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# Evidence-Based Care for Couples With Infertility

Eleanor L. Stevenson, Patricia E. Hershberger, and Paul A. Bergh

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### ABSTRACT

When couples cannot achieve pregnancy, they often seek health care from medical and nursing specialists. The care the couple receives begins with a thorough assessment to determine the possible cause of infertility and to plan appropriate care to ensure the best chance for the couple to have a biological child. In this article, we provide an overview of the etiology and evaluation of infertility, the various treatment options available, and the appropriate clinical implications.

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#### Correspondence

Eleanor L. Stevenson, PhD, RN, Duke University School of Nursing, DUMC 3322, 307 Trent Drive, Durham, NC 27710.  
[eleanor.stevenson@duke.edu](mailto:eleanor.stevenson@duke.edu)

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Eleanor L. Stevenson, PhD, RN, is an assistant professor, Duke University School of Nursing, Durham, NC.

Patricia E. Hershberger, PhD, MSN, RN, FNP-BC, is an associate professor in the College of Nursing and an affiliate professor in the College of Medicine, University of Illinois at Chicago, Chicago, IL.

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Fertility and the process of bearing children is a significant experience for most individuals; however, many struggle to achieve pregnancy. Infertility is defined by the International Committee for Monitoring Assisted Reproductive Technology and the World Health Organization as "a disease of the reproductive system defined by the failure to achieve a clinical pregnancy after 12 months or more of regular unprotected intercourse" (Zegers-Hochschild et al., 2009, p. 4). Infertility is estimated to affect between 37 and 70 million couples worldwide (Boivin, Buntin, Collins, & Nygren, 2007). In the United States, approximately two million couples with infertility have been identified, which equals approximately 9% of married couples with female partners ages 15 to 44 years (Chandra, Copen, & Stephen, 2013). According to the 2010 National Survey of Family Growth, although infertility rates have actually dropped in the United States from 8.5% in 1982 to 6.0% in 2010, the inability to become pregnant or carry a pregnancy to term (i.e., impaired fecundity) has actually risen from 11% to 12% during the same time period (Chandra et al., 2013). This rate is greater than the Healthy People 2020 goal to reduce impaired fecundity by 10.8% (U. S. Department of Health and Human Services, 2015).

The incidence of infertility and impaired fecundity may actually be greater than sources are able to report. Information cited by the National Survey of Family Growth (Chandra et al., 2013) is potentially restricted because information is gathered from women who are considering pregnancy. The

survey does not include information from women who may have experienced infertility and, although they desire children, are no longer actively pursuing pregnancy.

As rates of infertility increase so do the numbers of individuals who seek infertility treatment from health care professionals. Each year between 1968 and 2010 in the United States, a fourfold increase that represented more than 2,000,000 health care visits occurred for infertility and impaired fecundity (Centers for Disease Control and Prevention [CDC], 2014). Although an estimated 12% (7.4 million) of American women ages 15 to 44 years have received infertility services at some point during their lifetimes (CDC, 2014), this estimate represents only half the women who actually need infertility services. Although some women and men seek care or services for infertility, not all move forward and undergo recommended treatment (Jain, 2006; Kessler, Craig, Plosker, Reed, & Quinn, 2013). Despite the underuse of services by all individuals affected by infertility, nurses and other health care providers who work in a variety of clinical settings have the opportunity to care for individuals with infertility and their partners. An accurate understanding of the process of fertility care is necessary to provide evidence-based and effective patient care.

The purpose of this article is to describe etiology and evaluation of infertility, the various treatment options available to help women and their partners achieve their family-building goals, and the

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## An estimated 7.4 million (12%) of American women ages 15 to 44 years have received infertility services at some point during their lifetimes.

nursing implications of this treatment. A glossary of widely used terms and abbreviations in the field is provided in [Table 1](#). We focus on couples that include a female and male partner. However, same-sex couples and individuals without partners will share many of the same challenges and additional ones that are beyond the scope of this article.

### Causes and Evaluation of Infertility

Despite the common perception that the cause of infertility mainly lies with the female partner, causes are equally distributed between the sexes. According to the [American Society for Reproductive Medicine \(2015\)](#), in 40% of couples with infertility, the female partner is either the sole or a contributing cause of infertility; in 40%, the male partner is either the sole or a contributing cause of infertility; and in the remaining 20% there are no identifiable reasons, which is labeled as unexplained infertility. Often, one or both partners will decide to seek health care because the couple has not been able to achieve pregnancy on their own. The focus of the evaluation should be not only on the etiology of infertility, but also on optimizing health through preconception education and screening (e.g., infectious disease, immunity, genetics).

### Contributors to Female Infertility

Women receive the most attention during fertility evaluation, in part because more established diagnostics and treatments are available for women and also because once pregnant, women need to maintain pregnancy until birth.

**Age.** Advancing age at the time of desired conception is a significant contributor to infertility in women. The average age of women when they have their first children has increased in past decades in the United States ([Finer & Philbin, 2014](#)), and trends are similar in many European countries ([Kohler & Ortega, 2002](#)). The process of aging leads to diminished ovarian reserves and increased chromosomal problems with the oocytes. Even though women often continue to have regular menstrual cycles past the age of 35 years, the actual percentage of ovulatory cycles decreases significantly ([Small et al., 2006](#)). Despite the regularity of menstrual cycles, a

decline in ovarian reserve is reflected by changing hormones that indicate a woman is nearing perimenopause; thus, many women have a false belief that the continued presence of a normal menstrual cycle indicates they are still fertile ([Small et al., 2006](#)). Although the pool of available oocytes declines with age ([Seifer & Naftolin, 1998](#)), the primary reason for age-related decline in fertility is the exponential rise in oocyte aneuploidy, in which a deviation in the normal number of chromosomes occurs ([Hunt & Hassold, 2010](#)).

**Endometriosis and fibroids.** Endometriosis affects 10% to 15% of all women of reproductive age and more than 30% of women with infertility. Uterine fibroids (e.g., leiomyomas or myomas) affect as many as 77% of women of reproductive age, of whom 20% to 50% are symptomatic ([Ciarmela, Critchley, Christman, & Reis, 2013](#)). These conditions may have a direct effect on fertility and quality of life because of dysfunctional uterine bleeding and pelvic pain. Endometriosis and fibroids are common indications for surgery, and the cost is considerable. For example, in one study investigators found that women in the United States diagnosed with endometriosis incur a loss of 10.8 hours (standard deviation, 12.2 hours) of work weekly and experience a decline in quality of life ([Nnoaham, et al., 2011](#)).

**Tubal blockage.** Fertilization that occurs in the fallopian tubes is attributable to tubal blockage. When tubes become damaged or blocked, primarily through scarring, a physical barrier prevents sperm from meeting the oocytes. The biggest contributor to tubal blockage is pelvic inflammatory disease, which is a serious complication of sexually transmitted infections (STIs) such as chlamydia and gonorrhea. The incidence of pelvic inflammatory disease is 1% to 2% yearly in women under the age of 25 years who are sexually active. Risk factors for pelvic inflammatory disease include history of an STI, young sexual debut, multiple sexual partners, inconsistent condom use, vaginal douching, smoking, alcohol use, and exchange of sex for drugs or money ([Crossman, 2006](#)). Fallopian tube abnormalities are estimated to account for 30% to 40% of female infertility. In addition to tubal blockages contributing to infertility, women with a history of pelvic inflammatory disease are at a 12% to 15% increased risk of experiencing ectopic pregnancies ([Stenkeler, Woodfield, Lazarus, & Hillstrom, 2009](#)).

Paul A. Bergh, MD, is a founding partner of Reproductive Medicine Associates of New Jersey and a clinical associate professor, Division of Reproductive Endocrinology, Department of Obstetrics and Gynecology and Reproductive Sciences, Robert Wood Johnson Medical School-UMDNJ, New Brunswick, NJ.

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