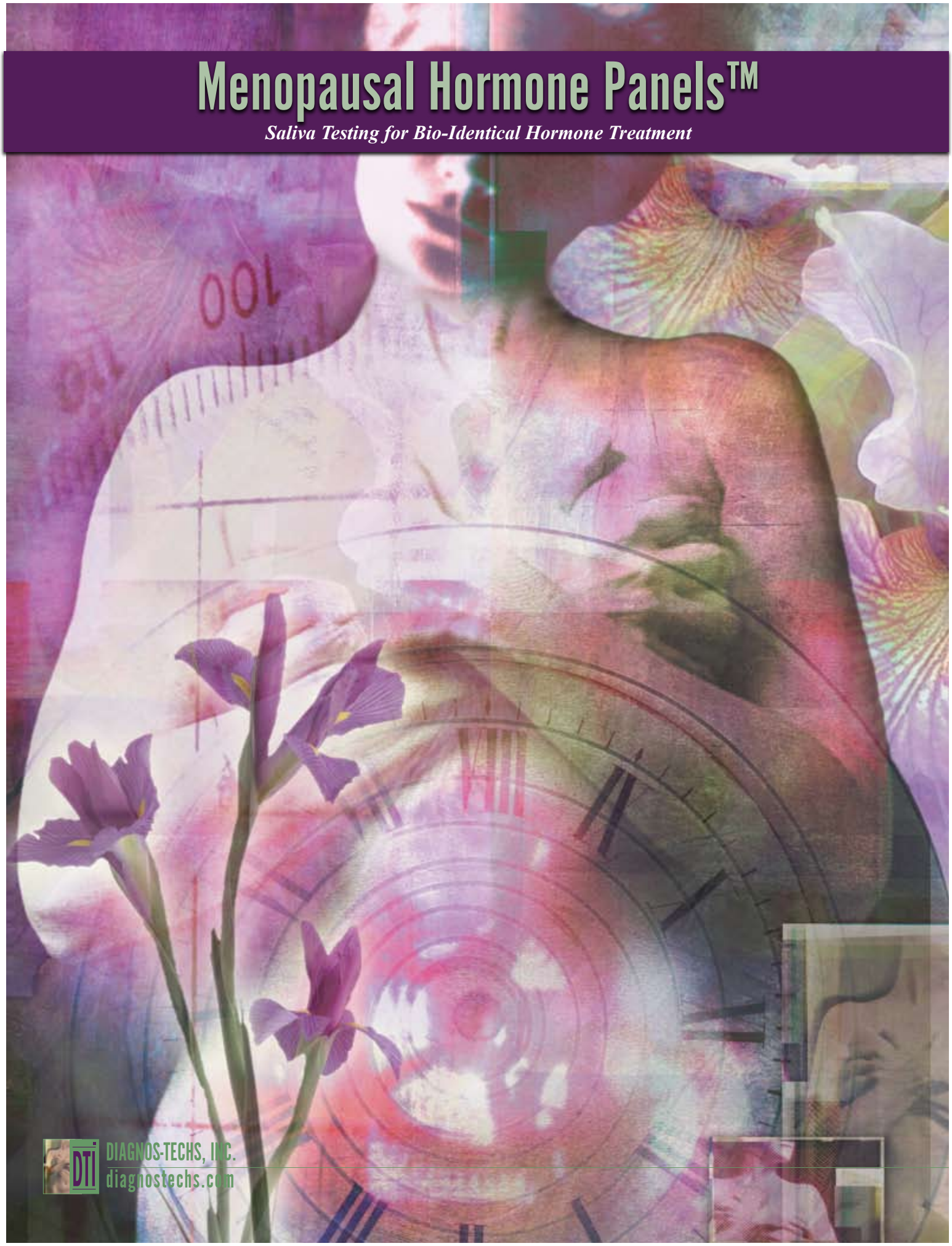
Menopausal Hormone Panels™

Saliva Testing for Bio-Identical Hormone Treatment



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Menopausal Hormone Panels™

These panels provide measurements of six key hormones: progesterone, estradiol, estrone, estriol, testosterone and DHEA. The inclusion of FSH and LH in the extended panels, expands the interpretation to include pituitary involvement. Complex patient data is reported in an easy-to-read, customized and individualized report as explained below.

Significant Perimenopausal Hormone Changes

Just as gonadal hormone levels begin to cycle long before the initiation of menses, there are substantial shifts in hormone levels prior to the onset of menopause. Some of the most important changes are summarized below.

Neuroendocrine Hormone Changes

1. Follicle stimulating hormone (FSH) and Luteinizing hormone (LH) levels increase progressively (3-7 fold their prior average values).
2. Increases in FSH levels appear to correlate with an increased severity in hot flashes, a higher rate of bone loss and poor sleep quality.

Ovarian Changes

1. There is a gradual decrease in the number of functional follicles.
2. The follicles are less responsive to regulation by FSH and LH.
3. Estradiol fluctuations are exaggerated.
4. Progesterone production gradually declines and eventually flattens out.

Other Changes

1. As ovarian function declines, the adrenal androgen contribution approaches 90% of the total.
2. Adipose tissue estrogen becomes a larger fraction of the total circulating estrogen.

Menopause Symptoms

- hot flashes
- low libido
- mood swings
- depression
- headache
- irritability
- insomnia
- memory problems
- bleeding irregularities

Other Findings

- osteoporosis
- altered lipid metabolism
- atherosclerosis

What is in the report?

1 - Data and Ranges

- 6-8 measured hormone values
- reference ranges
- BHRT target ranges

2 - Health Risk Indexes

Each report includes separate breast and uterine Proliferation Potential Indices. The proliferative effects of the three estrogens on breast and uterine tissue, and their balancing antagonists, testosterone and progesterone are interpreted into a visual format.

3 - Restoration Plan

An example of an integrated restoration plan is included with the test results. This plan may include BHRT, dietary supplements and lifestyle changes based on scientific literature and relevant publications.

Why use salivary testing?

Saliva hormone levels reflect the active tissue fraction and they correlate more closely with clinical symptoms than serum hormone levels.

Perimenopause Panel™ (PeriM™)

Two saliva samples

Each sample is tested for 6 hormones:
Estrone (E1), Estradiol (E2), Estriol (E3), Progesterone (P1), Testosterone (TTF) and DHEA

First sample collected any time and then frozen; 13-15 days later, second sample collected and both submitted for testing.

Clinical Applications:

- In perimenopausal women with regular or irregular cycles
- When collecting 11 specimens over a full cycle is impractical
- Therapeutic Monitoring or Hormone Challenge in postmenopausal women
- Risk assessment of breast/uterine proliferative diseases

Information on fees, billing, insurance and medicare assignment is available to healthcare providers

Note: In perimenopause, one specimen is minimally representative of the hormone status, while the 11 specimen mapping is impractical, due to an absent or irregular cycle.

Postmenopause Panel™ (PostM™)

One saliva sample tested for 6 hormones :
Estrone (E1), Estradiol (E2), Estriol (E3), Progesterone (P1), Testosterone (TTF) and DHEA

Clinical Applications:

- Measurement of hormone baselines or monitoring bioidentical hormone replacement therapy (BHRT) in:
  - Menopausal women and women with total hysterectomy
  - Cycling women using birth control pills
- Risk assessment of breast/uterine proliferative diseases and osteoporosis
- Investigation of libido changes and emotional vulnerability problems

Information on fees, billing, insurance and medicare assignment is available to healthcare providers

Expanded Postmenopause Panel™ (ePostM™)

One saliva sample

8 hormones tested:
Estrone (E1), Estradiol (E2), Estriol (E3), Progesterone (P1), Testosterone (TTF) DHEA, FSH and LH

Clinical Applications:

- Same as PostM™
- To examine FSH & LH abnormalities
- For a more definitive diagnosis of menopause in younger women
- FSH and LH values can help track severity of hot flashes, bone loss and insomnia

Information on fees, billing, insurance and medicare assignment is available to healthcare providers

**Hormone assessment of cycling women from puberty to perimenopause is done by cycle mapping using the 11 sample FHP Panel™.*

Case Study

Estrogen Overdose

PURPOSE

To present an example of estrogen overdose in a postmenopausal woman as a result of attempts to control hot flashes.

BACKGROUND

The recent Women's Health Initiative Study (JAMA 2002; vol 228(3):321-333) on HRT helps confirm the futility of hormone treatment based only on symptoms, without ongoing monitoring. Many women are given large doses of estrogen to control hot flashes. The hormone levels in a typical hot flash consist of a high FSH with a rapid drop in estrogen coupled with a low progesterone. There is no decrease in the baseline value of estrogen. High dose estrogen treatment, as usually prescribed, will overdose the woman while it mitigates symptoms. It overrides estrogen fluctuations, but increases the risk of proliferative diseases of the breasts and uterus.

PATIENT HISTORY and DATA

AGE AND SEX: **50 year old female**

LAST PERIOD: 3 years prior

BONE DENSITY CHANGES: Sub-clinical or minimal

INITIAL SYMPTOMS: Hot flashes, emotional and concentration problems

INITIAL TREATMENT: Placed on estrogen patch with no hormone monitoring done

OUTCOME: Control of somatic symptoms, increased aggression and irritability, and breast tenderness

Patient sought further help and a Diagnos-Techs PostM™ panel was ordered.

PostM™ REPORT SUMMARY

	Patient Values	Reference
DHEA	6 ng/ml	3-10 ng/ml
Testosterone	27 pg/ml	8-20 pg/ml
Estrone	35 pg/ml	26-64 pg/ml
Estradiol	45 pg/ml	5-13 pg/ml
Estriol	42 pg/ml	14-38 pg/ml
Progesterone	53 pg/ml	100-300pg/ml

REMARKS

The report showed normal DHEA and testosterone, mild estriol excess, elevated estradiol, and very depressed P1 values. The induced estrogen excess (about 400%) coupled with low progesterone increases breast tissue proliferation, and irritable/aggressive behavior.

CASE MANAGEMENT

Estrogen dose was cut by 65% and patient was given 20mg BID of sublingual liquid progesterone. Retesting 30 days later, using the PostM™ showed that the hormone levels were acceptable and all symptoms were under control.

Other available test panels:

Male Hormone Panel™

No of Samples: 1 saliva

Hormones Tested:
DHEA, Androstenedione, Testosterone, DHT, Progesterone and Estrone

Indications:

- Andropause
- Low vitality and libido
- Hair thinning

Cycling Female Hormone Panel™

No of Samples: 11 saliva
11 samples are collected on designated days, spread over 1 full cycle

Hormones Tested:
Estradiol, Progesterone, Testosterone and DHEA

Indications:

- PMS
- Infertility
- BHRT monitoring

Adrenal Stress Index™

No of Samples: 4 saliva

Hormones Tested:
4 Cortisol, DHEA,
2 Insulin, 17
OH Progesterone, Total SIgA and Gluten antibody

Indications:

- Chronic stress and fatigue
- Glycemic dysregulation
- Chronic pain and inflammation

Brief Biography

Background:

Diagnos-Techs, Inc. USA was founded in 1987. In 1989 we introduced salivary hormone testing into clinical practice. The routine use of salivary assessments became a powerful tool in the clinical evaluation of stress and hormone related diseases in both genders and all age groups.

Quality Control:

Our quality control procedures include daily parameter standardization in accordance with WHO* and other agencies' reference material. This insures continuity of follow up test results over time, and permits precise diagnosis, based on truly standardized and reproducible test values.

Licensure:

Diagnos-Techs laboratory is licensed by the State of Washington (License No. MTS-0327). Our Federal CLIA Number is 50D0630141. Diagnos-Techs laboratory applies rigid standards of quality in day-to-day operation.

*WHO is the World Health Organization that sets international standards for various parameters in medical practice.

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