Estronex℠

Every Woman Should Know Her Risk for Breast Cancer.

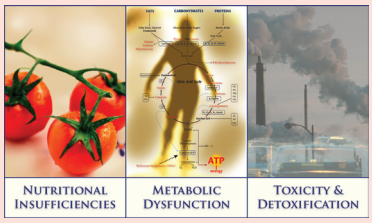
Now she can with a simple urine test! When a major study of hormone replacement therapy in women was discontinued a few years ago, clinicians and patients alike were left with unanswered questions. Why are certain tissues, such as the breast, susceptible to estrogen-induced cancer? Why are some women susceptible, but not others? Researchers at Rockefeller University have found that the body metabolizes estrogens into several different metabolites that can impact cancer development.

One metabolite, 2-hydroxyestrone (2-OHE1), tends to inhibit cancer growth. Another, 16-α-hydroxyestrone (16-α-OHE1), actually encourages tumor development. A woman's "biochemical individuality" determines which of these metabolites predominates. Studies have shown that measuring the ratio of these two metabolites provides an important indication of risk for future development of estrogen-sensitive cancers. The studies also show that this risk is modifiable!

The **Estronex℠ 2/16** test from Metametrix Clinical Laboratory measures the ratio of these two critical estrogen metabolites from a single urine specimen. Estronex 2/16 ratios less than 2.0 indicate increasing long-term risk for breast, cervical, and other estrogen-sensitive cancers. Importantly, nutritional interventions can help raise Estronex 2/16 ratios and decrease long-term risk.

The Estronex℠ 2/16 Test features:

- A simple first-morning urine specimen; no blood draw is necessary.
- Economical, so you can retest often to monitor therapy.
- **Bone Resorption Test** can be added for osteoporosis risk assessment at only a small incremental cost.



Metametrix Clinical Laboratory

Individualized Solutions for Integrative Clinicians℠

call 800.221.4640 or visit our website at www.metametrix.com

Estronex℠

Analytes

2-Hydroxyestrogens -
(sum of 2-Hydroxyestradiol and 2-hydroxyestrone)
16-alpha-Hydroxyestrone
Creatinine

Estronex 2/16 Ratio - Urine

Test # 0142 2/16 OH Estrogen Ratio
Test # 0145 2/16 with Bone Resorption

Specimen Requirements

First morning urine, 10 ml, frozen

Method

Chemiluminescence, EIA, Spectrophotometry

Turnaround Time

7 - 10 days, 8 days average

CPT Codes

Estrone (2- and 16-alpha-hydroxyestrones)	82679 x 2
Creatinine	82570

Estronex 2/16 Ratio Sample Report

0142 Estronex™ - 2/16 OH Estrogen Ratio in Urine — *Methodology: Enzyme Immunoassay, Colormetric Assay*

	Result		Reference Limits
2:16 Ratio	1.78 L	2.00 — 8.00	2.00 - 8.00

	Result	Normal Limits			
		Pre-Menopausal	Post-Menopausal without hormone therapy	Post-Menopausal with hormone therapy	
2-Hydroxyestrogens (2OHE)	20.8	3 - 40	2 - 10	10 - 75	ng/mg crea
16-Hydroxyestrone (16OHE1)	11.7	3 - 30	2 - 8	5 - 25	

Creatinine = 100 mg/dl

The ideal value for the 2/16 ratio is above 2.0. The following have been shown to raise the ratio.

- Cruciferous vegetables (e.g. broccoli, brussel sprouts, cabbage, cauliflower)
- Supplementation of indole-3-carbinol (I-3-C) or diindolylmethane (DIM)
- Soy isoflavones
- Flax seeds (not oil)
- Omega-3-fatty acids (DHA & EPA) found in fish (e.g. mackerel, lake trout, herring, sardines, salmon) and marine algae also may help to lower cancer risk. Assure antioxidant adequacy when adding polyunsaturated oils.

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