

VIEWS AND REVIEWS**747 Introduction: Management of the luteal phase in assisted reproductive technology**

G. Griesinger and D. Meldrum
Luebeck, Germany; and La Jolla, California

The optimal regimen of luteal phase support for successful implantation varies among treatment protocols.

749 Role of gonadotropin-releasing hormone agonists, human chorionic gonadotropin (hCG), progesterone, and estrogen in luteal phase support after hCG triggering, and when in pregnancy hormonal support can be stopped

D. de Ziegler, P. Pirtea, C. Y. Andersen,
and J. M. Ayoubi
Suresnes, France; and Copenhagen, Denmark

Luteal phase support indicated in assisted reproductive technology can be administered with the use of different progesterone preparations or alternate new options such as microdose human chorionic gonadotropin or gonadotropin-releasing hormone agonist.

756 Oral dydrogesterone for luteal phase support in fresh in vitro fertilization cycles: a new standard?

G. Griesinger, C. Blockeel, and H. Tournaye
Luebeck, Germany; and Brussels, Belgium

Oral dydrogesterone is at least as effective as micronized vaginal progesterone for luteal phase support in fresh in vitro fertilization cycles.

763 Luteal phase support after gonadotropin-releasing hormone agonist triggering: does it still matter?

C. Benadiva and L. Engmann
Farmington, Connecticut

Intensive luteal support and adjuvant low-dose human chorionic gonadotropin administered either at the time of gonadotropin-releasing hormone agonist trigger or 35 hours later both facilitate fresh embryo transfer, with excellent reproductive outcomes.

768 Programming the endometrium for deferred transfer of cryopreserved embryos: hormone replacement versus modified natural cycles

E. R. Groenewoud, B. J. Cohlen, and N. S. Macklon
Den Helder and Zwolle, The Netherlands; London, United Kingdom; and Roskilde, Denmark

Hormone replacement cycles and modified natural cycles offer similar clinical outcomes. The optimal approach is determined by other factors, such as convenience for the patient and for the clinic.

INKLINGS**775 Recognizing and eliminating bias in those with elevated body mass index in women's health care**

S. R. Lindheim, T. L. Glenn, and L. D. Whigham
Dayton, Ohio; and El Paso, Texas

Fertility and Sterility® (ISSN 0015-0282) is a registered trademark of the American Society for Reproductive Medicine and is published monthly in two volumes by Elsevier Inc., 230 Park Avenue, Suite 800, New York, NY 10169-0901, USA. Periodicals postage paid at New York, NY and at additional mailing offices (not valid for journal supplements). Membership dues to the American Society for Reproductive Medicine include \$50.00 for *Fertility and Sterility®*. Publication of an advertisement or other product mentioned in *Fertility and Sterility* should not be construed as an endorsement of the product or the manufacturer's claim. Statements and opinions expressed in articles and communications herein are those of the authors and not necessarily those of the editors, publisher, or the American Society for Reproductive Medicine or any organizations endorsing this journal. **Subscriptions:** Personal Rates: US\$483.00 (USA and Canada), US\$682.00 (all other countries); Students: US\$183.00 (USA and Canada), US\$181.00 (all other countries). Prices include postage and are subject to change without notice. **Orders, claims, and journal inquiries:** Please visit our Support Hub page <https://service.elsevier.com> for assistance.

POSTMASTER: Send address changes to *Fertility and Sterility*, Elsevier, Journal Returns, 1799 Highway 50 East, Linn, MO 65051, USA.



777 Evaluation of the azoospermic male: a committee opinion

Practice Committee of the American Society for Reproductive Medicine in collaboration with the Society for Male Reproduction and Urology
Birmingham, Alabama

The purpose of this document is to review the current methods of diagnosis and evaluation for men with azoospermia.

REFLECTIONS**783 Moving the science forward on dietary patterns and male fertility**

A. J. Gaskins
Boston, Massachusetts

784 Fibroids: when should they be removed to improve in vitro fertilization success?

H. S. Taylor
New Haven, Connecticut

786 Better together than alone: the cumulus benefits

M. Meseguer, C. Hickman, and A. Pellicer
Valencia, Spain; and London, United Kingdom

788 Chronic endometritis and the plasma cell, fact versus fiction

J. V. Groth
Chicago, Illinois

789 Time to think about neonatal outcome in assisted reproductive technology

D. de Ziegler, P. Pirtea, M. Poulain, S. Vanlieferinghen, and J. M. Ayoubi
Suresnes, France

791 Big data approach to evaluation of birth defects and assisted reproductive technology: the Chinese linkage cohort

M. D. Sammel, N. Stentz, and D. K. Shah
Philadelphia, Pennsylvania

793 Marijuana and reproduction: time to raise the evidence bar to a new high

J. E. Chavarro
Boston, Massachusetts

795 Clinical utility of ovarian-stimulation intrauterine insemination

R. A. Wild
Oklahoma City, Oklahoma

797 What is a person with depression who wants to have a baby to do?

S. R. Holley
San Francisco, California

799 Polycystic ovary syndrome and mental health: a call to action

N. Santoro
Aurora, Colorado

800 Is hope on the horizon for premature ovarian insufficiency?

G. W. Bates Jr.
Birmingham, Alabama

802 Non-coding RNAs: an important regulatory mechanism in pathogenesis of uterine fibroids

Q. Yang and A. Al-Hendy
Chicago, Illinois

804 What do you see in *Fertility and Sterility* video articles?

J. P. Parry
Madison, Mississippi

805 Pediatric ovarian tissue cryopreservation: time to lift the experimental label?

M. S. Christianson and S. R. Lindheim
Baltimore, Maryland; and Dayton, Ohio

807 Old insights, same questions

O. Carpinello and A. DeCherney
Bethesda, Maryland

ORIGINAL ARTICLES

ANDROLOGY

809 Dietary patterns are positively associated with semen quality

M. Efrat, A. Stein, H. Pinkas, R. Unger, and R. Birk
Ariel, West Bank; and Ramat Gan, Petah Tikva, and Tel Aviv, Israel

Adherence to four dietary indexes is associated with higher overall sperm quality, with the Alternative Healthy Eating Index best associated and thus recommended as a clinical and practical nutritional tool for semen health.

ASSISTED REPRODUCTION

817 Effect of type 3 intramural fibroids on in vitro fertilization–intracytoplasmic sperm injection outcomes: a retrospective cohort study

Online Extra

L. Yan, Q. Yu, Y.-n. Zhang, Z. Guo, Z. Li, J. Niu, and J. Ma
Jinan, People's Republic of China

Type 3 fibroids exert a negative impact on the rates of implantation, clinical pregnancy, and live birth in patients undergoing in vitro fertilization–intracytoplasmic sperm injection.

823 Cumulus oophorus complexes favor physiologic selection of spermatozoa for intracytoplasmic sperm injection

C. Wang, G. Feng, J. Shu, H. Zhou, B. Zhang, H. Chen, R. Lin, X. Gan, Z. Wu, and T. Wei
Guangxi, People's Republic of China

The use of cumulus oophorus complexes to select spermatozoa for intracytoplasmic sperm injection seems to be an effective method.

832 Comparison of the prevalence of chronic endometritis as determined by means of different diagnostic methods in women with and without reproductive failure

Y. Liu, X. Chen, J. Huang, C.-C. Wang, M.-Y. Yu, S. Laird, and T.-C. Li
Hong Kong, SAR China; and Sheffield, United Kingdom

Based on new methods of plasma cell assessment, the prevalence of chronic endometritis in women with various categories of reproductive failure may have been overestimated in earlier studies.

EPIDEMIOLOGY

840 In vitro fertilization, interpregnancy interval, and risk of adverse perinatal outcomes

Online Extra

K. Palmsten, M. V. Homer, Y. Zhang, S. Crawford, R. S. Kirby, G. Copeland, C. D. Chambers, D. M. Kissin, and H. I. Su, on behalf of the States Monitoring Assisted Reproductive Technology (SMART) Collaborative
Minneapolis, Minnesota; La Jolla, San Ramon, California; Atlanta, Georgia; Tampa, Florida; and Lansing, Michigan

Following live births, short and long interpregnancy intervals are associated with higher risks of adverse perinatal outcomes regardless of in vitro fertilization.

849 Association of birth defects with the mode of assisted reproductive technology in a Chinese data-linkage cohort

H.-t. Yu, Q. Yang, X.-x. Sun, G.-w. Chen, N.-s. Qian, R.-z. Cai, H.-b. Guo, and C.-f. Wang
Shanghai, People's Republic of China

Assisted reproductive technology appears to increase the odds of selected and the presence of multiple birth defects. Odds were increased for both fresh- and frozen-embryo cycles.

GENETICS

857 Frequencies of chromosome-specific mosaisms in trophoectoderm biopsies detected by next-generation sequencing

G. Nakhuda, C. Jing, R. Butler, C. Guimond, J. Hitkari, E. Taylor, N. Tallon, and A. Yuzpe
Vancouver, British Columbia, Canada

Mosaicism detected with the use of next-generation sequencing is not found with equal frequency in all chromosomes, and the distribution per chromosome is distinct from that of constitutional aneuploidy.

INFERTILITY

866 Association between use of marijuana and time to pregnancy in men and women: findings from the National Survey of Family Growth

A. M. Kasman, M. E. Thoma, A. C. McLain, and M. L. Eisenberg
Stanford, California; College Park, Maryland; and Columbia, South Carolina

Using a nationally representative population-based sample, marijuana use was not associated with time to pregnancy for both men and women.

872 Ovarian stimulation in infertile women treated with the use of intrauterine insemination: a cohort study from China

S. Huang, R. Wang, R. Li, H. Wang, J. Qiao, and B. W. J. Mol
Beijing, People's Republic of China; and Adelaide, South Australia and Clayton, Victoria, Australia

In couples with unexplained and mild male-factor infertility, intrauterine insemination with the use of letrozole may increase live birth rates compared with natural cycles, without increasing multiple pregnancy rates.

MENTAL HEALTH

879 Major depression, antidepressant use, and male and female fertility

E. A. Evans-Hoeker, E. Eisenberg, M. P. Diamond, R. S. Legro, R. Alvero, C. Coutifaris, P. R. Casson, G. M. Christman, K. R. Hansen, H. Zhang, N. Santoro, and A. Z. Steiner, on behalf of the Reproductive Medicine Network
Roanoke, Virginia; Rockville, Maryland; Augusta, Georgia; Hershey, Pennsylvania; Denver, Colorado; Philadelphia, Pennsylvania; Burlington, Vermont; Ann Arbor, Michigan; Oklahoma City, Oklahoma; New Haven, Connecticut; and Chapel Hill, North Carolina

Among infertile couples, male depression is associated with lower pregnancy rates following non-assisted reproductive technology treatment. Female antidepressant use is associated with early pregnancy loss, which may be medication class dependent.

REPRODUCTIVE ENDOCRINOLOGY

888 Androgen Excess- Polycystic Ovary Syndrome Society: position statement on depression, anxiety, quality of life, and eating disorders in polycystic ovary syndrome

A. Dokras, E. Stener-Victorin, B. O. Yildiz, R. Li, S. Ottey, D. Shah, N. Epperson, and H. Teede
Philadelphia, Pennsylvania; Stockholm, Sweden; Ankara, Turkey; Beijing, People's Republic of China; Atlanta, Georgia; Mumbai, India; and Clayton, Victoria, Australia
Women with polycystic ovary syndrome should be screened for depressive and anxiety symptoms at initial diagnosis given the impact of these disorders on treatment options and quality of life.

REPRODUCTIVE SCIENCE

900 Resveratrol improves in vitro maturation of oocytes in aged mice and humans

M.-J. Liu, A.-G. Sun, S.-G. Zhao, H. Liu, S.-Y. Ma, M. Li, Y.-X. Huai, H. Zhao, and H.-B. Liu
Jinan and Linyi, People's Republic of China
Resveratrol supplementing in vitro maturation medium improved oocyte quality.

908 Fertility rescue and ovarian follicle growth promotion by bone marrow stem cell infusion

S. Herraiz, A. Buigues, C. Díaz-García, M. Romeu, S. Martínez, I. Gómez-Seguí, C. Simón, A. J. Hsueh, and A. Pellicer
Valencia, Spain; London, United Kingdom; and Stanford, California

Human bone marrow-derived stem cell infusion supplied an optimal environment to promote follicle growth and fertility rescue in chemotherapy-damaged mouse ovaries and in human ovarian biopsies from poor-responder women.

919 Next-generation sequencing reveals differentially expressed small noncoding RNAs in uterine leiomyoma

T.-D. Chuang, Y. Xie, W. Yan, and O. Khorram
Torrance, California; and Reno, Nevada

The expression profile of sncRNAs was determined by next-generation sequencing and confirmed by qRT-PCR, indicating differential expression of selected snoRNAs, piRNAs, tRNA, and rRNA in leiomyoma.

930 Matrix metalloproteinases and their inhibitors in human cumulus and granulosa cells as biomarkers for oocyte quality estimation



A. Luddi, M. Gori, C. Marrocco, A. Capaldo, V. Pavone, L. Bianchi, L. Boschi, G. Morgante, P. Piomboni, and V. de Leo
Siena, Italy

Expressions of metalloproteinases MMP2, MMP9, and MMP11, and their tissue inhibitors TIMP1 and TIMP2 are finely tuned in granulosa and cumulus cells and related to ovarian function.

VIDEO

940 Ultrasound-guided follicle aspiration at time of laparotomy in a patient with Mayer-Rokitansky-Küster-Hauser syndrome



A. M. Eskew, D. E. Broughton, M. B. Schulte, K. R. Omurtag, and R. R. Odem
St. Louis, Missouri

The video demonstrates a unique case of successful ultrasound-guided follicle aspiration *in vivo* at the time of a laparotomy in a patient with Mayer-Rokitansky-Küster-Hauser syndrome.

941 Fertility preservation in pediatric female cancer patients



S. E. Arian, R. L. Flyckt, R. Herman, H. Erfani, and T. Falcone
Cleveland, Ohio; and Houston, Texas

We present ovarian tissue cryopreservation as an emerging option for fertility preservation in pediatric and prepubertal female patients diagnosed with cancer, prior to undergoing cancer treatment.

ERRATA

942 Errata



: Connects to the video for the article



: Article is only available online



: Complete article available online

Visit www.fertstert.org for e-only and e-extra materials

Complete Guide for Authors may be found on the journal's website, <http://www.fertstert.org/authorinfo>

Cover image provided by Jacques Donnez, M.D.: Laparoscopic observation of spontaneous human ovulation. A remarkably prominent vascular pattern was observed on the mature follicle. A small follicular area called the stigma was seen protruding like a reddish bleb from the follicular surface.