



Fertility, Stress, and the Female Athlete

By : Teresa Kenney, APRN, CFCP

The control center of the reproductive system is the pituitary gland. It awakens the ovaries during puberty and continues to act as the pacemaker of the fertility system throughout a young woman’s reproductive years. The pacemaker sends out signals to the reproductive organs during each cycle. These signals tell the organs what hormones to make which, in turn, stimulates ovulation.

The pituitary axis can be disrupted by many things. One thing that can cause this disruption is stress, whether it is an acute or a chronic stress. This is a protective mechanism of the body that occurs to sometimes stop pregnancy from occurring during extreme physical or emotional stress. God designed us to protect us naturally

as a stress the brain then temporarily slows down or shuts off the reproductive axis, leading to fertility problems and irregular or absent periods. Psychological stress as seen with strenuous exercise training is associated with an increase in cortisol (an adrenal stress hormone). This type of exercise can lead to weight loss by expending more calories than are taken in, leading to a decrease in body fat. This disrupts the entire menstrual cycle so the woman no longer ovulates, indicating that the body is less able to nourish a baby.

When a woman’s fertility pacemaker is disrupted, she will stop having periods regularly and sometimes will stop periods all together. This has been seen in highly competitive athletes like gymnasts, ballerinas, and marathon runners. However, in the regular population of exercisers and athletes, there is still the danger of disruption of the cycle. In the woman’s body stopping your period is a warning sign that the body is under too much stress and has too little energy stores to support healthy functioning. This is something called the female athlete triad. According to the American College of Sports Medicine (ACSM) the female triad refers to disordered eating patterns, amenorrhea (cessation of the menses), and *continued on page 2*

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DID YOU KNOW????

Nearly half of pregnancies among women are unintended, and about four in 10 of these are terminated by abortion^[1]. Twenty-two percent of all pregnancies (excluding miscarriages) end in abortion^[2].

In 2008, 1.21 million abortions were performed, down from 1.31 million in 2000. However, between 2005 and 2008, the long-term decline in abortions stalled. From 1973 through 2008, nearly 50 million legal abortions occurred^[2].

Each year, two percent of women aged 15-44 have an abortion. Half have had at least one previous abortion^[2,3].

At least half of American women will experience an unintended pregnancy by age 45 and, at current rates, one in 10 women will have an abortion by age 20, one in four by age 30 and three in 10 by age 45^[4,5].

From Guttmacher Institute, *In Brief: Fact Sheet – Facts on Induced Abortion in the United States*, August 2011. <http://www.guttmacher.org/pubs/fb_induced_abortion.html> accessed April 17, 2013.

A newsletter dedicated to helping young women

Fertility, Stress, and the Female Athlete ...continued

continued from page 1 osteopenia (loss of bone mass). Intense exercise and extremely low body weight has also been linked with lower levels of the hormone estrogen, which is necessary to maintain healthy bones.

It is important to be aware of the way our bodies react to stress. It is also important to know how much exercise is good for our bodies and how much may be too stressful for us. Every individual is different and knowing your own body and how it handles stress is a task. One way to make this job easier is through the Creighton Model System. By using the Creighton Model System to chart your cycles, you can see how and when your body is being influenced by too much stress. Our body has biological markers that can be charted on a daily basis. These indicate the health of our fertility system. This charting can help young women monitor and maintain a healthy fertility system throughout her life.

For example, the chart on the right is of a woman who was tracking her cycles. When she started a heavy exercise and weight loss program in her fourth cycle, her cycles change dramatically. The charting patterns during the first three cycles indicate that she was producing normal amounts of cervical mucus (essential for fertility and sign of ovulation). The dramatically different charting patterns in the fourth, fifth, and sixth cycles indicate that she was no longer producing cervical mucus. These completely dry cycles were induced by the stress that the exercise had on her body.

A general rule of thumb is exercise programs should be started slowly and increased in intensity over time. Exer-

cise with mild to moderate intensity for 30-60 minutes, depending on the activity, for 4-6 days a week. Always be able to carry on a conversation when you exercise and make sure you drink plenty of fluids during and after exercising.

In terms of diet, never reduce the amount of calories you eat by more than 500 calories without consulting a doctor. It is good idea to consult a nutritionist or dietician if you need help with managing your diet and knowing what foods to eat. If you have an eating disorder, either anorexic or bulimic tendencies, please get medical help as soon as possible as these disorder can have extreme detrimental effects to your health.

If you are experiencing changes in your menstrual cycles or have stopped your menses altogether, consider seeing a medical doctor trained in NaProTechnology. Doctors trained in NaProTechnology know how to treat the underlying causes of menstrual cycle problems and treat the problems in a way that cooperates with the natural fertility cycle. You can find a medical doctor trained by Pope Paul VI Institute on our website at www.fertilitycare.org and, if you want to learn more about NaProTechnology, please go to www.naprotechnology.com or www.popepaulvi.com.

We cannot diminish the one category of human life — the unborn — without diminishing the category of all human life.”
Ronald Reagan.



Chart of a woman who began heavy exercise program (taken from Hilgers TW, *The Medical & Surgical Practice of NaProTechnology*, Chapter 25).

The Female Athlete Triad, Position Stand, the American College of Sports Medicine, Medicine and Science in Sports and Exercise, 2007.

Warren MP, Chua AT., Exercise-induced amenorrhea and bone health in the adolescent athlete. *Annals of the New York Academy of Sciences*, 2008

Nattiv A, Agostini R, Drinkwater B, Yeager KK., The female athlete triad. The inter-relatedness of disordered eating, amenorrhea, and osteoporosis. *Clin Sports Med.* April, 1994

I Dreamed a Dream

By: Teresa Kenney, APRN, CFCP, and Dan Kenney, MA

Every virtue in your soul is a precious ornament which makes you dear to God and to man.

But holy purity, the queen of virtues, the angelic virtue, is a jewel so precious that those who possess it become like the angels of God in Heaven, even though clothed in mortal flesh.

St. John Bosco

I watched the movie *Les Miserables* recently and was struck by the theme of Christian love that overwhelms the movie. Each main character goes through suffering but goes through it learning how God has made them for Love and to be loved. If you have not seen the movie, don't let the singing scare you away. It's well worth the time to sit and examine the lives of these characters that so often mirror our own.

Take Fantine, young and beautiful. She is full of hope for what human love might bring. But, she is crushed by the reality that humans fail miserably at giving the very love they were created to give—the kind of sacrificial love that can lead to human fulfillment and happiness. Instead, Fantine falls in love, is swept away by her love and passion, becomes pregnant, and as the song says...

*But the tigers come at night
With their voices soft as thunder
As they tear your hope apart
And they turn your dream to shame*

all hope seemed lost, when humanity showed nothing more than hate, God's mercy was given to Jean Valjean and his heart was filled...

*Yet why did I allow that man
To touch my soul and teach me love?
He treated me like any other
He gave me his trust
He called me brother
My life he claims for God above
Can such things be
For I had come to hate this world
This world which had always hated me*

All of us hope for the happiness of this life and, so often, our dreams are shaken when we realize that humans too often fail to bring us fulfillment. Many people go from relationship to relationship still thinking that someone will be able to satisfy the deepest longings of their heart. But, as the story of *Les Miserables* shows, the world cannot offer what only God can give.

After he found God's mercy in person of that Bishop, Jean Valjean responded by uniting himself to God. Then, being a receiver of God's great love, when the time came, Jean Valjean was able to offer his own love, freely and faithfully, with no conditions. He took the little girl Cozette from a place of misery to give her care and love, to give her a home. And, when it was time for her to leave his home and enter the adult world, having done the job God gave him, Jean Valjean had one more task to complete. He selflessly gave his life for young Marius, the boy Cozette loved.

In the end Jean Valjean knew that to love another person truly was to see the face of God. His fulfillment was in being a vessel for Christ and, because of this, in the end the eternal banquet was his reward.

The wounds that are in all of us are only filled by the Love that comes from above.

No earthly relationship, no physical pleasure, no drug, no food, no career, no material possession—none satisfy the deepest longings of our hearts.

We were made for Love, to know Love and to be loved, but that Love that I am talking about

is not just a feeling, it is a person. It is the person of Jesus Christ.

Or, consider Jean Valjean. For years, he felt only the pain and cruelty of the world, spending his life imprisoned, shamed and tormented by a past that could not be forgotten. Then, in a moment of shame, a humble Bishop shows him the mercy and compassion of God. When



Images courtesy of Microsoft Office Support online, 2013 (images from Microsoft, partner Fotolia)



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Resources

www.popepaulvi.com

www.DrHilgers.com

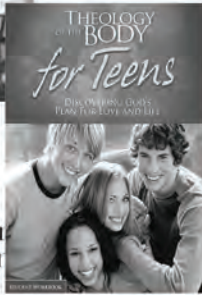
www.fertilitycare.org

<http://www.chastity.com>

<http://vocation-network.org>

www.onemoresoul.com

www.ewtn.com



The Meaning of Vocation
IS THE WORD OF
John Paul II



SNAPSHOT: Saint Barbara

Barbara was a beautiful maiden imprisoned in a high tower by her father Dioscorus for disobedience. While there, she was tutored by philosophers, orators and poets.

In the time that Maximian reigned there was a rich man, a paynim, which adored and worshipped the idols, which man was named Dioscorus. This Dioscorus had a young daughter which was named Barbara, for whom he did do make a high and strong tower in which he did do keep and close this Barbara, to the end that no man should see her because of her great beauty.

From them she learned to think, and decided that polytheism was nonsense. With the help of Origen and Valentinian, she converted to Christianity.

On a time this blessed maid went upon the tower, and there she beheld the idols to which her father sacrificed and worshipped, and suddenly she received the Holy Ghost and became marvellously subtle and clear in the love of Jesu Christ, for she was environed with the grace of God Almighty, of sovereign glory and pure chastity. This holy maid Barbara, adorned with faith, surmounted the devil, for when she beheld the idols she scratched them

Her father denounced her to the local authorities for her faith, and they ordered him to kill her. Barbara escaped, but he caught her, dragged her home by her hair, and tortured her.

[H]er father returned from his voyage... Then he being replenished with furor, incontinent drew his sword to have slain her, but the holy virgin made her prayer and then marvellously she was taken in a stone and borne into a mountain ...[H]er father took her by the hair and drew her down from the mountain and shut her fast in prison...and delivered her unto the judge. ...Then became the judge all...angry, and commanded to unclothe her and beat her with sinews of bulls, and frot her flesh with salt, and when she had long endured this, that her body was all bloody, the judge did do close her in a prison...[O]ur Lord showed him to her, ...he blessed her and remounted into heaven. ...And on the morn, the judge commanded that she should be brought tofore him, and when she was come he saw that her wounds appeared not but she was all whole...Then the judge, replenished of ire, commanded that she should be hanged between two forked trees, and that they should break her reins with staves, and burn her sides with burning lamps, and after he made her strongly to be beaten, and hurted her head with a mallet, [and to] the hangman that



St. Barbara and her father, from a recent Italian film on her life, *Saint Barbara: Convert and Martyr of the Early Church*

he should cut off with his sword her paps...And when she had long endured this pain, the judge commanded that she should be led with beating through the streets...

She was beheaded by her father circa 235 at Nicomedia during the persecution of Maximinus of Thrace. Her father was immediately struck by lightning, or according to some sources, fire from heaven.

And then her father all araged took her out of the hands of the judge and led her up on a mountain...and received the end of her martyrdom with Saint Julian. But when her father descended from the mountain, a fire from heaven descended on him, and consumed him in such wise that there could not be found only ashes of all his body. This blessed virgin Saint Barbara received martyrdom with Saint Julian the second nones of December.

Her imprisonment led to her association with towers, then the construction and maintenance of them, then to their military uses. The lightning that avenged her murder led to asking her protection against fire and lightning, and her patronage of firefighters, etc. Her association with things military and with death that falls from the sky led to her patronage of all things related to artillery, and her image graced powder magazines and arsenals for years. One of the Fourteen Holy Helpers.

While there were undoubtedly beautiful converts named Barbara, this saint is legend, and her cultus developed when pious fiction was mistaken for history.

[Taken from: "Saint Barbara". Saints.SQPN.com. 5 April 2013. Web. 16 April 2013. <<http://saints.sqpn.com/saint-barbara/>> and from The Golden Legend]

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