

Medical Matters, The Effects of Light on the Menstrual Cycle

By Joy DeFelice, RN, BSN, PHN

“As different as night and day” is an expression we’ve all used. But that distinction has become blurred over generations by ever increasing sources and length of light. As a result, many women do not experience a true nighttime anymore. They are in, or surrounded by, light 24 hours a day.

Since the Fall of 1976, we have consistently observed that the presence of light during the woman’s major sleep period can affect one or more phases of her menstrual cycle. This will be seen in the woman’s charted pattern, and also applies in determining breastfeeding and pre-menopausal *Basic Infertile Patterns*.

Fertility itself can be affected in many couples by excess light intake during sleep. Problems in maintaining a pregnancy can also occur.

Some common sources of light reported by couples are digital clocks, hallway or bathroom lights, nightlights, TV lights, smoke detector light, cell phone lights, computer lights; also light reflecting into the sleeping area from porch lights and street lights. There are several less common sources of artificial light as well. Even natural light can be too bright in some sleeping areas.

Any bedroom will seem dark when you first turn off the lights. The evaluation of light needs to be done after the woman has been in bed for 15 minutes, allowing time for the eyes to adjust. The quickest and easiest way to determine the presence of light is when awakening in the middle of the night. You should not be able to see the bedroom furniture or other objects, or be able to walk out of the bedroom

without slowly feeling your way. Bright early morning light should not enter the room before 6:30-7am (unless you usually rise earlier, but also have earlier evening hours of darkened sleep).

Once the sources of light are brought to the woman’s attention, she quickly becomes aware of this light interference. Sufficient elimination of the light source(s) usually resolves the problem areas in the woman’s charted hormonal pattern. She then needs to consistently maintain this level of sufficient darkness for continued hormone stability.

Short periods of light, as during night breast-feeding, will usually not be disruptive. Use as dim a light as possible, and turn it off as soon as possible. In situations where the light cannot be eliminated entirely, for example, smoke detectors, baby monitors, apartment complexes and college dorms, many helpful ideas for darkening are available.

Couples report they also are sleeping much better after darkening their sleeping area. Many also darken their children’s bedrooms for improved sleep patterns.



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HOW DO LIGHT AND DARKNESS AFFECT THE REPRODUCTIVE HORMONES?

Even through closed eyelids during sleep, light and dark messages from the woman’s environment are picked up by the retino-hypothalamic tract and relayed to the pineal gland. The pineal gland then produces the hormone melatonin in direct response to the environmental light/dark messages it has received.

Normal melatonin production is on a clear 24 hour rhythm of a lower level during the day and the highest level during the night. The amount of melatonin produced then influences the hypothalamus gland which is the cycling center for the woman’s reproductive hormones. When the normally high level of melatonin production at night is disrupted by the presence of light, the normal progression of hormonal events initiated by the hypothalamus can also become disrupted. This may apply to male fertility as well.

The woman herself, and the NFP instructor, can easily observe the one or more affected areas in the woman’s charted hormonal pattern. The positive changes after sufficient darkness is achieved and maintained are also easily observed.