midwives in the United States. **By nourishing the blood and fluids, endocrine glands and organs, Placenta will ...reduce or stop postpartum bleeding, speed up recovery, boost energy and relieve postpartum blues.**

The Effect of Ingestion of Desiccated (dried) Placenta on Milk Production

"All patients were given desiccated placenta prepared as previously described in doses of 10 grains in a capsule 3 times a day. Only those mothers were chosen for the study whose parturition was normal and only the weights of those infants were recorded whose sole source of nourishment was mother's milk. The growth of 177 infants was studied. The rate of growth is increased by the ingestion of placenta by the mother... the maternal ingestion of dried placenta tissue so stimulates the tissues of the infants feeding on the milk produced during this time, that unit weight is able to add on greater increments of matter, from day to day, than can unit weight of infants feeding on milk from mothers not ingesting this substance.

The American journal of obstetrics and diseases of women and children

"It has been shown that the feeding of desiccated placenta to women during the first eleven days after parturition causes an increase in the protein and lactose percent of the milk... All the mothers were receiving the same diet, and to the second set 0.6mg of desiccated placenta was fed three times a day throughout the period. Certain definite differences in the progress of growth of the two sets of infants are to be observed. It is evident that the recovery from the postnatal decline in weight is hastened by the consumption of milk produced under the influence of maternally ingested placenta

Placenta as Lactagagon

"Powdered Placenta Hominis was used for 57 cases of insufficient lactation. Within 4 days, 48 women had markedly increased milk production, with the remainder following suit over the next three days.

"An attempt was made to increase milk secretion in mothers by administration of dried placenta per os. Of 210 controlled cases only 29 (13.8%) gave negative results; 181 women

(86.2%) reacted positively to the treatment, 117 (55.7%) with good and 64 (30.5%) with very good results. It could be shown by similar experiments with a beef preparation that the effective substance in placenta is not protein. Nor does the lyophilised placenta act as a biogenic stimulator so that the good results of placenta administration cannot be explained as a form of tissue therapy per os. The question of a hormonal influence remains open. So far it could be shown that progesterone is probably not active in increasing lactation after administration of dried placenta.

This method of treating hypogalactia seems worth noting since the placenta preparation is easily obtained, has not so far been utilized and in our experience is successful in the majority of women."

Placentophagia: A Biobehavioral Enigma

"Although ingestion of the afterbirth during delivery is a reliable component of parturitional behavior of mothers in most mammalian species, we know almost nothing of the direct causes or consequences of the act. Traditional explanations of placentophagia, such as general or specific hunger, are discussed and evaluated in light of recent experimental results. Next, research is reviewed which has attempted to distinguish between placentophagia as a maternal behavior and placentophagia as an ingestive behavior. Finally, consequences of the behavior, which may also be viewed as ultimate causes in an evolutionary sense, are considered, such as the possibility of beneficial effects on maternal behavior or reproductive competence, on protection against predators, and on immunological protection afforded either the mother or the young."

Placenta for Pain Relief

Placenta ingestion by rats enhances γ - and n-opioid antinociception, but suppresses A-opioid antinociception

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Ingestion of placenta or amniotic fluid produces a dramatic enhancement of centrally mediated opioid antinociception in the rat. The present experiments investigated the role of each opioid receptor type in the antinociception-modulating effects of Placental Opioid-Enhancing Factor (POEF). Antinociception was measured in adult, female rats after they ingested placenta or control substance and after they received an intracerebroventricular injection of a γ -specific opioid receptor agonist. The results showed that ingestion of placenta potentiated γ - and n-opioid antinociception, but attenuated A-opioid antinociception. This finding of POEF action as both opioid receptor-specific and complex provides an important basis for understanding the intrinsic pain-suppression mechanisms that are activated during parturition and modified by placentophagia, and important information for the possible use of POEF as an adjunct to opioids in pain management.

Enhancement of Opioid-Mediated Analgesia: A Solution to the Enigma of Placentophagia.

Two major consequences of placentophagia, the ingestion of afterbirth materials that occurs usually during mammalian parturition, have been uncovered in the past several years. The first is that increased contact, associated with ingesting placenta and amniotic fluid from the surface of the young, causes an accelerated onset of maternal behavior toward those young. The second, which probably has importance for a broader range of mammalian taxa than the first, is that ingestion of afterbirth materials produces enhancement of ongoing opioid-mediated analgesia. The active substance in placenta and amniotic fluid has been named POEF, for Placental Opioid-Enhancing Factor. Recent research on both consequences is summarized, with particular attention to POEF, the generalizability of the enhancement phenomenon, its locus and mode of action, and its significance for new approaches to the management of pain and addiction. Read the full article

"The placenta contains high levels of prostaglandin which stimulates involution (an inward curvature or penetration, or, a shrinking or return to a former size) of the uterus, in effect cleaning the uterus out. The placenta also contains small amounts of oxytocin which eases birth stress and causes the smooth muscles around the mammary cells to contract and eject milk.

The most general benefit of placentophagy, according to recent research, is that placenta and amniotic fluid contain a molecule (POEF, Placental Opioid-Enhancing Factor) that modifies the activity of endogenous opioids in such a way that produces an enhancement of the natural reduction in pain that occurs shortly after and during delivery."

Effects of placentophagy on serum prolactin and progesterone concentrations in rats after parturition or superovulation

In rats that were allowed to eat the placentae after parturition concentrations of serum prolactin were elevated on Day 1 but concentrations of serum progesterone were depressed on Days 6 and 8 postpartum when compared to those of rats prevented from eating the placenta. In rats treated with PMSG to induce superovulation serum prolactin and progesterone values were significantly elevated on Days 3 and 5 respectively, after being fed 2 g rat placenta/day for 2 days. However, feeding each rat 4 g placenta/day significantly lowered serum progesterone on Day 5. Oestrogen injections or bovine or human placenta in the diet had no effect. The organic phase of a petroleum ether extract of rat placenta lowered peripheral concentrations of progesterone on Day 5, but other extracts were ineffective. We conclude that the rat placenta contains orally-active substance(s) which modify blood levels of pituitary and ovarian hormones.

The placenta is composed of beneficial hormones, chemicals, iron, and proteins. These healing substances include:

- **Estrogen, Progesterone, Testosterone:** Contributes to mammary gland development in preparation for lactation; stabilizes postpartum mood; regulates post-birth uterine cramping; decreases depression; normalizes and stimulates libido.
- **Prolactin:** Promotes lactation; increases milk supply; enhances the mothering instinct.
- **Oxytocin:** Decreases pain and increases bonding in mother and infant; counteracts the production of stress hormones such as Cortisol; greatly reduces postpartum bleeding; enhances the breastfeeding let-down reflex.
- **Placental Opioid-Enhancing Factor (POEF):** Stimulates the production of your body's natural opioids, including endorphins; reduces pain; increases well-being.
- **Thyroid Stimulating Hormone:** Regulates the thyroid gland; boosts energy and supports recovery from stressful events.
- **Corticotropin Releasing Hormone (CRH):** Low levels of CRH are implicated in postpartum depression. Regulation of CRH helps prevent depression.
- **Cortisone:** Reduces inflammation and swelling; promotes healing.
- **Interferon:** Triggers the protective defenses of the immune system to fight infection.
- **Prostaglandins:** Regulates contractions in the uterus after birth; helps uterus return to its pre-pregnancy size. Anti-inflammatory effects.
- **Iron:** Replenishes maternal iron stores to combat anemia, a common postpartum condition. Increases energy; decreases fatigue and depression.
- **Hemoglobin:** Oxygen-carrying molecule which provides a boost in energy.
- **Urokinase Inhibiting Factor and Factor XIII:** stops bleeding and enhances wound healing.
- **Immunoglobulin G (IgG):** Antibody molecules which support the immune system.
- **Human Placental Lactogen (hPL):** This hormone has lactogenic and growth-promoting properties; promotes mammary gland growth in preparation for lactation in the mother. It also regulates maternal glucose, protein, and fat levels.