

# Fetus in Fetu <sup>[1]</sup>

By: DeRuiter, Corinne Keywords: [Fetus](#) <sup>[2]</sup> [parasitic twins](#) <sup>[3]</sup>

Fetus *in fetu* is a rare variety of parasitic twins, where the developmentally abnormal parasitic twin is completely encapsulated within the torso of the otherwise normally developed host twin. In the late eighteenth century, German anatomist [Johann Friedrich Meckel](#) <sup>[4]</sup> was the first to describe [fetus](#) <sup>[5]</sup> *in fetu*, which translates to [fetus](#) <sup>[5]</sup> within [fetus](#) <sup>[5]</sup>. Fetus *in fetu* is thought to result from the unequal division of the [totipotent inner cell mass](#) <sup>[6]</sup>, the mass of cells that is the ancestral precursor to all cells in the body. The unequal division is thought to occur during the formation of the [blastocyst](#) <sup>[7]</sup>, which can also result in parasitic and [conjoined twins](#) <sup>[8]</sup>. Fetus *in fetu* represents a developmental anomaly that has prompted developmental biologists to further examine the mechanisms for how twins arise.

In the past, scientists speculated that [fetus](#) <sup>[5]</sup> *in fetu* was the result of a highly developed [teratoma](#) <sup>[9]</sup> rather than the product of abnormal embryonic development. Teratomas are tumors composed of tissues foreign to the area of the body in which they are found, and can include hair, teeth, bone, and organ tissues. Teratomas are the most common type of brain tumor found in infants, and are potentially malignant.

In order to classify an abdominal growth as [fetus](#) <sup>[5]</sup> *in fetu* rather than a [teratoma](#) <sup>[9]</sup>, several characteristics must be present. Fetus *in fetu* is a benign growth of embryological origin, and is located behind the abdomen lining of the host twin. To diagnose [fetus](#) <sup>[5]</sup> *in fetu* there must be evidence of body plan [organization](#) <sup>[10]</sup>, including vertebrae, limb buds, and organ tissues. Abdominal radiographs, computed tomography scans (CT scans), and [ultrasonography](#) <sup>[11]</sup> are helpful technologies for doctors to determine whether a mass is a [teratoma](#) <sup>[9]</sup> or [fetus](#) <sup>[5]</sup> *in fetu*.

Individuals diagnosed with [fetus](#) <sup>[5]</sup> *in fetu* generally have the parasitic twin excised, as the mass poses risks to the host twin because the mass may continually increase in size. Increased mass can lead to hemorrhaging in the host twin, and it may increase pressure on the host twin's [diaphragm](#) <sup>[12]</sup>, which can lead to trouble with breathing and potentially suffocation.

With less than 100 known cases worldwide, when [fetus](#) <sup>[5]</sup> *in fetu* occurs, the event often receives international media attention. With advanced technology, doctors can easily detect [fetus](#) <sup>[5]</sup> *in fetu*, and parents of infants with this medical anomaly are often encouraged to surgically remove the abnormal mass of tissue to improve the quality of life of the host twin.

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## Subject

[Meckel, Johann Friedrich, 1724-1774](#) <sup>[13]</sup> [Fetus](#) <sup>[14]</sup> [Embryos](#) <sup>[15]</sup> [Fetal development](#) <sup>[16]</sup> [Pregnancy](#) <sup>[17]</sup> [Fetus--Abnormalities](#) <sup>[18]</sup>

[Fetus](#) <sup>[19]</sup>

## Topic

[Theories](#) <sup>[20]</sup> [Disorders](#) <sup>[21]</sup> [Reproduction](#) <sup>[22]</sup>

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- [1] <https://embryo.asu.edu/pages/fetus-fetu>
- [2] <https://embryo.asu.edu/keywords/fetus>
- [3] <https://embryo.asu.edu/keywords/parasitic-twins>
- [4] <https://embryo.asu.edu/search?text=Johann%20Friedrich%20Meckel>
- [5] <https://embryo.asu.edu/search?text=fetus>
- [6] <https://embryo.asu.edu/search?text=totipotent%20inner%20cell%20mass>
- [7] <https://embryo.asu.edu/search?text=blastocyst>
- [8] <https://embryo.asu.edu/search?text=conjoined%20twins>
- [9] <https://embryo.asu.edu/search?text=teratoma>
- [10] <https://embryo.asu.edu/search?text=organization>
- [11] <https://embryo.asu.edu/search?text=ultrasonography>
- [12] <https://embryo.asu.edu/search?text=diaphragm>
- [13] <https://embryo.asu.edu/library-congress-subject-headings/meckel-johann-friedrich-1724-1774>
- [14] <https://embryo.asu.edu/library-congress-subject-headings/fetus>
- [15] <https://embryo.asu.edu/library-congress-subject-headings/embryos>
- [16] <https://embryo.asu.edu/library-congress-subject-headings/fetal-development>
- [17] <https://embryo.asu.edu/library-congress-subject-headings/pregnancy>
- [18] <https://embryo.asu.edu/library-congress-subject-headings/fetus-abnormalities>
- [19] <https://embryo.asu.edu/medical-subject-headings/fetus>
- [20] <https://embryo.asu.edu/topics/theories>
- [21] <https://embryo.asu.edu/topics/disorders>
- [22] <https://embryo.asu.edu/topics/reproduction>