



Assisted fertility treatments 2020–2021

Number of fertility treatments increased in 2021

MAIN FINDINGS

- In 2020, 12 800 treatment cycles were started. Of these, over 18% lead to a birth.
- According to preliminary data, the number of treatment cycles started increased 14% in 2021.
- In total, approximately 2400 children were born as a result of the treatments in 2020, representing 4.9 per cent of all children born.
- The number of multiple births has still decreased due to a high proportion of single embryo transfers.
- According to preliminary data in 2021, the public sector performed 55.8 per cent of all fertility treatments.

In 2020, the total number of assisted fertility treatments was approximately 12 800. According to the preliminary data for 2021, about 14 600 assisted fertility treatment cycles were started. This is 14.0 per cent more than the year before.

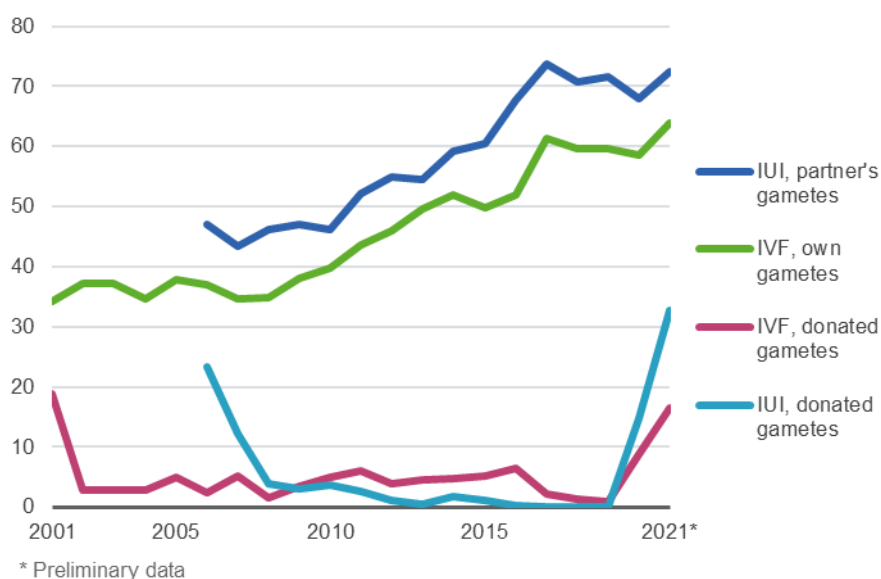
In 2020, the total number of assisted fertility treatments declined (-3.2%) compared to 2019. This is likely connected to the outbreak of the COVID-19 epidemic: majority of the assisted fertility treatment clinics in Finland suspended their treatments in March 2020 for a few months. The increase in 2021, in turn, is likely to be related to the release of medical debt caused by the corona epidemic and the increase in the number of treatments performed with donated gametes in the public sector.

The number of assisted fertility treatments using donor gametes increased slightly (+2.2%) in 2020 even though the total number of assisted fertility treatments decreased. According to preliminary data, the increase accelerated in 2021 (+25.8%).

According to preliminary data, the public sector performed 23.6 per cent of all treatments using donor gametes which is more than ever before. In 2019, the proportion was 0.5 per cent and in 2020 it was 11.4 per cent. The proportion of treatments using donor gametes was 22.0 per cent of all assisted fertility treatments in 2020 and 24.2 per cent in 2021.

Of all the assisted fertility treatments performed in 2020, 18.4 per cent resulted in a birth which is slightly more than the proportion previous year. Approximately 2400 children were born as a result of the treatments, representing an estimated 4.9¹ per cent of all children born.

Figure 1. Assisted fertility treatments 2005–2021



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Terms and definitions

Assisted fertility treatments: Includes IVF treatments (incl. IVF, ICSI and FET treatments) and IUI treatments with own and donor gametes. A woman might undergo several treatment cycles per year all of which are recorded as separate treatments even if gametes or embryos retrieved in earlier treatment cycles are used.

FET (frozen embryo transfer): A process where, after IVF procedures, embryos of good enough quality can be frozen and later transferred to the uterus.

ICSI (intracytoplasmic sperm injection): A procedure in which a single sperm is injected directly into an oocyte. The process then follows in the same way as IVF treatments.

IUI (intrauterine insemination): A process where sperms are injected into the uterine cavity.

IVF (in vitro fertilisation): A process where mature oocytes (egg cells) are retrieved from the ovaries and fertilized in a laboratory. The fertilized oocytes are allowed to grow into embryos, after which usually one or two of the resulting embryos are transferred to the recipient's uterus. When the term IVF treatment is used in this report, it excludes ICSI and FET treatments unless specifically stated.

IVF treatments (including ICSI and FET): In IVF treatments mature eggs are retrieved from ovaries and fertilized in a laboratory. In this report, this includes IVF, ICSI and FET treatments. When the term IVF treatment is used in this report, it excludes ICSI and FET treatments unless specifically stated.

PGT-M/PGT-SR and PGT-A: Embryo diagnostics methods (PGT=preimplantation genetic testing), where embryos resulting from IVF treatments are examined for certain genetic conditions so that an unaffected embryo can be transferred to the recipient's uterus. **PGT-M:** Embryo diagnostics performed to detect a hereditary sickness. **PGT-SR:** Embryo diagnostics performed to detect chromosome rearrangements. **PGT-A:** Embryo diagnostics performed to detect aneuploidies.

www.thl.fi/statistics/fertility_treatments

Quality description (OSF)

Assisted fertility treatments

Relevance of statistical data

The statistics on assisted fertility treatments, compiled by the Finnish Institute for Health and Welfare (THL), contain data on in vitro fertilisation (IVF) treatments as well as intrauterine inseminations (IUIs). The statistical report presents data on the numbers and results of treatments on an annual basis. The statistical report includes preliminary data on treatments in the previous year and data on the number of treatments and their outcomes in the year preceding that.

Data on IVF, ICSI and FET treatments have been collected since 1992. Data has been collected separately on oocyte donations (since 1996), sperm and embryo donations and surrogacy (since 2001), as well as on insemination treatments (since 2006). Data on embryo diagnostics, oocyte freezing and oocyte thawing have been collected since 2017. The statistics also provide information on the number of clinics providing treatments, treatment outcomes and the number of births per type of assisted fertility treatment.

The data are given at the national level, with no clinic-specific data published. Data are collected for THL in table form; no personal data is collected on persons receiving treatment.

The statistics are particularly intended for health care professionals, researchers, administrators and planning officials working in the area of reproductive health.

The data collection was started on the initiative of the clinics providing assisted fertility treatments, and the data disclosure was voluntary until 2005. In accordance with the Decree issued under section 26 of the Act on Assisted Fertility Treatments (1237/2006), which entered into force on 1 September 2007, clinics giving assisted fertility treatments have a statutory duty to provide THL with statistical data. The clinics must provide THL with information about their assisted fertility treatment activities for the purposes of monitoring and statistics (the Act on Assisted Fertility Treatments 1237/2006 and the Ministry of Social Affairs and Health Decree on Assisted Fertility Treatments 811/2009).

The Act on Assisted Fertility Treatments (1237/2006), the Decree on Assisted Fertility Treatments (811/2009) and Act of the Medical Use of Human Organs and Tissues (101/2001) regulate the use of gametes and embryos. According to the Act on Assisted Fertility Treatments, a person whose birth has resulted from assisted fertility treatments where donated gametes have been used, has a right to know the identity of the donor when the child turns 18 years and anonymous donation is not allowed. In accordance with the legislation, no surrogacy treatments have been performed since 2007.

Description of methods

The statistics on assisted fertility treatments are compiled annually from all private and public sector clinics in Finland that provide assisted fertility treatments. The statistics are based on a population of all assisted fertility treatments performed in Finland. Assisted fertility treatments received by Finnish women abroad are not included in the statistics.

Only aggregate-level data are collected concerning these treatments. The clinic performing the embryo transfer or insemination is responsible for reporting. If hormone therapy associated with assisted fertility treatment is initiated at one clinic, while the transfer is performed on another clinic, the reporting responsibility lies with the clinic performing the transfer.

Data are collected from the clinics that provide treatment using an international data collection form. Before reporting, the data are checked and any unclear data are ascertained by contacting the reporting clinic. Anonymous case reports are collected on congenital anomalies and serious diseases of the mother or the newborn.

Data are collected by using an electronic form.

Correctness and accuracy of data

The data are based on figures reported by the clinics providing treatments. Estimates made on the basis of preliminary statistics on the previous year's treatments have been found to be very close to the real figures. The total number of assisted fertility treatments was 0.5 per cent less in the final 2020 statistics than in the preliminary statistics reported a year earlier.

Preliminary data are collected only on the total number of started treatment cycles (separately for non-donor gametes and donor gametes) as well as on the number of single-embryo transfers of all treatments.

Any inaccuracies identified in the statistics are corrected annually. This also applies to data from earlier years.

Timeliness and promptness of published data

The statistics on assisted fertility treatments are produced annually by THL. The statistical report is published in May–June.

The statistics are concerned with treatments given two statistical years earlier (2020) and with preliminary data on the previous year's treatments (2021). The lag in the data collection is due to the fact that data cannot be collected until the outcomes of all treatments are known: the last children resulting from treatments performed in 2021 are born as late as the autumn of the year following the treatment. It should also be noted that, in this statistical report, the statistical years given in the tables on births refer to the year of fertilisation, not to the year of birth as in THL's Medical Birth Register.

Availability and transparency / clarity of data

In addition to being [published online](#), the statistics are sent to the clinics providing assisted fertility treatments.

The clinics and the European Society for Human Reproduction and Embryology (ESHRE) are also provided with more detailed, nationwide statistical data.

Comparability of statistical data

The Finnish statistics on assisted fertility treatments begin from the statistical year 1992. In 1992–1993, the data were collected by the IVF clinic at Helsinki University Hospital. Since 1994, the data collection has been THL's (previously STAKES) responsibility. With the introduction of new methods of treatment, the data collection has been extended accordingly. More detailed information on factors affecting the interpretation of the statistical data is given separately for each table. The concepts and definitions related to assisted fertility treatments have not changed.

The follow-up data on six pregnancies could not be obtained from one of the clinics and the data for one clinic are missing from the statistics for 2001–2002.

The data collection was revised in 2019 (data on 2017 and preliminary data 2018). The data content was expanded and is subsequently not totally compatible with earlier statistics. The data content includes new treatments methods from 2017 onwards embryo diagnostics, oocyte freezing and oocyte thawing). Even though the definitions of IVF, ICSI and FET treatments did not change in 2019, it is possible that some fertility clinics have included the methods now added as separate methods, in the number of IVF, ICSI or FET treatments in earlier years.

It seems that there are slight inaccuracies in the data for 2017 and the reported number of treatments might be slightly smaller than in reality. The problems with the data quality have been resolved in the 2018 data, but the possible quality issues for 2017 data have to be taken into account in the time series even in the future.

Clarity and consistency

The data on assisted fertility treatments in the statistics are nationwide. The numbers given in the preliminary statistics for the previous year relatively accurately reflect the final annual statistics.

Special issues concerning the 2020–2021 statistics

The statistics concern treatments performed in 2020 and preliminary numbers of treatments in 2021. The lag in the data collection is due to the fact that data cannot be collected until the results of all treatments are known: the last infants resulting from treatments performed in 2021 are born as late as the autumn of 2022.

In 2020, the number of assisted fertility treatments was particularly affected by the corona epidemic: the majority of clinics in Finland stopped providing treatments in March 2020. As a rule, the treatments were continued later in the spring or summer of 2020.

All clinics giving assisted fertility treatments that operated in Finland in 2020–2021 are included in the statistics.

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