

MedNews

If you want to know more...



COVID-19 Vaccines and Pregnancy Safety

Large-scale rollout of vaccines has been done the past few months to help finally see an end to the COVID-19 pandemic. Various mechanisms have been tried and identified to counteract how the virus attacks the human body and with approvals and efficacies having 90% and up results, it was time to start vaccination programs to achieve herd immunity. Although this has given us a possible solution to the COVID-19 problem, it was still a question to the safety of these vaccines towards one particular group – the pregnant women and the ones contemplating pregnancy.

Little do the general public know on the possible effects of these vaccines to the woman or the child that is being conceived mostly due to the challenge of getting participants for this group on the clinical trials of these vaccines. However, there are already

recommendations published by various COVID-19 Task Forces for the safety guidelines of vaccines to this particular age group.

For the IVF field, the American Society for Reproductive Medicine (ASRM) Covid-19 Task Force has issued their Update No. 11 and No. 12 titled “COVID-19 Vaccination” and “Testing and Vaccine Truths”, respectively. These updates also include the topic on the safety of vaccination for pregnant women and those who are contemplating pregnancy.

In these updates, it has been pointed out that COVID-19 vaccines do not cause infertility in women or men and there was a randomized blinded Pfizer-BioNTech trial that showed pregnant women still conceived after receiving the vaccine same as for those who

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received only a placebo. Moreso, it was found that pregnancy is a risk factor for severe COVID-19 disease which gives this group all the more reason to receive the vaccines under the guidance and supervision of their physician. Also, the mRNA vaccines are not composed

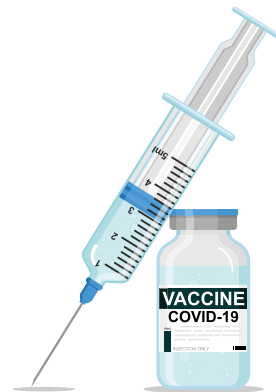
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COVID-19 Vaccines and Pregnancy Safety

Continued from Page 1.

of live virus which makes the mechanism of action and existing safety data reassuring for this group to receive COVID-19 vaccines.

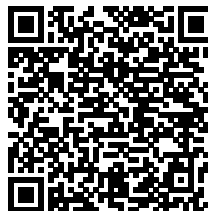
Today, vaccines are regarded as one of the most effective and cost-efficient medical products ever developed, that has led to the control and eradication of many transmittable diseases. Immunization and vaccination save lives globally to all, heedlessly of age, gender or location.



Hyperlink



1. Update No. 11 - <https://www.reproductivefacts.org/globalassets/asrm/asrm-content/news-and-publications/covid-19/covidtaskforceupdate11.pdf>



2. Update No. 12 - <https://www.reproductivefacts.org/globalassets/asrm/asrm-content/news-and-publications/covid-19/covidtaskforceupdate12.pdf>

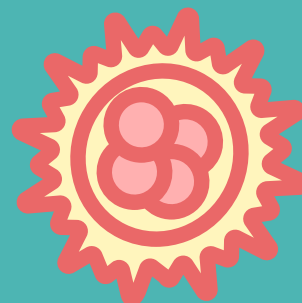
Frozen or Fresh Embryos? Which is better?



When *in vitro* fertilization or IVF is first developed, fresh embryos are the only available option for embryo transfer to the carrier's uterus. Cryopreservation for the gametes or freezing the sex cells is not yet known and is not being used during those times. But as our generation advances, the IVF technology tremendously improved, innovations after innovations are being made and discovered. Many techniques are being incorporated with IVF to make it more reliable, effective and of course convenient to the patients, especially with the female side. Hence, freezing harvested egg cells or even fertilized embryos are being discovered and done. From then on, frozen embryo transfers (FETs) taken place. FET is now also being considered when doing IVF, but both frozen and fresh embryo are used depending on the patient's choice.

But is there a difference between fresh and frozen embryos? Is there any advantage in using frozen embryo over fresh ones?

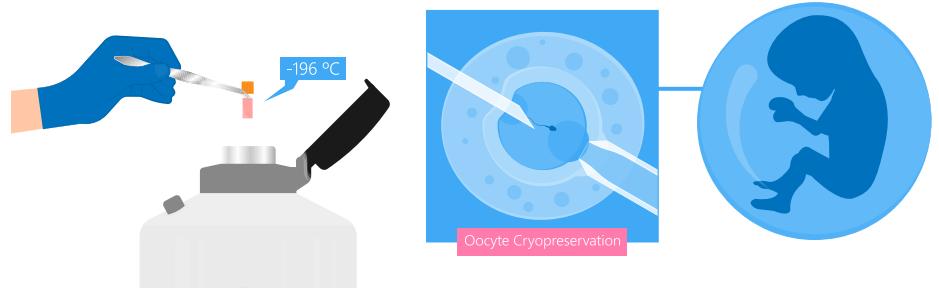
Fresh embryos



The term "fresh embryos" refers to newly collected egg cells from the woman's ovaries then fertilized with the sperm through the process of *in vitro* fertilization. After being monitored and cultured in a laboratory, a ready embryo is now ready to be transferred to the patient's womb. The main benefit of fresh embryo transfer is that there is a shorter time for the conception, since there is only 5 day waiting period between egg retrieval and embryo transfer to the uterus.

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Social Egg Freezing & its Social Implications



Four decades after the birth of Louise Brown via IVF, a societal inclination to postponing reproduction and motherhood have been perceived among women of procreative age for the past 10 or so years. The trend on this delay is multi-factorial but the woman's lifestyle seems to be a primary factor. From prioritizing a budding or busy

profession, to finding the right partner, the concept of "social egg freezing" came about as a potential solution to women who may be affected by "age-related infertility" when the time comes that they choose to get pregnant. And if you are watching the medical series "New Amsterdam", the successful oncology doctor in the show (Dr. Helen Sharpe, a widow of about 40), is contemplating over whether she should freeze her eggs.

of eggs transvaginally, with the subsequent freezing and storing of a woman's viable eggs. The freezing of eggs can be done using slow-freezing or flash-freezing (aka vitrification) wherein the latter has shown to increase the survival of oocytes after thawing process, and hence, improved pregnancy rates. Vitrification encompasses the utilization of cryoprotectants with the aim of solidifying the cell to prevent ice crystals formation. According to the ASRM-SART (American Society for Reproductive Medicine and the Society for Assisted Reproductive Technology) practice guideline, it is estimated that the survival rate of oocytes after vitrification and thawing is 90%–97%, the fertilization rate is 71%–79% and the implantation rate is 17%–41%.

Potential benefits of social egg freezing:

Social egg freezing is usually presented to women less than 38 years old, women who want to preserve the choice of having healthy, genetically-associated offspring at a later date. Social egg freezing, followed by *in vitro* fertilization (IVF) and embryo transfer, is perceived here to offer vital benefits to these women who wish to become pregnant at an older age. For one, it affords them with the opportunity of being a genetic parent by means of their frozen-thawed eggs, and two, it decreases the hazard of having a child/children with chromosomal aberrations.

Are there associated medical risks?

Just like any other medical procedure, risks associated with

Social egg freezing is a fertility preservation technique that is heavily talked about from a scientific, social and moral standpoint. This practice means preserving and storing a woman's oocytes (egg cells) for non-medical purposes. Previously, freezing of eggs has been an option only for medical motives to women who are undergoing cancer treatments or other fertility-related conditions. These women are deemed not to have other alternatives for fertility preservation. Currently, such medical revolution is broadly upheld and offered to healthy, fertile women who want to delay parenthood.



What is Egg Freezing?

This is a procedure that includes the stimulation of the ovaries' hormones, followed by the retrieval



Frozen embryos

Frozen embryos, from the word itself "frozen", the embryo underwent a process of freezing to preserve its life. Embryo cryopreservation has existed for many years but since cells are primarily made up of water, ice crystal formation takes place and it damages cells when they are eventually thawed. But as years go by, scientists discovered a process called vitrification to prevent this crystal formation to happen and finally preserve the embryo without compromising its integrity. Using cryoprotectants, it will prevent the biologic tissue from the formation of ice crystal from the freezing process.

But according to Kate Devine, M.D. of Shady Grove fertility's Washington D.C., patients who use frozen embryos now experience success rates equal to or better than, those from fresh embryo cycles. Using fresh or frozen embryos does not have a difference in terms of the result, the chance of getting pregnant using either is the same.

To sum up all the above, both frozen and fresh embryos will yield the same result. Both are beneficial to the patients.

ovarian stimulation and egg retrieval should be noted and talked to all women who inquire about social egg freezing. One of the most notable medical risk linked with egg freezing are those from ovarian stimulation, like in the case of ovarian hyperstimulation syndrome. Most common symptoms observed include headaches, fatigue, abdominal pain, nausea, and breast tenderness. The more serious symptoms include blood clots, vomiting, shortness of breath, and even dehydration (which will prompt for a woman to be hospitalized).

Social implications of social egg freezing:

With social egg freezing being viewed as an important reproductive option, some women may come to a conclusion that this is the best way to safeguard the chance of having a healthy, genetically-related offspring in the future.

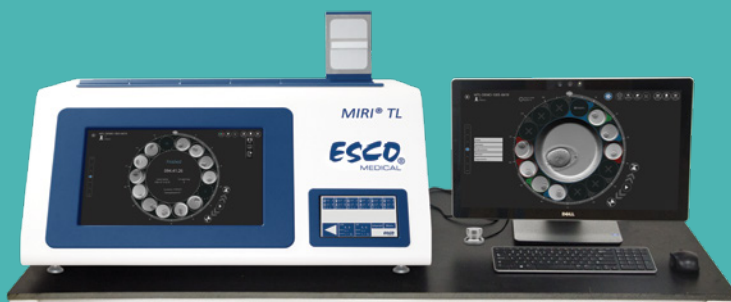
The idea is like having a “back-up plan” that consents young, fertile women to complete their degree, establish a good career and attain financial solidity, or even take the time to find a proper long-term partner. These factors could heavily influence women’s informed reproductive choices. But it should be noted that doctors be wary not to add-up pressure on women by depicting egg freezing as the only option to avoid future guilt.



Also, a woman should be informed that social egg freezing requires considerable financial resources, henceforth, it is deceptive to emphasize that such option is a value to all women.

Some people may perceive social egg freezing as an act of commodification and commercialization of the human reproduction. There are challenging viewpoints and information accessible from different sources, and medical professionals have an inimitable opportunity to support women in providing truthful and sensible information about their reproductive well-being. Such information and discussion of its financial, ethical and societal implications should be made accessible to all women (irrespective of their age, disability, health, sexual orientation, or socio-economic status) who have questions regarding social egg freezing.

What's New with the MIRI® TL Viewer Software?



The TL Embryo Viewer can now easily measure the embryo as the embryologist can create, update and delete the embryo measurement. Also, the measurement is included in the exported image and in the time lapse report.

For the Annotation Tools, events annotations are now in alignment for comparison, but measurements and calculations are listed normally.

For the Summary View, there is now an option where the embryologist can select or deselect the dish position he/she desires to view by clicking the “checkmark”. However, the ability to activate/deactivate dish positions in a summary view was removed.

For the Fetal Heart Beat, the

embryologist can now change it into numerical evaluation. It can now be set from 0 to 5 by clicking the “+” or “-” keys.

Wait, there’s more. Additional features that will make the use of the MIRI® TL more desirable are as follow:

1. Ability to add more embryo
The creation of a new embryo state consists of 4 states:
 - a. Ability to activate/deactivate the created embryo state.
 - b. “Key” – one symbol, which will indicate the selected well on a “Dish map”.
 - c. “Name” – created embryo state name.
 - d. Embryo state color selection.
2. Added “Gestational Sacs” field
In the treatment result section, there is

added a new “Gestational Sacs” field.

3. Added “Outcome” field
The user can determine the used treatment outcome for the patient, either pregnant or not pregnant as an example. This field can be exported to the time lapse report as well.
4. Ability to clear treatment values
The embryologist can now delete anything they write in an open text field.
5. Ability to filter patient last treatment outcome
There is now a possibility to filter patients by their last treatment outcome. The option is located at the top of the screen in the “Patient”. There is also a newly added “Last outcome” column in the patient treatment list view.

2021 Academic Conference Season 1

The 1st season of the 2021 Academic Conference Season 1 on "Laboratory Strategies for High Qualified Embryo Rate" culminated its 3-part conference last March 18, 2021. The 1st two parts were conducted last February 4 and 25.

Here is the summary of the said Academic Conference:

Topic: Key Points for Vitrification and Cryopreservation of Embryos and Oocytes Date: February 4, 2021

Speaker: Zhiguo Zhang, Ph.D.
 USTC Postdoctoral Fellow, Associate Professor, Master Supervisor.
 Deputy Director of Reproductive Medicine Center, First Affiliated Hospital of Anhui Medical University.
 Director of Laboratory of Embryology, Genetics, Laboratory and Andrology.

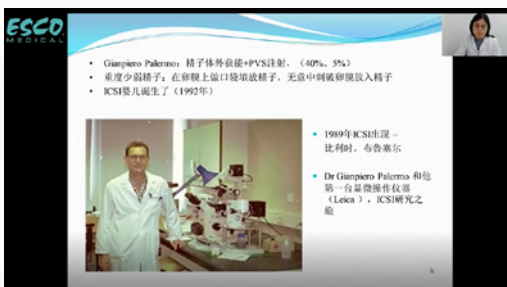
Platform: streamed via vzan, broadcast/livestream platform in China Attendees: 466 embryologists

2021 Academic Conference Season 1
Laboratory Strategies for High Qualified Embryo Rate
 webinar

Schedule

- Feb. 4th 16: 00-17: 30**
 Key Points for Vitrification and Cryo-preservation of Embryos and Oocytes
 Zhang Zhiguo
- Feb. 25th 16: 00-17: 30**
 All about ICSI...
 Ding Xiaofang
- Mar. 18th 16: 00-17: 30**
 Quality Control of Key Indicators in Embryo Laboratory
 Luo Chen

For more messages, Scan the QR code.



Topic: All about ICSI

Date: February 25, 2021

Speaker: Xiaofang Ding, Ph.D.
 Doctor of Medicine, Associate Chief Technician, Master Tutor, Reproductive Center, Union Hospital Affiliated to Huazhong University of Science and Technology.
 Director of Embryology Laboratory, member of Reproductive Genetics Group of Family Planning Branch of Chinese Medical Association, member of Hubei Reproductive Immunology Society, member of Data Management and Artificial Intelligence Group of Assisted Reproductive Institutions.

Platform: streamed via vzan, broadcast/livestream platform in China Attendees: 450 embryologists



Topic: Quality Control of Key Indicators in Embryo Laboratory Date: March 19, 2021

Speaker: Chen Luo
 Master senior experimentalist, Head of Reproductive Center laboratory, Nanfang Hospital, Southern Medical University

Platform: streamed via vzan, broadcast/livestream platform in China Attendees: 395 embryologists



IVF Laboratory Safety and Infection Control

Procedures and policies on lab safety must be available to all laboratory personnel and should be reviewed annually by the laboratory director.

Protocols should be:

- Available for fire and electrical safety
- Internal and external disaster preparedness
- Provisions for equipment back-up in the event of equipment failure

A

Every body fluid sample (semen, blood, follicular fluid) should be handled using universal precautions. ****All donor tissues and fluids should be subjected to appropriate infectious disease screens and quarantine periods where applicable.*



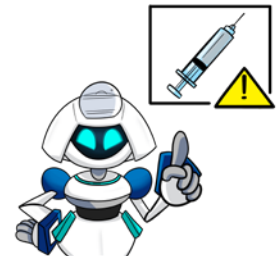
B

All accredited laboratories are required to have an Exposure Control Plan.



C

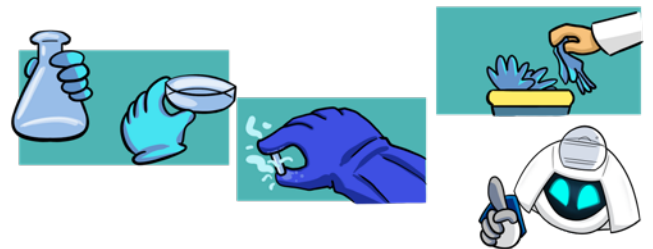
Extraordinary precautions should be taken to avoid accidental wounds from sharp instruments contaminated with body fluids.



D

The Use of Gloves:

- Disposable, nontoxic (non-powdered) gloves should be worn when handling fresh or frozen body fluids or any material that has come in contact with body fluids.
- Use of cryogloves (if cryogenic materials are handled).
- Should be removed and discarded when leaving the laboratory or handling the telephone.
- Should never be reused.



E

A laboratory coat or appropriate gown should be worn in the laboratory and removed upon leaving the laboratory.



F

Safety glasses or goggles are suggested where appropriate.



G

On Hand washing:

- Hands should be washed after removing gowns and gloves and immediately if they become contaminated with body fluids.
- All hand washing should be done with disinfectant soap and hot water or alcohol-based solutions.



H

Disposable laboratory supplies must be used whenever possible.

**I**

On Contamination:

- Contaminated laboratory equipment and/or work surfaces should be disinfected and sterilized after a spill
- Example of disinfection solution is 1:10 dilution of 5.25% sodium-hypochlorite household bleach in water

**J**

Mechanical pipetting devices should be used for the manipulation of liquids in the laboratory.

****Mouth pipetting is never permitted.*

**K**

Guidelines on procedures and manipulation of body fluids:

****should be performed to minimize the creation of droplets and aerosols.*

- Complete facemasks or the use of appropriate hoods (in case of fixatives) should be considered.

****Centrifugation or vigorous mixing of open containers represents examples of this problem.*

- Centrifuges may be placed in exhaust hoods during use or non-aerosol centrifuges may be used.

****Capped tubes must be used for centrifugation.*

**L**

Eating, drinking, smoking, application of makeup, or manipulation of contact lenses are not permitted in the laboratory.

**M**

On disposal:

- Body fluid samples and disposable laboratory supplies should be disposed of properly in a container marked BIOLOGICAL HAZARD
- Needles and other sharps should be handled with extreme caution and discarded in special containers.

**N**

Policies must be established to document all adverse laboratory incidents.

****All incident reports and corrective action plans should be included in the Quality Assurance review.*

**O**

On Material Safety Data sheets

Copy availability of such document that list the details of hazards and the precautions for safe handling and storage of chemicals and reagents should be available.



In IVF laboratories, the diversification of the applied procedures necessitates a major attention and concentration, a systematic check of the results obtained, and a more complex training program.

All these involvements require high-laboratory standards with highly qualified personnel, as well as defined quality management systems. Keep in mind the safety of your client's embryo/ specimen, and your own personal safety as an IVF clinician.

Effects of Cigarette Smoking on Fertility



Infertility is a condition that affects millions of people around the world and the numbers are rising each year. Infertility is defined as, failure to establish a clinical pregnancy after 12 months of regular unprotected sexual intercourse. Most of the time, infertility is being addressed as a “women’s problem”. More often than not, people tend to point out women’s age, body built, hormonal imbalance, reproductive health problem, and other factors as reason for the couple’s inability to bear a child. Little did they know is that men also share factors in the said problem, according to National Center for Biotechnology Information, female factors contribute to about 37% of infertility problems, whereas male factors account for about 29%, and combined female and male factors for about 18% of causes; the remaining 16% is due to genetic factors or idiopathic infertility .

The diagnosis of infertility can be attributed to many factors: anatomical abnormalities, hormonal and metabolic problems, age, infection, lifestyle (smoking, stress, alcohol, etc.) tubal disease, cancer treatments, antiphospholipid syndrome, genetics and environmental chemicals. Of all these causes, smoking is one of the common activities that both men and women habitually doing as a past time which they did not know has an impact on their fertility.

Effects on Women

Cigarette smoking represents a worldwide health concern and has been consistently involved in various diseases including reproductive disorders. Despite remarkable claims and evidence on its damaging and

harmful effects, millions of women aged 15 and above are still smoking on a daily or non-daily basis. A study found that smoke cigarette contains about 4000 substances belonging to a variety of chemical classes, including polycyclic aromatic hydrocarbons, heavy metals, and alkaloids, which are all compounds displaying reproductive toxicity. In other words, cigarette smoke is a complex mixture of compounds that could potentially exert effects on different targets within the reproductive system. Aside from these, smoking has been shown to decrease the outcome of Assisted Reproductive Technologies (ART) because of the effect of cigarette smoke on the uterus and its implantation. Listed below are the effects of cigarette smoking on different organs in the female reproductive system.



1. Effects on the ovary:

- Early menopause
- Poor quality of oocyte

2. Effects on oviduct:

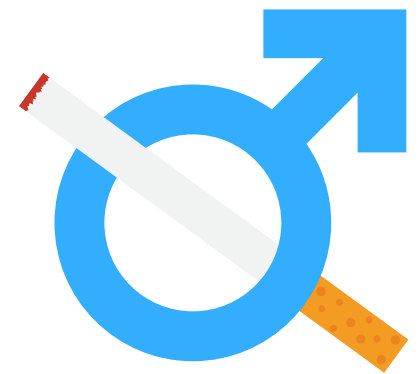
- Increased risk of ectopic pregnancy
- Affected oviductal smooth muscle cells contraction

3. Effects on the uterus or implantation:

- Delayed implantation
- Decreased uterus receptivity

4. Effects on menstruation:

- Increased oligomenorrhea
- Increased dysmenorrhea
- Heavy bleeding



Effects on Men

As mentioned earlier, cigarette smoke contains about 4000 kinds of constituents including nicotine, tar, heavy metal, etc. One of the main hazardous substances of tobacco is nicotine, and it can be found in both serum and semen smokers. A study shows that higher nicotine concentration decreases sperm mobility and viability parameters significantly. Moreover, nicotine is considered as a toxic component of tobacco smoke that directly impairs male reproductive functions. Heavy metals found in tobacco smoke can also reduce sperm cell count, sperm motility and increases DNA fragmentation and sperm abnormality. Aside from that, the tar in cigarettes contains benzo(a) pyrene which is a polycyclic aromatic hydrocarbon considered to be the major etiology of DNA damage in smokers. Despite these chemical compounds that

can be found in a cigarette, many men are still using tobacco and unknowingly affect their fertility. Listed below are the different effects of cigarette smoking on the male reproductive system.

1. Epididymis

Detached ciliary tufts may indicate a testicular pathology which is a consequence of smoking

2. Varicocele

It is due to the dilation of the pampiniform plexus of the veins near the upper and lateral parts of the scrotum and causing the elevated temperature in the groin. As a result, it causes hyperthermia which is proven to be harmful to sperm development and reduced male fertility.

3. Testicular Function

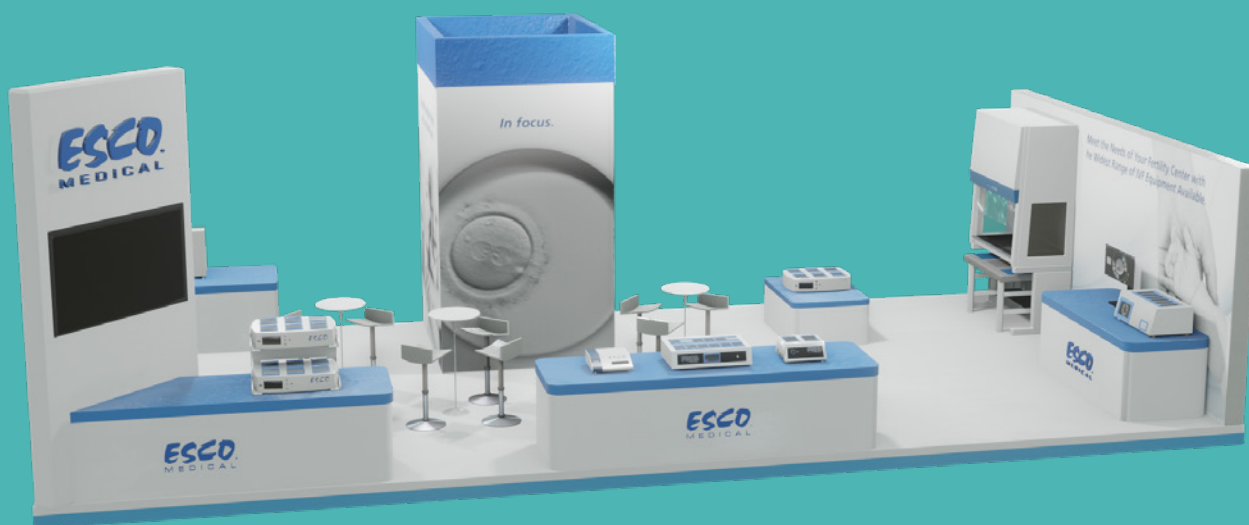
Oxygen insufficiency which can

be caused by smoking is therefore suspected to negatively affect the testicular function of the smokers

4. Erectile Dysfunction

As a result of 30 years of research, tobacco smoking is scientifically recognized as a risk factor for erectile impotence.

Esco Medical Re-launches its Virtual Exhibit



After a successful run last year, Esco Medical's virtual exhibit returns for another round of product display wherein various elements of a live exhibit is translated into multimedia file format and is broadcasted via <https://escovirtualreality.com/>

Happening this March 22 – 26, 2021, the Esco Medical Virtual Exhibit showcases the innovative products of the company through a 3D virtual booth. Esco Medical's

sales personnel and specialists are there to entertain booth guests and visitors. All IVF professionals are welcome to visit and participate in this exhibit.

Get to know more about Esco Medical's fertility-clinic and laboratory solutions. We have an array of advanced technologies that range from workstations (multi-zone ART workstations) to incubators (MIRI®, MIRI® TL) and other products like centrifuges and anti-vibration tables.



10th ASPIRE Congress to Go Virtual

With the ever changing challenges posed by the COVID-19 situation since last year, majority of the exhibits and conferences (big or small) were put on hold. Some opted to do these gatherings online. ASPIRE (or the Asia Pacific Initiative on Reproduction) Congress is one of the largest Assisted Reproductive Technology (ART) events in the Asia-Pacific region was supposed to happen in Manila, Philippines last year. Eventually, the organizers opt to push it this year and will be done virtually.

ASPIRE's purpose is "to promote awareness of infertility and ART, and to improve infertility-related services in the Asia-Pacific region". The virtual congress, which will happen from April 30 – 2 May and 8 – 9 May 2021, aims at enabling ART professionals and industry personnel from all over the world to attend and enjoy the academic exchange; and learn about concerns, advancements and technologies in the field of reproduction within the Asia Pacific regions.

Esco Medical is one with ASPIRE's goal of further promoting awareness of infertility and ART in the region. We hope to see you all there!



Dry and Humidity Incubators: What's the Difference?

Incubators are some of the most indispensable devices within an *In Vitro* Fertilization (IVF) laboratory. Through the years, these incubators have undergone various changes and advances in their physical form and design, to their features. From the conventional CO₂ incubators to the bench-top models to incubators using time-lapse system, this technological wonder has come a long way.

Bench-top incubators are some of the most notable and frequently used in the IVF lab. They are able to offer customized culture chambers and cutting-edge technology with the aim of improving environmental stability for developing embryos. Such incubators come in dry or humidified models. Basically, the dry and humidity incubators have the same features except for the fact

that a humidity incubator has built-in humidity sensor for more accurate and continuous reading of humidity source. Noteworthy to mention is the point that incubators initially made use of thermal conductivity CO₂ sensors wherein moisture was a vital component to the impeccable performance of such sensor. Eventually, infrared CO₂-regulating sensors have replaced such conductivity approach, bringing about development of moisture-free incubators.

Concerns in the IVF clinic such as smaller workspace paved way for the development of scaled-down version of some of these IVF devices. Incubators with smaller footprint have become an essential consideration in the choice of such device. Such "mini versions" are similar to their original counterpart, only that their physical structure has been

reduced for them to be conveniently accommodated within a lab that has limited space.

Common questions about the use of "mini dry and humidity incubators":

Question: What is / are the difference/s between mini dry incubator and the regular ones?

Answer: The mini dry incubator is just a scaled-down version of a regular one. It means that it has a smaller footprint; hence, it could fit in IVF laboratories with minimized spaces. Take the case of an Esco Medical MIRI® Incubator and its Mini MIRI® Dry and Humidity incubators. A regular MIRI® Incubator has 6 fully independent culture heat chambers (each with its own heated bottom, heated lid and a heating

Continue reading to page 11 

optimization plate), while the mini one has only 2.

Another difference is noted on the N₂ gas consumption wherein the Mini MIRI® Dry makes use of <10L/h N₂ gas while the humidity model utilizes approximately <12L/h. Other than these variances, the key features like the speed of recovering temperature and gas parameters after opening a chamber, to the built-in gas mixer and the high-performance CO₂ and O₂ sensors, are generally the same.

Question: What is / are the advantage/s of a compact designed MIRI® Incubator?

Answer: The obvious advantage is that it can be utilized by small-scale IVF clinics (those with limited space) without compromising the quality and function expected of an IVF incubator.

Question: What is the difference between a dry and a humidity incubator?

Answer: The difference lies on the presence and/ or absence of a water or humidity source. Dry incubators are desktop CO₂ and O₂ incubators that directly warm dishes in the chambers allowing superior temperature conditions in comparison to conventional incubators, without using any humidity source (moisture-



Mini MIRI® Dry and Humidity Incubators

A compact incubator ensuring unique environment for human embryo culture

Built on the strong and reliable MIRI® Multiroom, the Mini MIRI® is an incubator that provides a stable culture environment. It has two chambers that prevent cross-contamination while HEPA/VOC filtration cleans the incoming airstream. The compact design and direct heat regulation further translate to faster temperature and gas recovery.

Key Features



Heated Lid

Prevents condensation and enhances temperature regulation and recovery.



Optional SAFE Sens Integration

For continuous pH measurement.



Dual Chamber System

This is ideal because any disruption (e.g. temperature drop after opening the lid) has zero impact on the rest of the system. Also, calibration is much simpler since there is no crossover of heat from adjacent chamber.



Ergonomic Rotatory Key

This is used to access the menu, to toggle among settings and to set parameter values.

free). Some professionals believe that presence of humidity brings about the prospect of microbial overgrowth, which can adversely alter the cultured embryo's development.

On the other side of the spectrum, some studies would claim that humidification during incubation increases the rate of blastocyst formation, and eventually, pregnancy rate. In a humidity incubator like the Mini MIRI® Humidity, a water

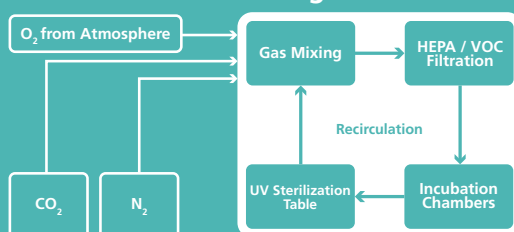
bottle is located on the side of the unit for refilling and easy control of water level. All other features are similar with that of a Mini MIRI® Dry Incubator.

The *in vivo* state is moist, and imitating this *in vitro* appears to be physiologically correct. Yet, there is no collective settlement among scientists (IVF professionals) with regards to the advantages of dry against humid incubators.

Mini MIRI® Dry



Airflow Diagram



High quality airstream via HEPA/VOC filter + UV

The filter module can be easily replaced once used.

The gas in the MIRI® is continuously recirculated through a HEPA/VOC filter. A UV-C light (254 nm) sterilizes the airstream before passing through the filter.

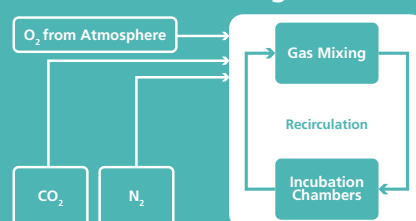
Mini MIRI® Humidity

It has built-in humidity sensor for accurate and continuous readings.

The water bottle is located on the side of the unit for refilling and easy control of water level.



Airflow Diagram

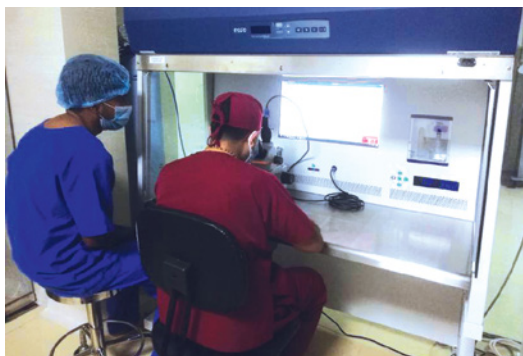
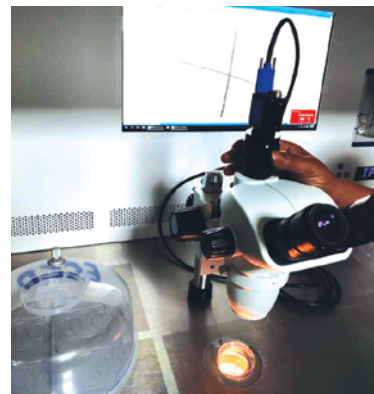


Esco Medical offers a wide array of IVF devices that caters the industry's specific needs. Aside from its MIRI® Multiroom incubators, MIRI® Time-Lapse incubator, Esco Medical also manufacture incubators with smaller footprint like the Mini MIRI® Dry and Humidity.

Medical Installations

Bangladesh

Clinic: Dhaka Combined Military Hospital
 Address: Dhaka Cantonment , Dhaka
 Date Installed: 27.08.2020
 Devices installed: MAW-4D8,
 2020-146852



Germany

Clinic: IVF Valentinschhof
 Address: Hamburg Germany
 Devices installed: MIRI® TL-12 with
 SAFESens and MIRI® Multiroom with
 SAFESens

Lab Director Ms. Stefanie Schansker, IVF
 Valentinschhof, Hamburg, Germany
 Director Ms. Stefanie Schansker, IVF
 Valentinschhof, Hamburg, Germany



MIRI® TL-12 installed with SAFESens



® equipped with SAFESens



IVF Lab Personnel attending
 TL-12 training



Morten giving the training on TL-12

India

MIRI® TL6 Installation completed today at Dr Jay Mehta's - Shree IVF Clinic
 Dr. Jay Mehta is a Gynecologist with an International Reputation for Endoscopic Surgery and is followed by many doctors across the world for his skill set of endoscopic surgery. Dr Mehta also runs the largest educational group on WhatsApp and Facebook for his fellow colleagues where his surgeries are broadcasted to all the members.
 Website: <https://www.shreeivfclinic.co>



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Manufacturer:
Esco Medical Technologies, Ltd.
 Draugystes g. 19, 51230 Kaunas, Lithuania
 Service address: Please contact your local distributor for details.
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Manufactured for and sold under company trade mark:
Esco Medical ApS
 Kringellets 10, 8250 Egå,
 Denmark
 Tel.: +45 53973067

medical@escoglobal.com www.esco-medical.com

Esco Micro Pte Ltd
 21 Changi South Street 1,
 Singapore 486777
 Tel.: +65 6542 0833
 Fax: +65 6542 5732