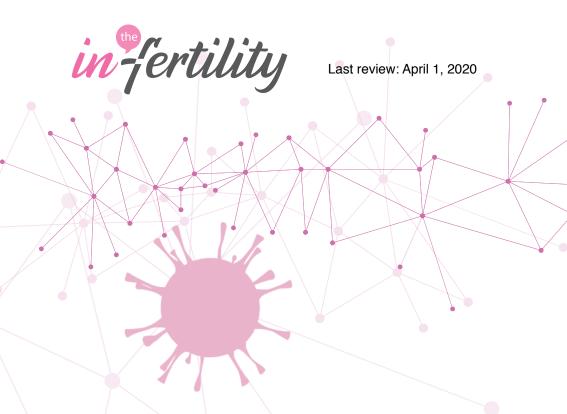


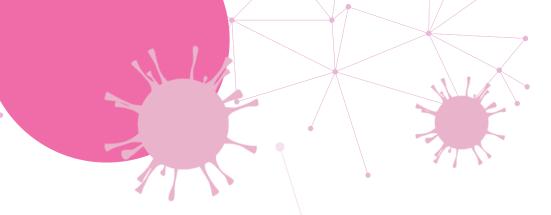
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We are all affected, whether we admit or not. We all have questions, fear different things and need relevant and reliable information. COVID-19 affects us all even without direct infection. That's what viruses do. With all our capacity, passion and love for the truth, in-fertility's network team of many specialists have researched relevant resources and prepared this document, answering all basic questions which relate to COVID-19 and issues, #inthefertility, infertility treatments and effect of the virus on pregnancy.

Women planning or undergoing IVF or trying to conceive with any help of medicine, as well as pregnant women have many specific questions. The team of in-fertility network is doing its best to answer many of them individually. We have looked at the current situation with the help of the highest authorities in the area. But the situation is developing each day. Within a week we have seen a lot of changes even from the key players in the assisted reproduction (AR) industry. We will continue monitoring the most important statements and the most up-to-date information which will be always available at www.in-fertility.eu



In order to understand better, what is happening and what we can expect from the coming weeks and months, it is important to know the enemy we are facing. Let's start with the basic facts.

1. What causes the pandemic?

COVID-19 is a respiratory illness caused by a new virus. In order to avoid panic, it is however important to know that there are hundreds of coronaviruses, most of which circulate among animals including pigs, camels, bats and cats. According to the National Institute of Allergy and Infectious Diseases seven of them are known to cause human disease, four of which are mild and three of the coronaviruses can have more serious outcomes. These are SARS (severe acute respiratory syndrome), which emerged in late 2002 and largely disappeared by 2004; MERS (Middle East respiratory



syndrome), which emerged in 2012 and remains in circulation in camels; and SARS-CoV-2, which emerged in December 2019 in China and a global effort is under way to contain its spread. COVID-19 is caused by this coronavirus. According to the World Health Organisation (WHO)

MOST PEOPLE INFECTED WITH THE COVID-19 VIRUS WILL EXPERIENCE MILD TO MODERATE RESPIRATORY ILLNESS AND RECOVER WITHOUT REQUIRING SPECIAL TREATMENT.

Older people and those with underlying medical problems like cardiovascular disease, diabetes, chronic respiratory disease, and cancer or other immunity issues are more likely to develop serious illness such as pneumonia. Mortality rates range from 0.9% to 2.3% (Novel Coronavirus Pneumonia Emergency Response Epidemiology Team, 2020). Some people have no symptoms, which makes spreading of the virus trickier.

Some people recover easily, others do get very sick very quickly and the effects of pandemic hitting a specific region with full blow are devastating.

That is the main reason for physical (not social) distancing, to slow down the spread and enable the health system to cope. It is not the virus being the worst or the most dangerous ever.

PLEASE, REMEMBER THAT PANIC, FEAR AND STRESS HAVE A VERY NEGATIVE IMPACT ON OUR BODIES AND MAKES EVERYTHING WORSE.

That is the key reason we kindly ask you to help us to share this important information so people fear less and understand more.

2. How does coronavirus spread?

There is evidence that it spreads from person to person and that proper hygiene can prevent infection. Coronavirus is spread in sneeze or cough droplets. You could get the virus if you:

- Come into close contact with someone who has the virus and is coughing or sneezing.
- Touch surfaces that someone who has the virus has coughed or sneezed on.



- Emerging evidence of faecal-oral transmission of the virus suggests everyone should close toilet seats before flushing.
- Avoid touching your eyes, nose or mouth if your hands are not clean.
- Avoid shaking hands, hugging or kissing upon greeting colleagues, friends or family.

One of the most frequent questions relates to wearing a mask. In some countries it was made compulsory when leaving home. However, the WHO statement is very clear about this. Only wear a mask if you are ill with COVID-19 symptoms (especially coughing) or looking after someone who may have COVID-19. Disposable face mask can only be used once. If you are not ill or looking after someone who is ill then you are wasting a mask. There is a world-wide shortage of masks, so WHO urges people to use masks wisely to avoid unnecessary wastage of precious resources and misuse of masks.

The most effective ways to protect yourself and others against COVID-19 are frequently washing your hands, cover your cough with the bend of elbow or tissue and maintain a distance of at least 1 metre (app. 3 feet) from people who are coughing or sneezing. Be sure to comply with any local restrictions on travel, movement or large gatherings.

YOU SHOULD KNOW THAT NO ANTIBIOTICS WORK AGAINST COVID-19. ANTIBIOTICS DO NOT WORK AGAINST VIRUSES; THEY ONLY WORK ON BACTERIAL INFECTIONS.

Patients who visited IVF clinics in the past know that hygiene and protection are highly relevant for surgeries or tissue storage, so it is normal to ask the important question: can the clinics prevent their patients in such an environment from getting infected by screening patients and staff? According to The American Society for Reproductive Medicine (ASRM) as anyone who has been through fertility treatment or has prepared to begin fertility treatment knows that multiple clinic visits and procedures are required. Unfortunately, even if a clinic tries to screen patients and staff to lower the risk of the novel coronavirus exposure in the fertility clinic, there is no way to guarantee prevention of exposure.



3. What is the effect on pregnancy?

Centers for Disease Control and Prevention list pregnant women among those with higher risk for severe illness, however, at the same time they say that it is currently not known if pregnant women have a greater chance of getting sick from COVID-19 than the general public, nor whether they are more likely to have serious illness as a result.

PREGNANT WOMEN EXPERIENCE CHANGES
IN THEIR BODIES THAT MAY INCREASE THEIR RISK
OF SOME INFECTIONS.

With viruses from the same family as SARS-CoV-2, and other viral respiratory infections, such as influenza, women have had a higher risk of developing severe illness. It is always important for pregnant women to protect themselves from illnesses and this of course regardless of whether the pregnancy is the result of assisted reproduction techniques or conceived naturally.

According to <u>The Colorado Center for Reproductive Medicine</u>, pregnant women who have severe chronic medical conditions, which may be also the reason for going through IVF, may be at higher risk of preterm delivery and other pregnancy complications, which would require closer foetal monitoring.

It should be emphasized, however, that coronaviruses are unrelated to the ZIKA virus, which had very clear implications for pregnancy and foetal development. Given the information <u>ASRM</u> has stated that while it would be wise for individuals with confirmed or presumed COVID-19 infection to avoid pregnancy, there appears to be no cause for alarm for those already pregnant.

4. Can a newborn be infected?

While we still do not have sufficient data and numbers, we already know the answer to this question. Yes, it can. We just do not know exactly how. A newborn in London has tested positive for the novel coronavirus SARS-CoV-2, just minutes after being born to a mother who was also infected with the virus. Days prior to giving birth, the woman was admitted to a hospital for symptoms of pneumonia, finding out she had tested positive for the virus that causes COVID-19 only after her baby was born at North Middlesex hospital in Enfield, in North London, the Guardian reported.



According to The Sun, the baby was being treated at the hospital, while the mother had been transferred to an infectious-diseases hospital. It is not known when the child contracted the disease. "We can't say it happened while the baby was still in the womb," Dr. William Schaffner, a professor of Preventive Medicine and Infectious Diseases at the Vanderbilt University School of Medicine, told Live Science. The baby could have also contracted the virus during or immediately after birth, Schaffner said. Some infections pass from a mother to her baby through the mother's placenta, while the foetus is still developing in the womb or from bodily fluids during delivery. For instance, the Zika virus — which is in another family of viruses other than coronavirus — can pass to newborns both in the womb and during delivery according to the Centers for Disease Control and Prevention (CDC).

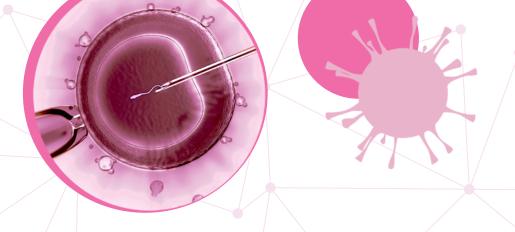
Following that news, <u>researchers analyzed samples from nine women who came down with COVID-19</u> when they were 36 to 39 weeks pregnant, and were admitted to a hospital in Wuhan, China, where the outbreak began.

All of the women delivered via C-section. To find out if and perhaps when the virus could be transmitted, the team looked at samples of amniotic fluid, umbilical cord blood, breast milk and samples from the newborn's throat. None of those samples tested positive for the coronavirus, and both the mothers and babies survived, according to that study, published February 12, 2020 in The Lancet. In those cases, at least, the virus didn't appear to pass between a mother and her developing foetus.

Three new reports released in The Journal of the American Medical Association unfortunately suggest the transfer may be true. Vertical transmission, or the spread of infectious disease from mother to child, initially seemed unlikely based on initial COVID-19 case reports as well as historical data from the outbreaks of MERS and SARS, close cousins of the novel coronavirus. To date, data has been published on 19 infants born to mothers with COVID-19, all of whom subsequently tested negative for the virus.

According to ABC News a study released from Wuhan's Children's

HOSPITAL EVALUATED 33 NEWBORNS BORN TO MOTHERS WITH COVID-19, FINDING THAT THREE OF THESE INFANTS (9%) FELL ILL.



The involved physicians noted that strict infection control procedures were followed during delivery, suggesting that the virus didn't infect the infants during or after delivery, and instead likely came from the mother while they were still in the womb.

We at in-fertility realize the health and wellbeing of your child is what matters to you. We are closely monitoring all reports we can get, again, if there are some in your language, different from English or German, please, forward them to info@in-fertility.eu as soon as possible together with the link to the source of the information and possibly also the author, thank you.

5. Should IVF treatments continue?

According to the <u>European Society of Human Reproduction and Embryology</u> (ESHRE) as a precautionary measure - and in line with the position of other scientific societies in reproductive medicine

IT IS ADVISED THAT ALL FERTILITY PATIENTS CONSIDERING OR PLANNING TREATMENT, EVEN IF THEY DO NOT MEET THE DIAGNOSTIC CRITERIA FOR COVID-19 INFECTION, SHOULD AVOID BECOMING PREGNANT AT THIS TIME.

For those patients already having treatment, the society suggests considering deferred pregnancy with oocyte or embryo freezing for later embryo transfer. ESHRE further advises that patients who are pregnant or those (men and women) planning or undergoing fertility treatment should avoid travel to known areas of infection and contact with potentially infected individuals.



Some of the IVF clinics or groups are not sure how to respond or decided to continue their operation. For example the <u>Queensland Fertility Group</u> wrote on its website: "Our advice is that unaffected and low risk patients going through assisted reproduction (such as IVF) will not be at any higher risk of complications than anyone else in the population. Fertility care continues for unaffected patients."

However, several days later the information changed to: "Many of the long-term effects of COVID-19 are still not clear. The number of pregnant women who have contracted COVID-19 and have subsequently delivered is



small. As the situation is still emerging, these results require cautious optimism and so in the interest of public health safety, they now encourage those of their patients who were planning to commence a treatment to consider postponing fertility treatment and to stay at home." It also very importantly acknowledges that the overreaching responsibility currently is to all patients as part of the Australian and New Zealand healthcare system.

Global crisis, as every crisis, has the ability to bring out the best of us in terms of unity, understanding and empathy. Naturally we understand every woman or couple trying to get pregnant and their sadness, anger and fear about the future options, treatments, payments or time availability as well as many other factors. However, here's the thing.

WITH OUR EFFORTS TO STOP THE SPREAD OF THE VIRUS WE CAN CUT THE TIME FROM MONTHS TO WEEKS.

We are already finding out what really matters to us, we learn to protect our families, the potential grandparents, neighbours and we are learning to appreciate the medical staff more than ever. They are the true heroes of our time. Naturally, saving lives is the priority these days.

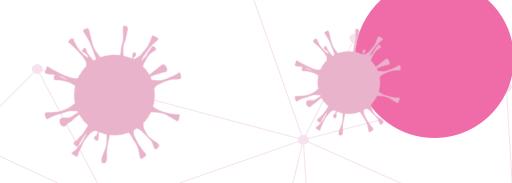
Having said that most of the relevant bodies and associations agree that with all possible hygienic precautions and care, fertility treatments such as fertility preservation for cancer patients should continue.



As there are various treatment options, including those with a third party, ASRM and Society for Assisted Reproductive Technology (SART) remain concerned that travel restrictions due to the virus may cause intended parents who are using a gestational carrier not to be able to join their newborn in a timely manner. As for treatments, The American Society for Reproductive Medicine (ASRM), the global leader in reproductive medicine, issued guidance recommending suspension of new, non-urgent treatments. Specifically, the recommendations include:

- Suspension of initiation of new treatment cycles, including ovulation induction, intrauterine inseminations (IUIs), in vitro fertilization (IVF), including retrievals and frozen embryo transfers as well as non-urgent gamete cryopreservation.
- Strongly considering cancellation of all embryo transfers, whether fresh or frozen.
- Continue to care for patients who are currently 'in-cycle' or who require urgent stimulation and cryopreservation.
- Suspend elective surgeries and non-urgent diagnostic procedures.
- Minimize in-person interactions.

These recommendations will be revisited periodically as the pandemic evolves, with the aim of resuming usual patient care as soon and as safely as possible.



Not everyone responded positively though. Nabil Arrach, the Founder of Progenesis, a San Diego-based company developing and offering non-invasive genetic tests published his decision to withdraw the sponsorship for ASRM 2020 as a response to ASRM statement, "which has violated that basic principle, the principle that you cannot make a claim or recommendation if you don't have data. No one doubts the good intentions of ASRM board. We know they are under pressure to be cautious and conservative. However, suggesting a shutdown of a whole industry with no tangible proof or data is simply unscientific."

This attitude is questionable from at least two reasons. First, it is not the IVF or fertility industry, which suffers most. Apart from hotels, airliners, restaurants, conference or fairs industry, there are millions of businesses and individuals at risk of their future and income.

Second, a medical professional should be the first to understand the <u>stressful hospital reality risks</u> and impact of a pandemic and not try to balance these risks and already existing problems out with "right that no one can deny to a patient, especially those that are in advanced maternal age, where their biological clock is ticking".



THE TRUTH IS, FERTILITY TREATMENT IS NOT BEING SINGLED OUT AT ALL.

Orthopaedic surgery, eye surgery, kidney stone procedures, dental procedures, and many other treatments are also being postponed due to the COVID-19 pandemic.

Speaking about the ticking, according to various patient initiatives it is the IVF industry failing to inform of the many risks and complications to both mother and child at an advanced age. The message some clinics patients get to hear is - as the lecture from a Berlin clinic recently put it during the Kinderwunsch Tage exhibition, where in-fertility network is a partner for patient education: "Forty is the new twenty." Well, it is definitely not.

The sooner we start educating teens on how to get pregnant instead of just how not to, the better as most of them today think a woman can get naturally pregnant up to the age of at least 56. The <u>FerTeen campaign</u> is a great start.



6. Does it impact male fertility?

Immediately upon the escalation of the pandemic a report was published on the Hubei government's website and widely shared on Chinese social media before being retracted, claimed that men who had contracted and recovered from the disease should seek medical advice to determine whether the virus had affected their fertility. Clinicians should pay attention to the risk of testicular lesions in patients during hospitalization and later clinical follow-up, especially the assessment and appropriate intervention in young patients' fertility, the report stated.

The unproven report linking coronavirus to male infertility has been removed. The problem in interpreting the results from semen analysis is that for most men who are infected with COVID-19, they wouldn't have had their fertility tested beforehand. So it is going to be very difficult with

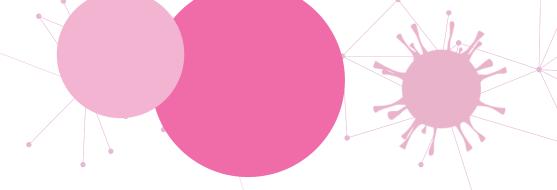
an individual man to know if any abnormal test result was due to the virus or not, said Professor Allan Pacey, an expert in male fertility at the University of Sheffield.

Conceiving while ill does not appear to increase risks to pregnancy unless there is a fever greater than 102 degrees Fahrenheit (38.8 degrees Celsius).

ACCORDING TO <u>THE FERTILITY CENTERS OF NEW</u> <u>ENGLAND</u>, ELEVATED CORE BODY TEMPERATURE MAY ADVERSELY AFFECT SPERM.

in-fertility understands that any treatment you need for building your family is already very stressful, expensive and puts a lot of pressure on everyone involved. Everyone is currently facing even more challenges, so it makes it even more important to answer all their questions, address their concerns and fears with true and competent information. That is the sole purpose of all we do at in-fertility. Thank you for your co-operation and assistance.

We are positive, we will master the situation and as in fertility issues, come out stronger, safer and wiser. And experience new, faster, less expensive, less regionally limited. Online services are emerging hand in hand with education and clinically proven information for patients, their relatives, media and other stakeholders.



We wish you all good health, take care of yourself and your beloved ones, don't panic and come back for more up-to-date information #inthefertility soon.

PS Co-operation and networking are key for our work. In case you come across an interesting statement, article or link, please, forward it to us, thank you.

If you wish to share this brochure on your page, blog or social network, feel free to do so through the following link:

https://in-fertility.eu/wp-content/uploads/2020/04/Covid-19-inthefertility-Brochure.pdf

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Who is in-fertility network?

in-fertility is an NGO founded in 2017. It is a global network of professionals, from over 25 specialisations related to human reproduction, its natural protection, treatment of diseases related to it as well as education in the area of both female and male fertility from over 40 countries of the world.

Innovative interdisciplinary approach and direct involvement of those trying to conceive, now or in the future, are the core of our work. We also teach through #storiesinthefertility full of hope, emotions and practical information.

We are the fastest growing network of experts, patient groups, therapists, coaches, doctors, nurses & other professionals, all with the same interest, to introduce everyone to the amazing world of fertility, because the highest risk of loosing it is the not knowing.

Denisa Priadková, Chairperson

