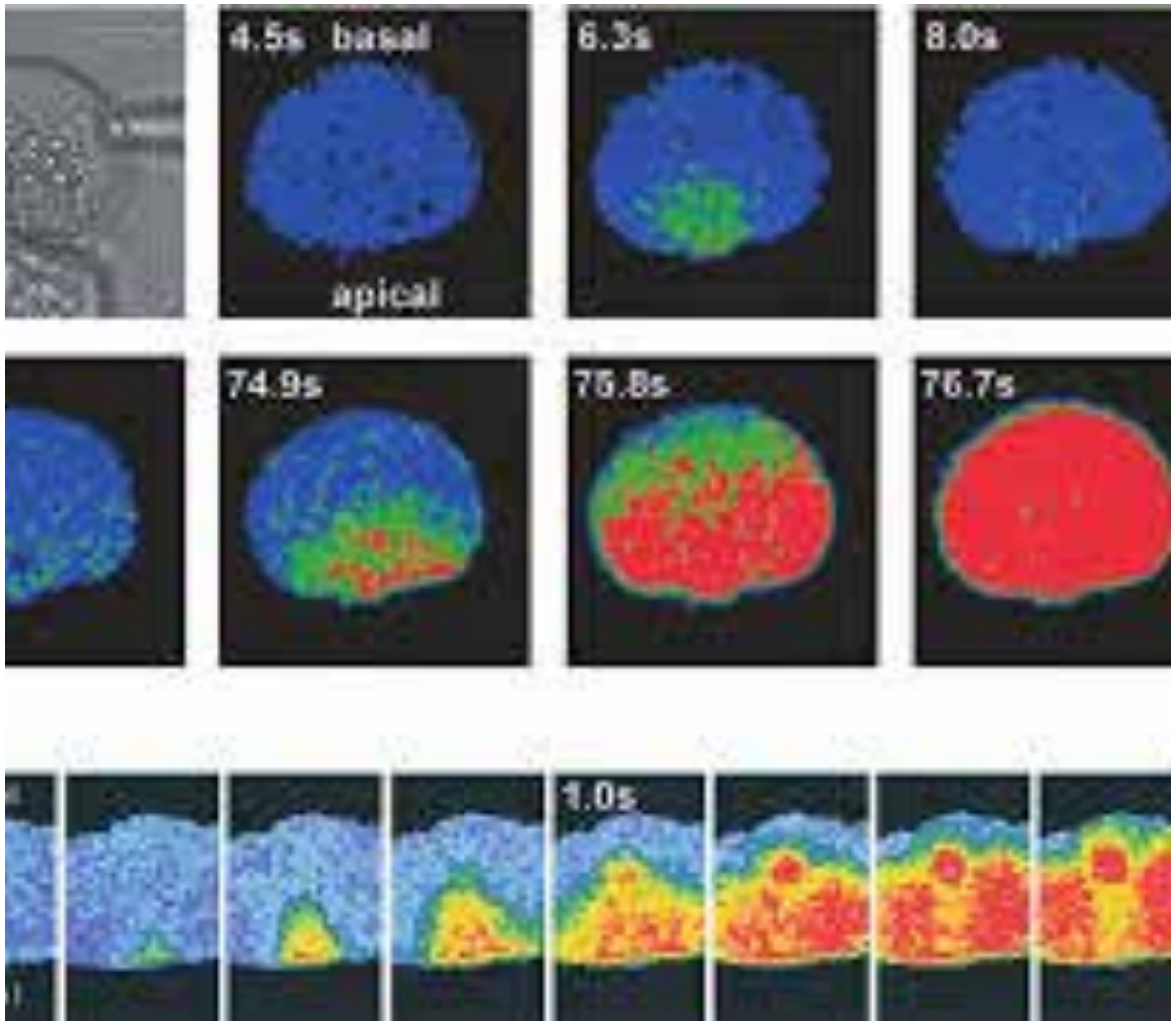
BODY SHAPING VIA ESTABLISHING HORMONAL BALANCE & HOW TO ACHIEVE IT

By Dr Xanya Sofra,MD Ph.D Neurophysiology
Ph.D Clinical Psy

Hormone	Normal range	Units
Free T_3	1.6-3.8	pg/ml
FreeT_4	0.89-1.7	ng/dl
TSH	0.17-4.05	μIU/ml
Basal cortisol (8 A.M.)	9.4-26	μg/dl
FSH		
Male	2.2-10	IU/L
Female	3.4-12	IU/L
LH		
Male	1.8-8.4	IU/L
Female	3-18.6	IU/L
Testosterone		
Male	3-12	ng/ml
Estradiol (E2)		
Female	57-227	pg/ml

TSH: Thyroid stimulating hormone, FSH: Follicle stimulating hormone, LH: Luteinizing hormone

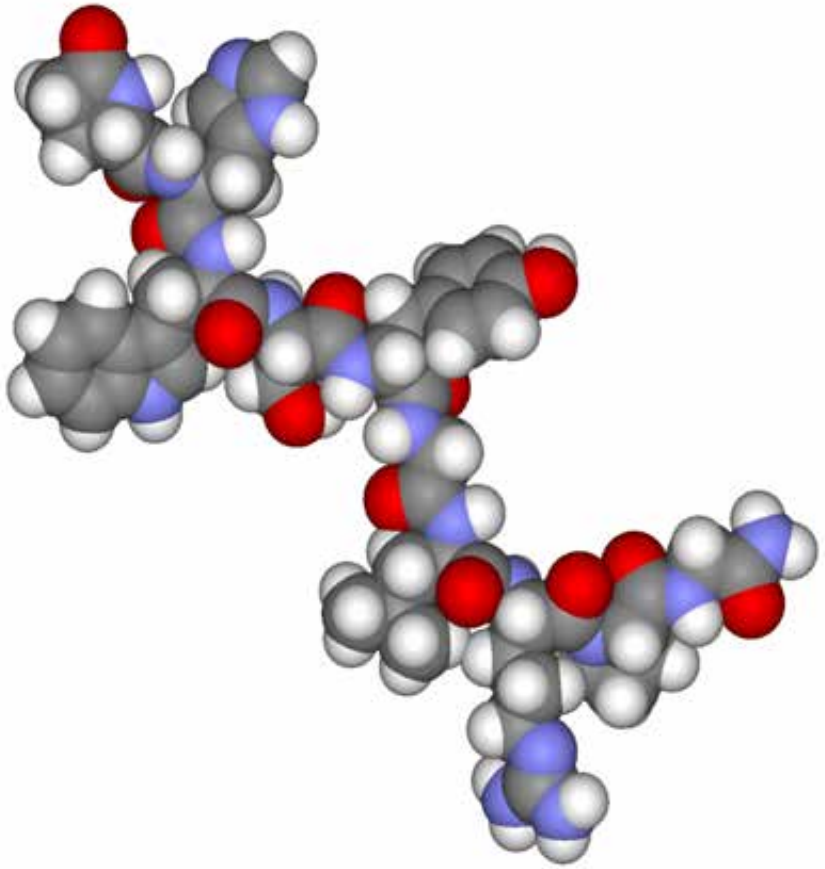
Hormonal Balance means your Hormones are within the Normal Range



What are Hormones?
Hormones are important agent os Cellular communications

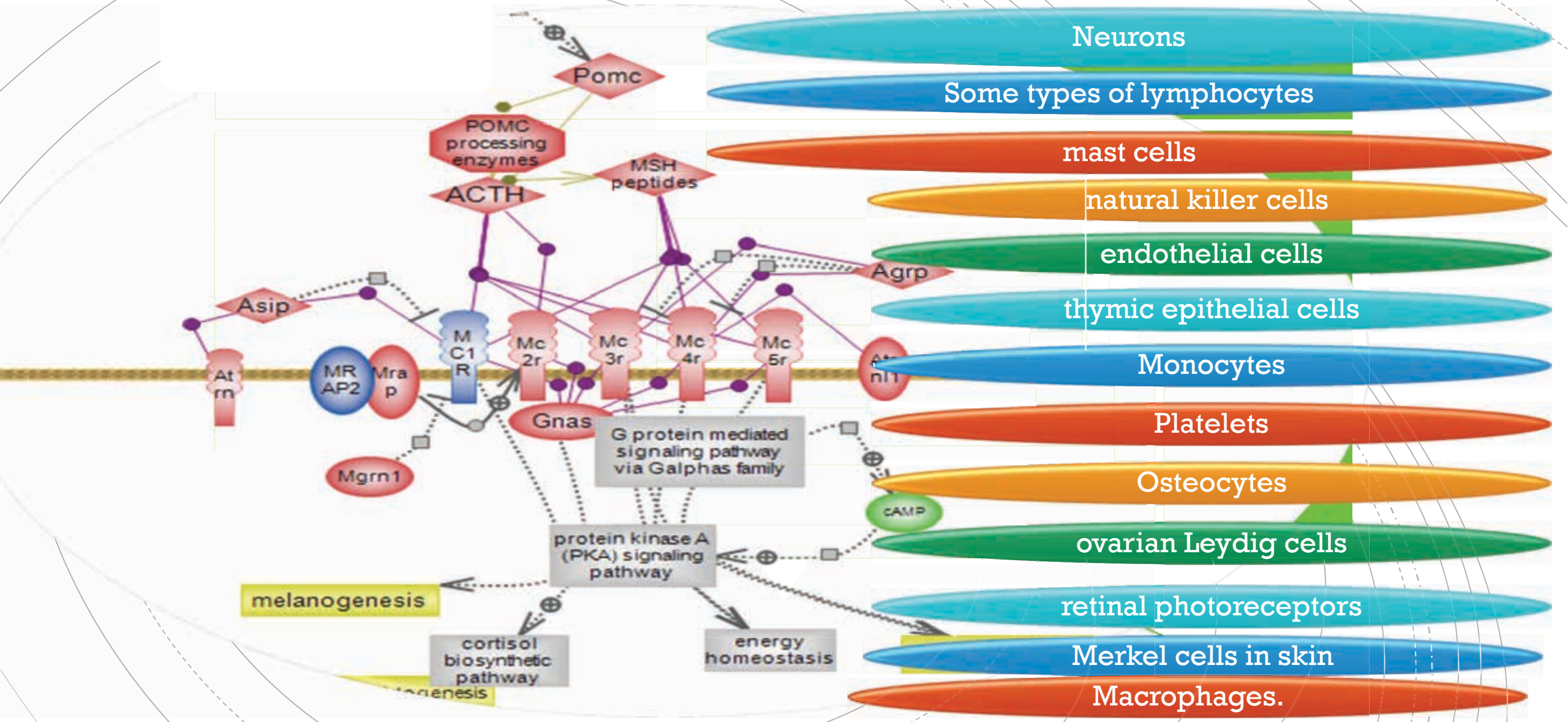
- **Hormonal function is not a specific action of some cells**
- **Hormonal Function is a general biological function of many cells Working together**

The spectrum of hormonal substances produced by cells is extremely wide

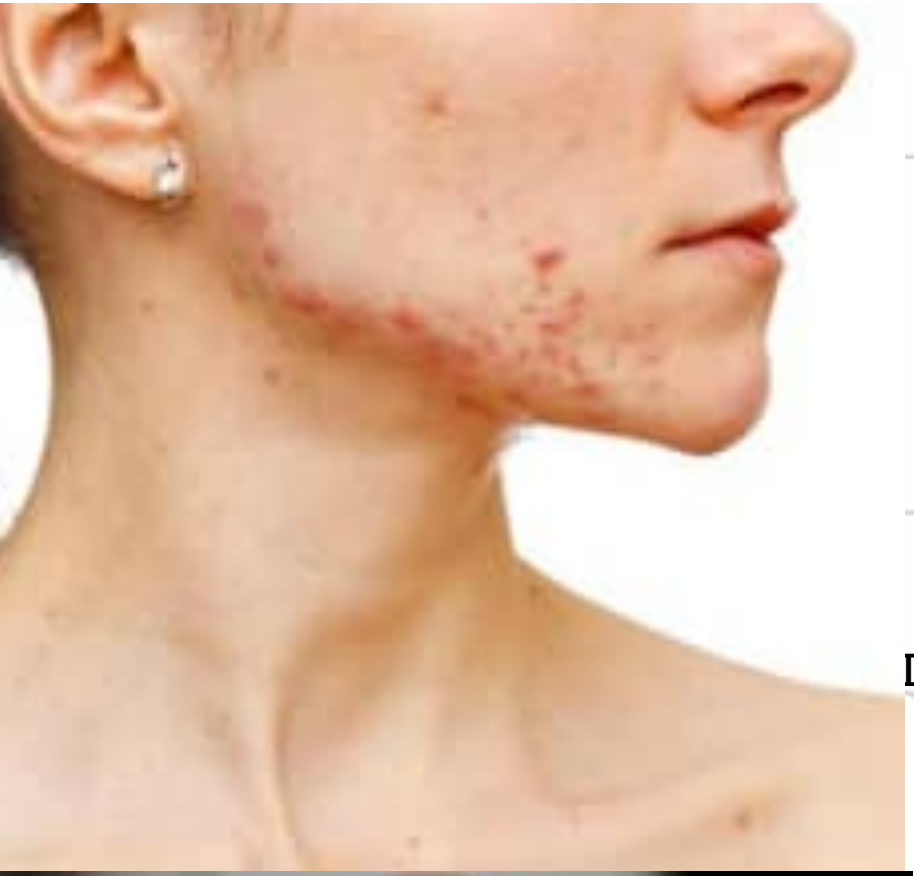


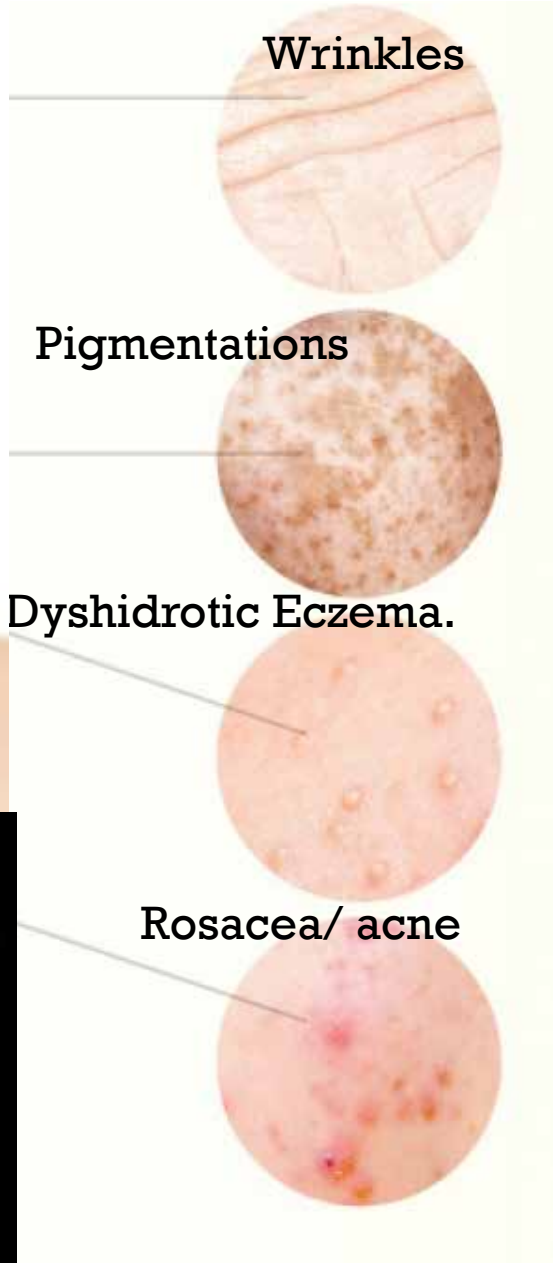
- serotonin melatonin catecholamines histamine
- Endorphins
- Endothelin
- Peptides
- Vasopressin
- Oxytocin
- Thymosins
- Insulin
- insulin-like substances
- ACTH
- Leptin
- etc

“Non-endocrine” cells Produce Hormones.



EFFECTS OF HORMONAL IMBALANCE





Cortisol

Testosterone.

GH / IGF-1

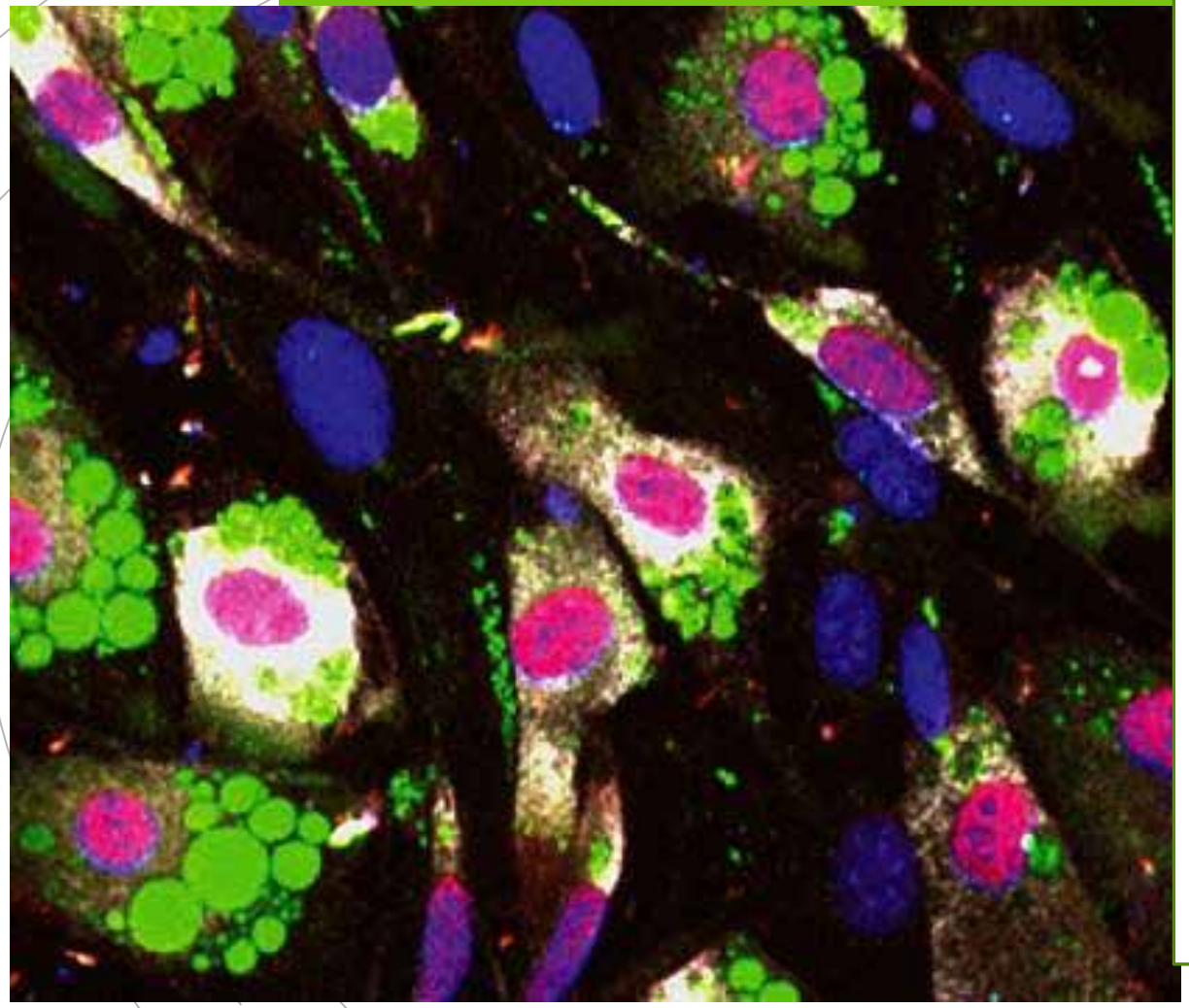
TSH / T4 / T3

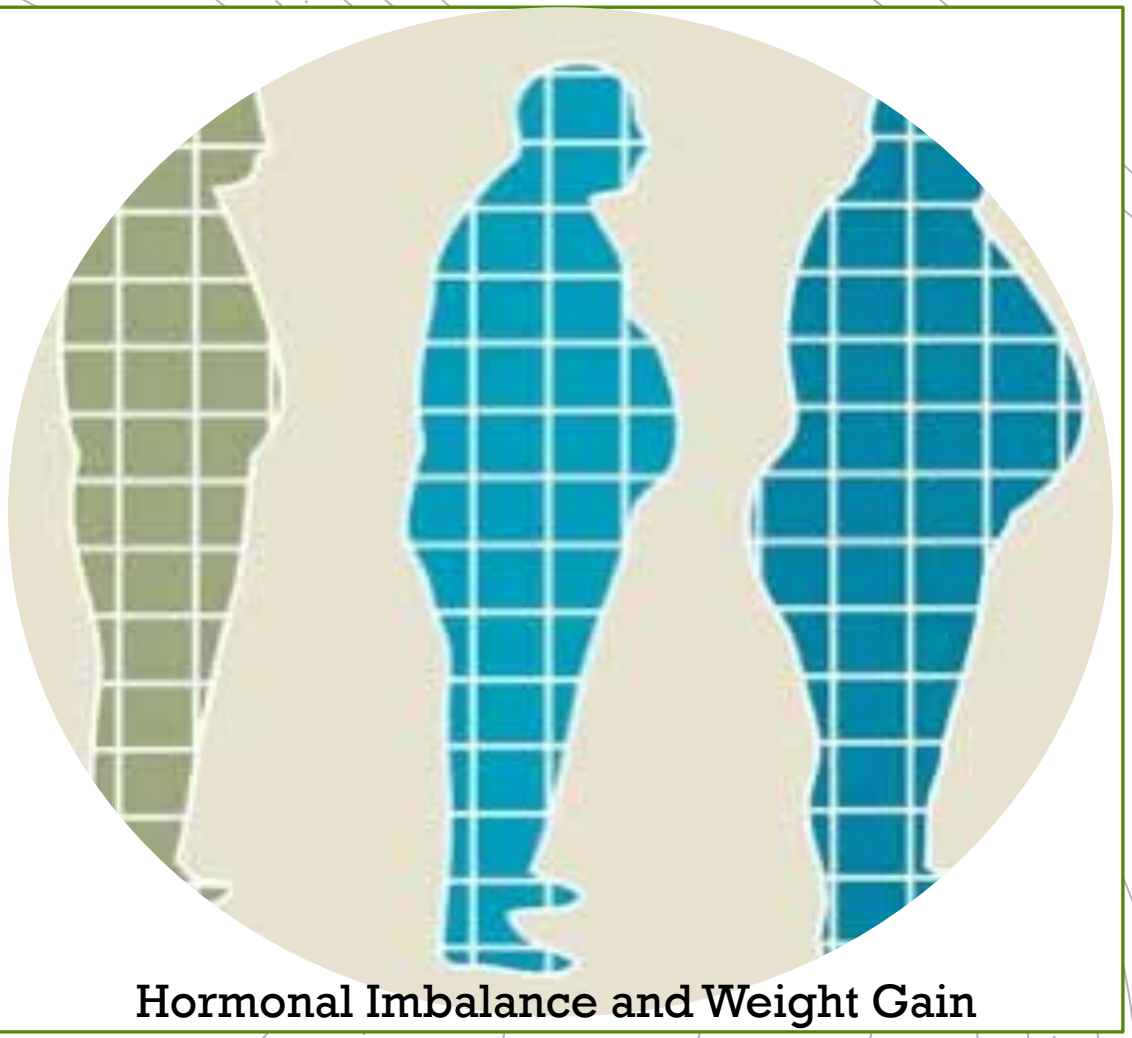
Estrogens

Progesterone

DHEA

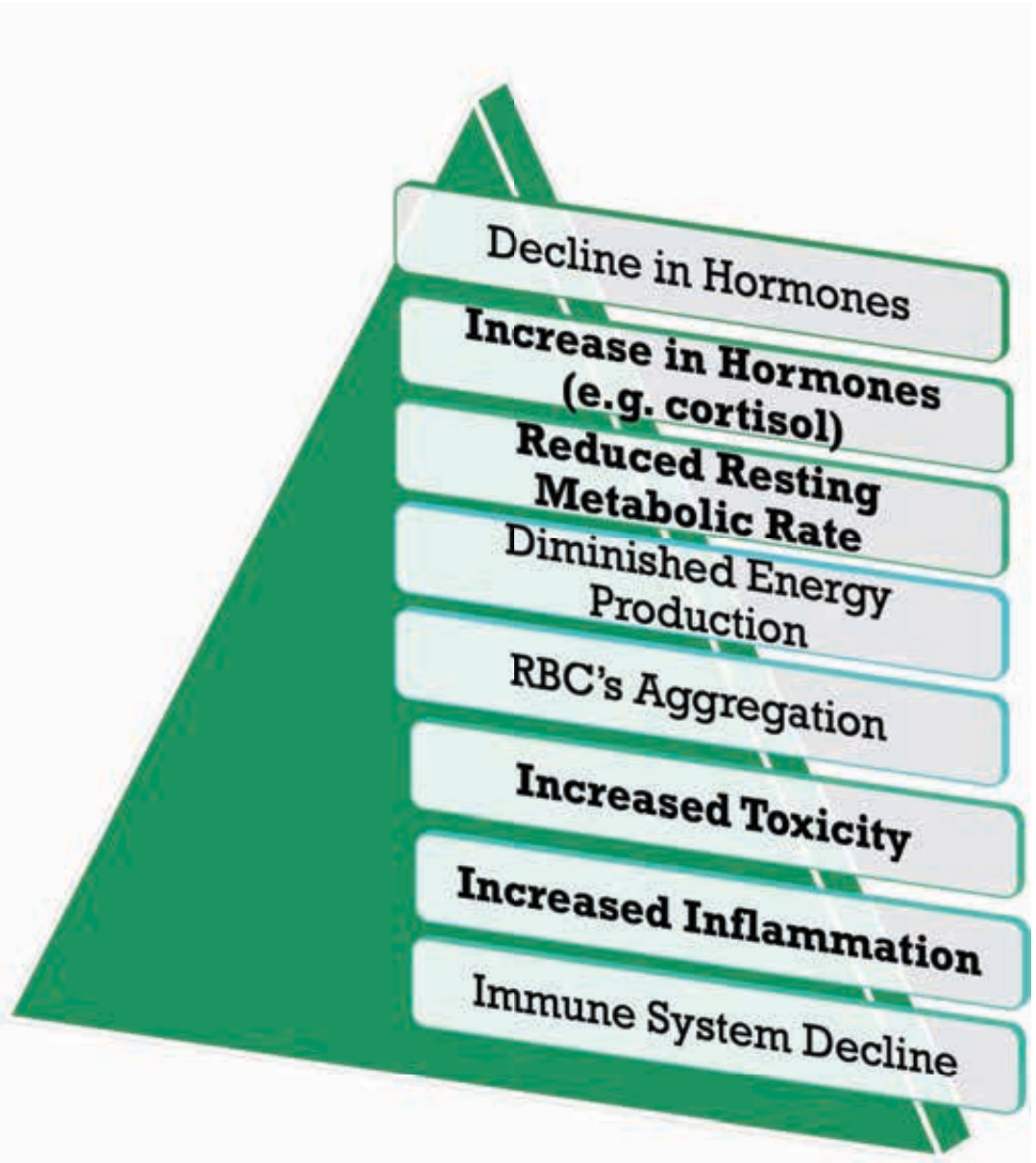
A SYSTEMIC PROBLEM can only be solved by changes in MANY aspects of the System



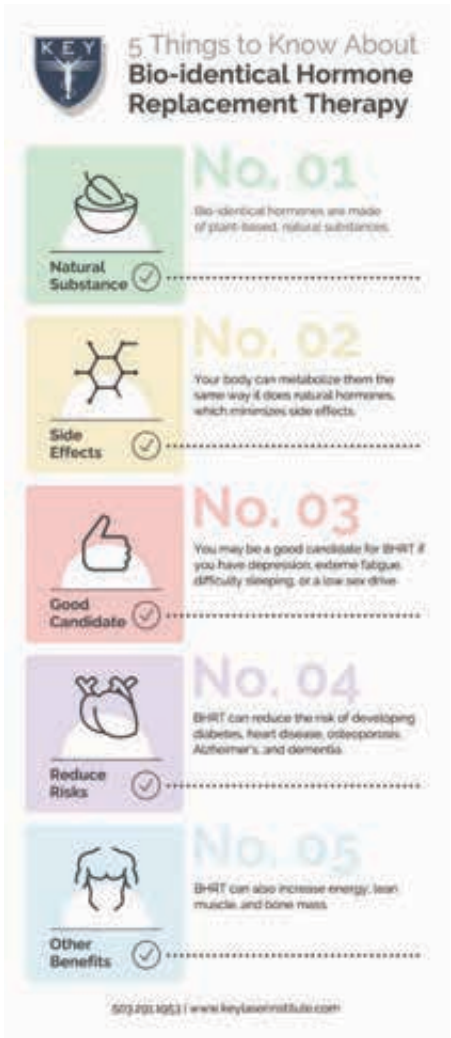


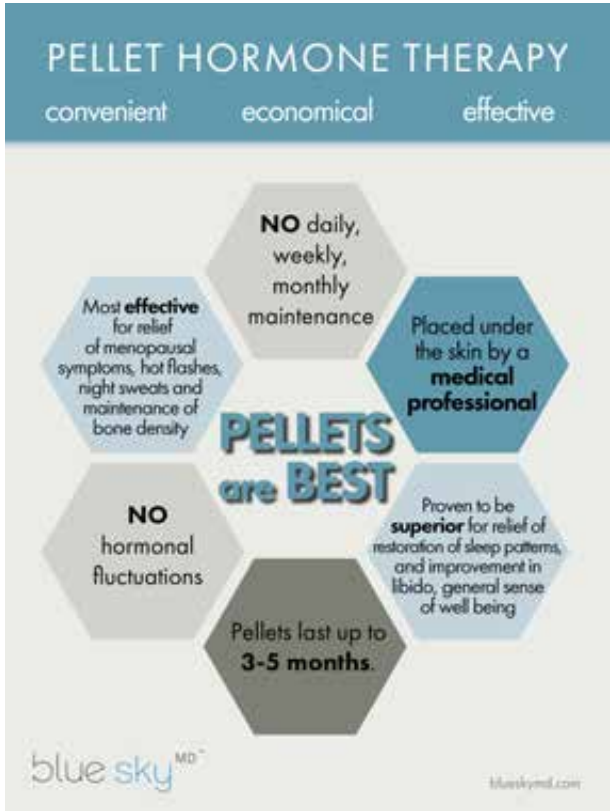
Hormonal Imbalance and Weight Gain

The Unsolved Aging Problem




TOP 10
HORMONE
BALANCING
FOODS
1 COCONUT OIL
2 AVOCADO
3 HEMP SEEDS
4 GRASS-FED BUTTER
5 BONE BROTH
6 TULSI TEA
7 WILD SALMON
8 ASHWAGANDHA
9 EVENING PRIMROSE OIL
10 RAW YOGURT
Dr. Axe FOOD MEDICINE


KEY
5 Things to Know About
Bio-identical Hormone Replacement Therapy
No. 01
Bio-identical hormones are made of plant-based, natural substances.
Natural Substance
No. 02
Your body can metabolize them the same way it does natural hormones, which minimizes side effects.
Side Effects
No. 03
You may be a good candidate for BHRT if you have depression, extreme fatigue, difficulty sleeping, or a low sex drive.
Good Candidate
No. 04
BHRT can reduce the risk of developing diabetes, heart disease, osteoporosis, Alzheimer's, and dementia.
Reduce Risks
No. 05
BHRT can also increase energy, lean muscle, and bone mass.
Other Benefits
503.293.1053 | www.keylaseinstitute.com


PELLET HORMONE THERAPY
convenient
economical
effective
NO daily, weekly, monthly maintenance
Most effective for relief of menopausal symptoms, hot flashes, night sweats and maintenance of bone density
Placed under the skin by a medical professional
PELLETS are BEST
NO hormonal fluctuations
Proven to be superior for relief of restoration of sleep patterns, and improvement in libido, general sense of well being
Pellets last up to 3-5 months.
blue sky MD

Are bioidentical hormones safe?

The bioidentical hormones that have been approved by the FDA ((i.e., plant-derived hormones). But custom compounded preparations have not been approved by the FDA

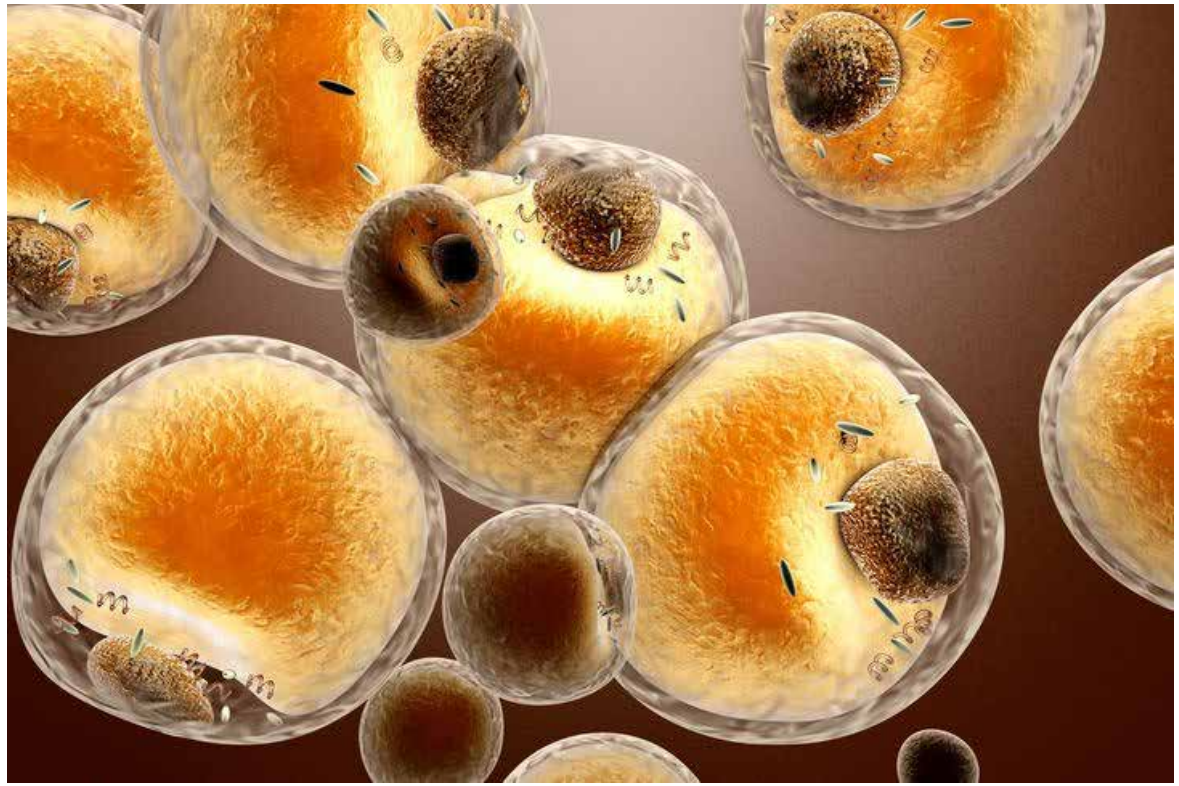
What are the risks of bioidentical hormones?

Increased risk of:

- Blood clots,
- Stroke
- Gallbladder disease.
- Heart disease
- Breast Cancer
- Etc…

WHAT ABOUT DIET?

- It's a common meme that weight loss releases "stored toxins" in fat cells. Hence the sales of "Detox Products", foot baths, drinks etc
- **Persistent Organic Pollutants (POP)**, accumulate in fat cells and get released into the bloodstream during fat loss.
- POPs cannot be broken down so they are distributed to other organs including the **brain** and they compromise the **immune system** (added danger with slimming laser and radiofrequency tech)
- Hence the need for **Exercise**

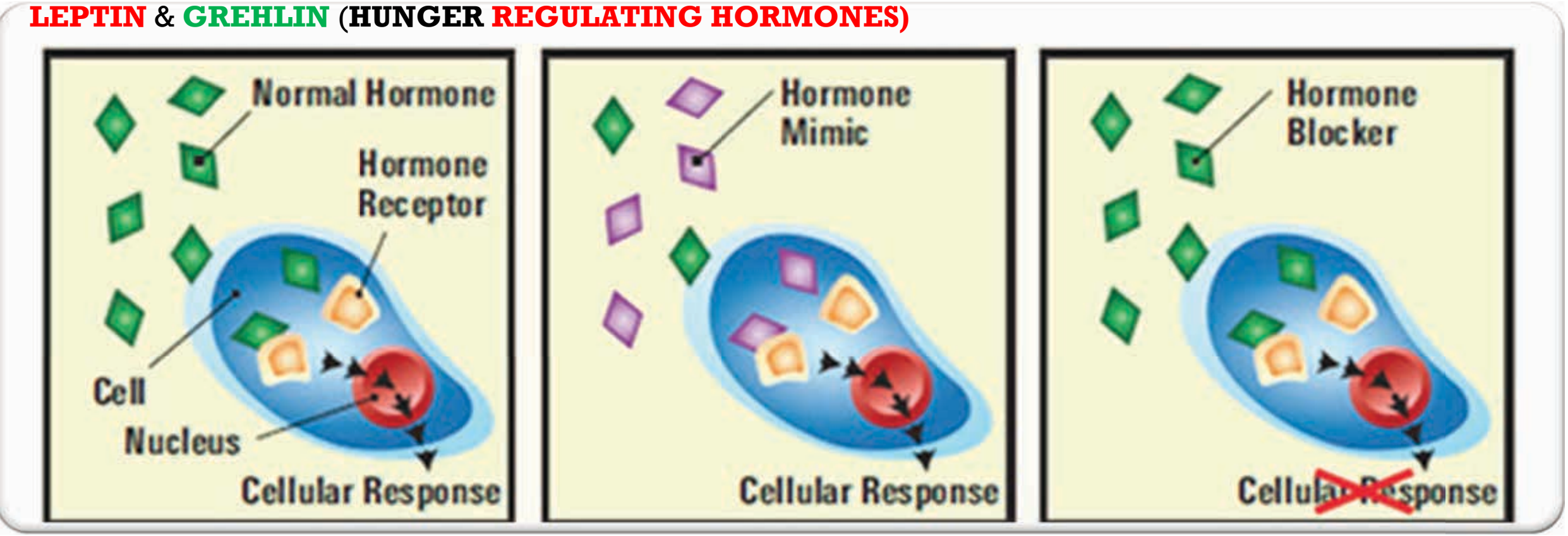


TOXICITY INTERFERES WITH All HORMONES.

METABOLISM – YOU CANNOT LOSE MORE WEIGHT BECAUSE YOUR METABOLISM IS SLOWED DOWN

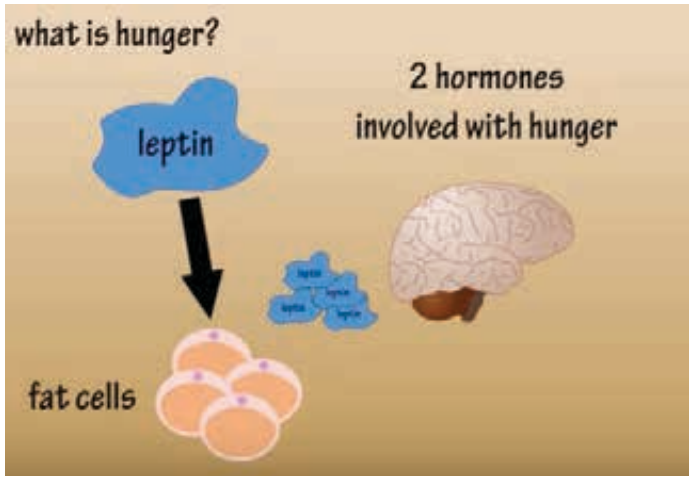
MOOD - YOUR MOOD IS AFFECTED

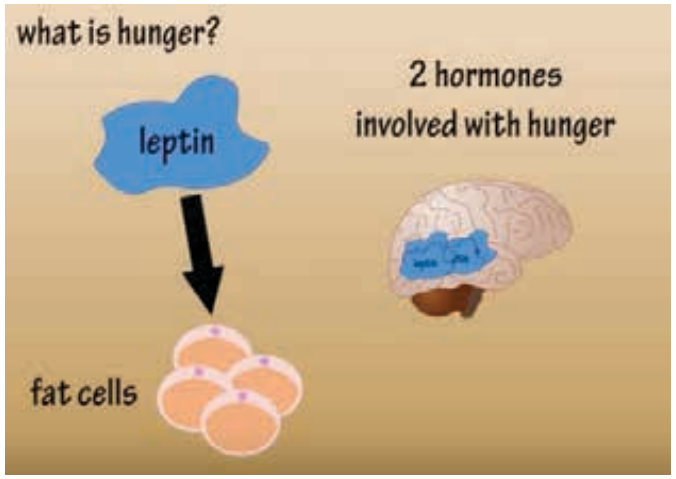
LEPTIN & GREHLIN (HUNGER REGULATING HORMONES)

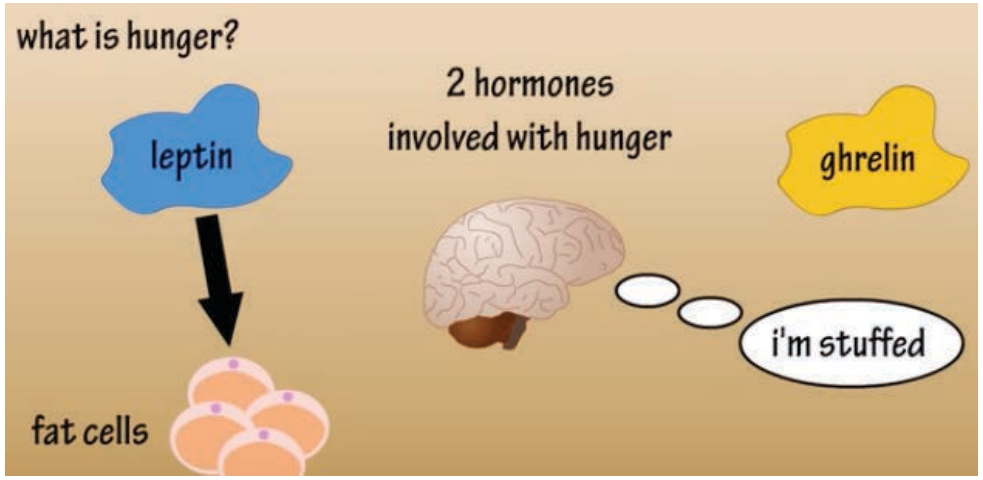


INCREASED TOXICITY = INCREASED HUNGER – REDUCED METABOLISM
INABILITY TO LOSE WEIGHT – MOOD PROBLEMS

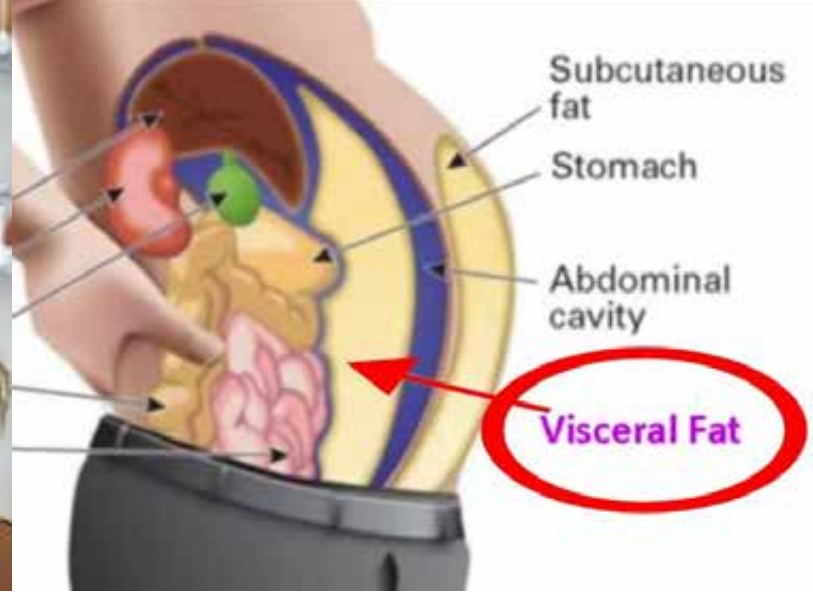
Toxins and **Persistent Organic Pollutants**
interfere with both Leptin and Grehlin

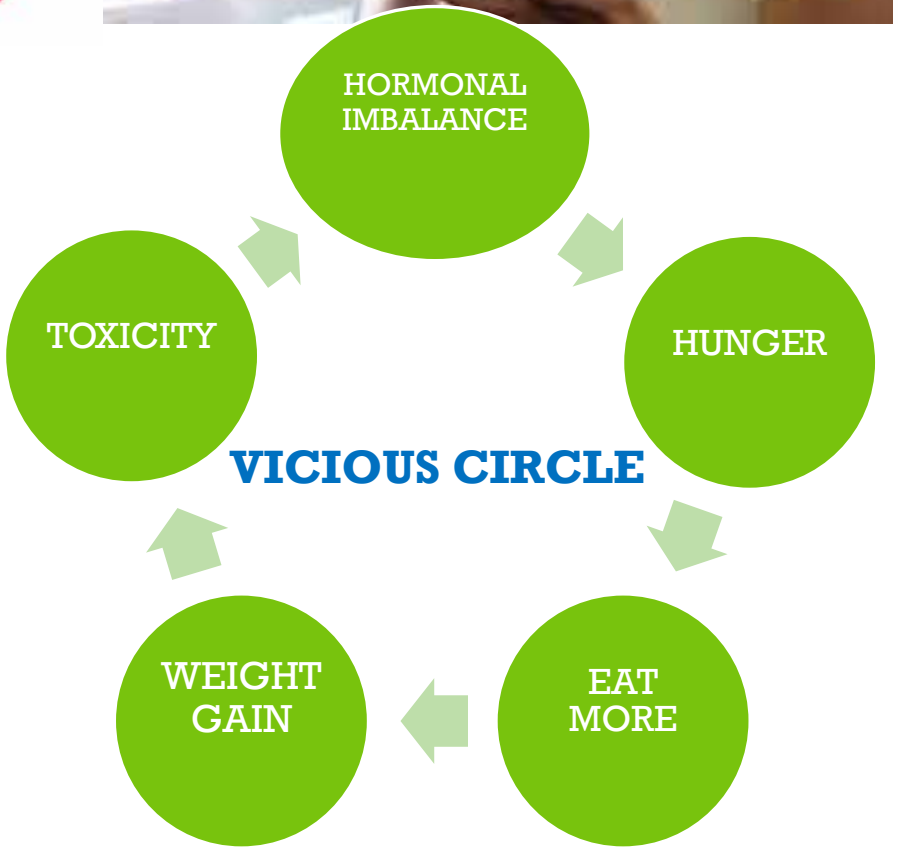


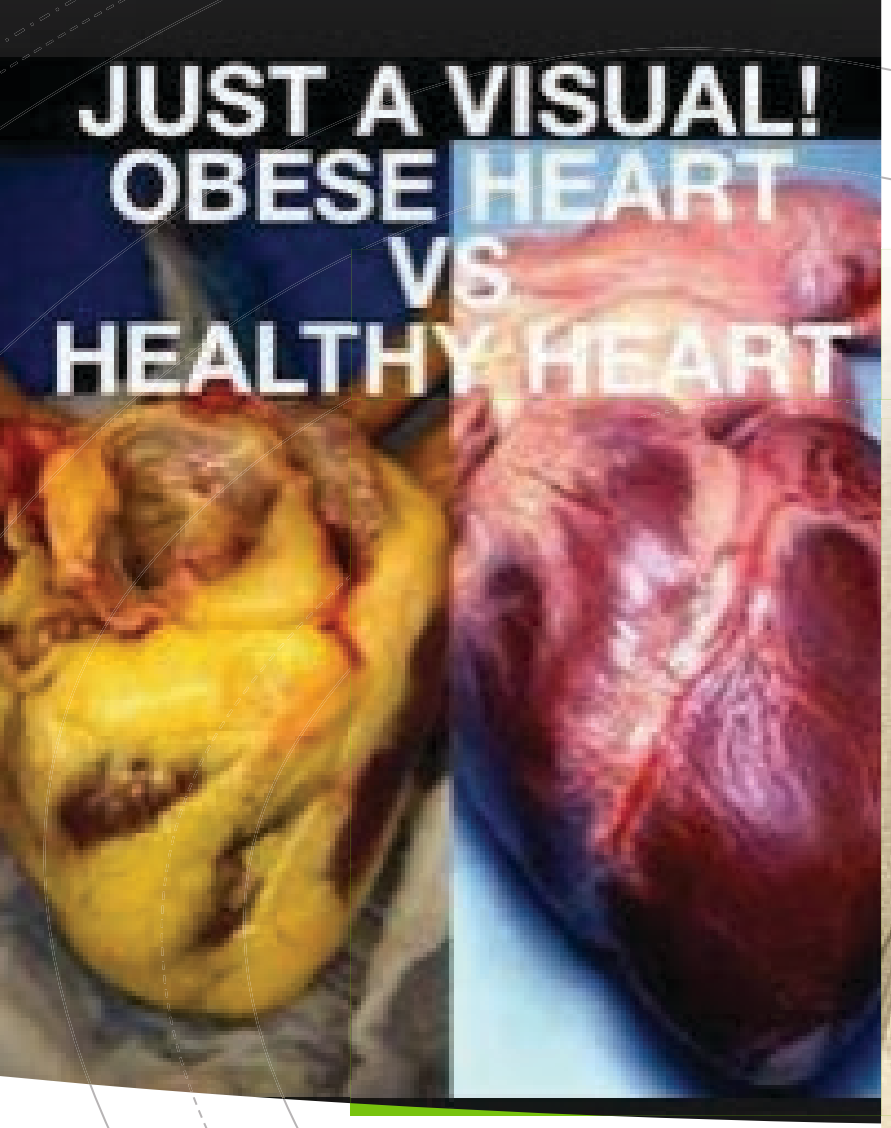


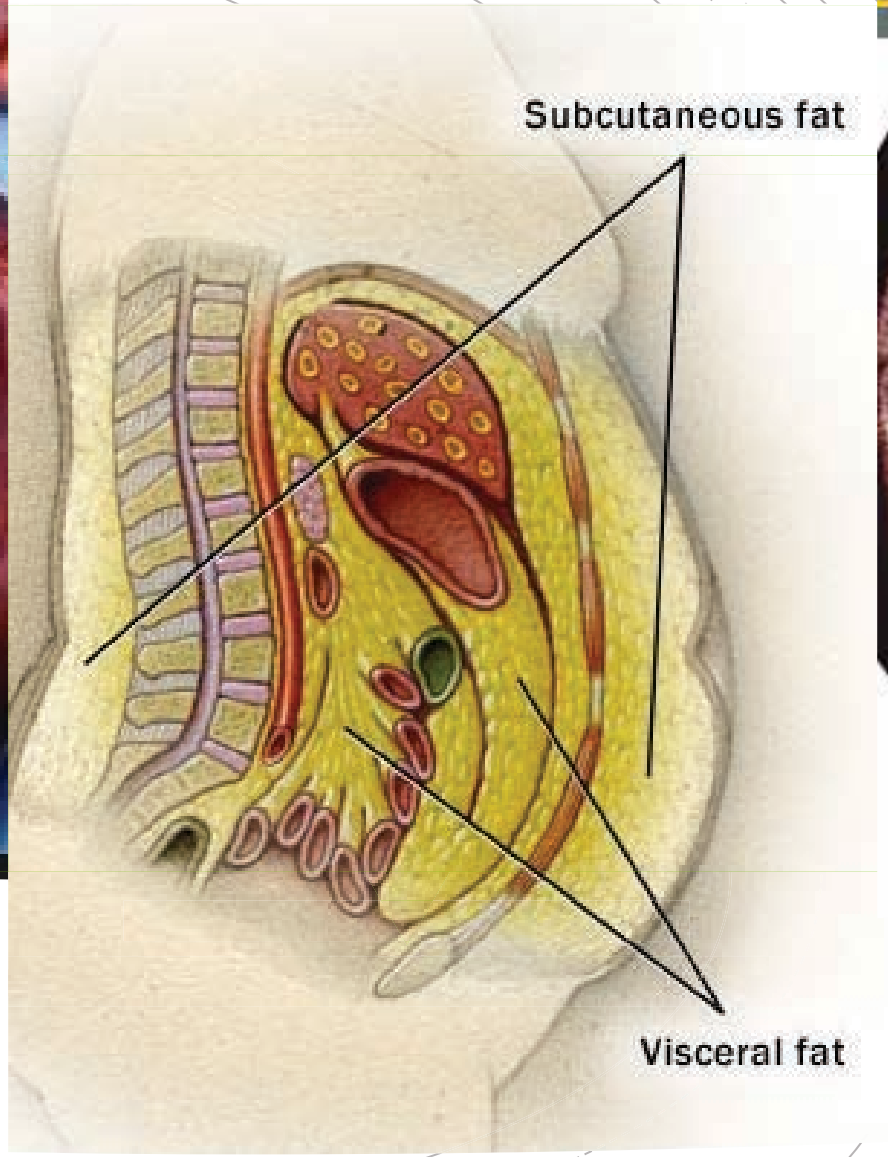


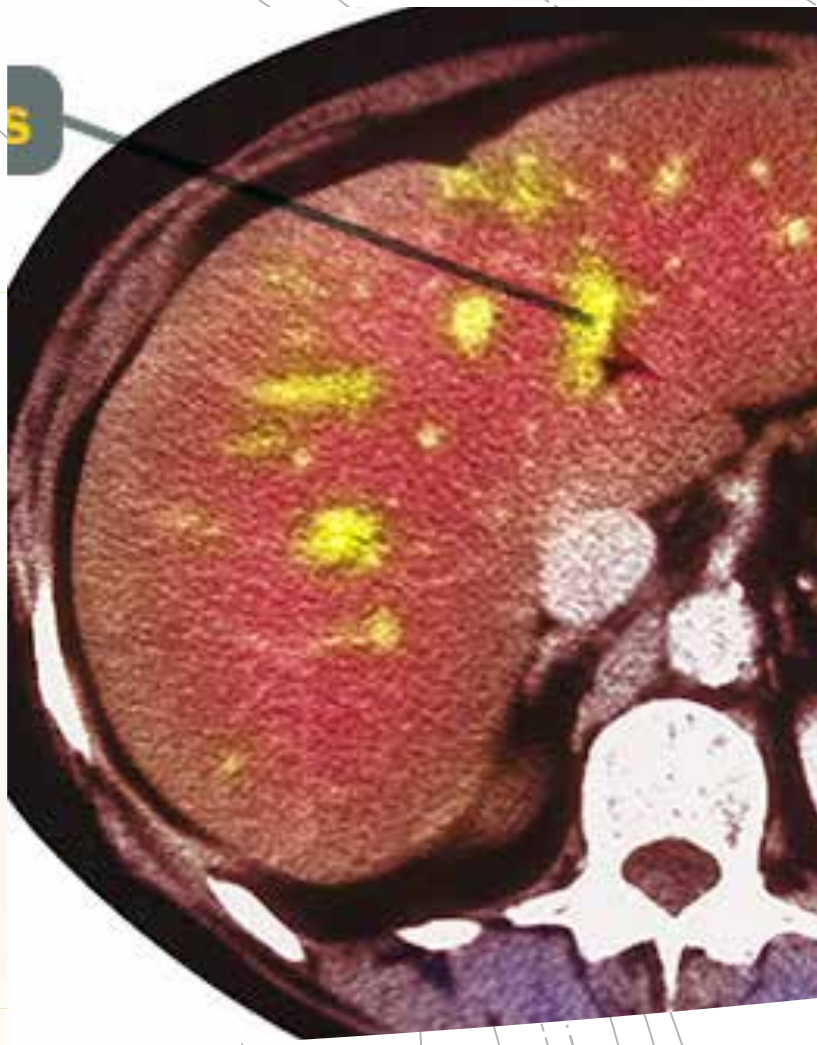

Signs You May Have a
HORMONAL IMBALANCE
1
Weight Gain or Loss
2
Constant Fatigue and Weakness
3
Hot Flashes & Night Sweats
4
Insomnia and Sleep Problems
5
Loss of Libido
6
Mood Swings and Depression
7
Indigestion and Gastrointestinal Discomfort
8
Hair Loss
9
Dry Eyes


Subcutaneous fat
Stomach
Abdominal cavity
Visceral Fat


HORMONAL IMBALANCE
HUNGER
EAT MORE
WEIGHT GAIN
TOXICITY
VICIOUS CIRCLE

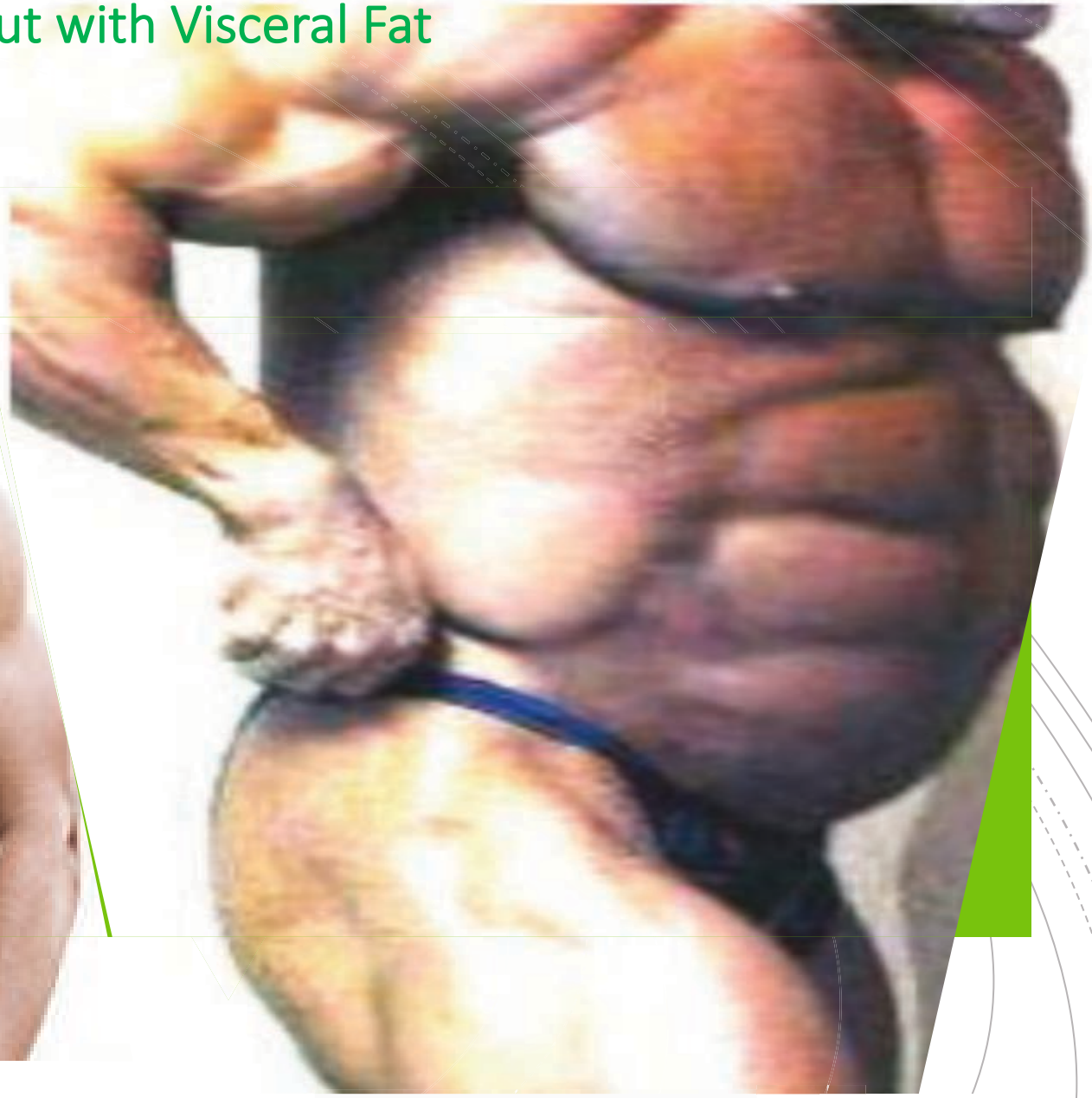

JUST A VISUAL!
OBESE HEART
VS
HEALTHY HEART


Subcutaneous fat
Visceral fat



Working out with Visceral Fat

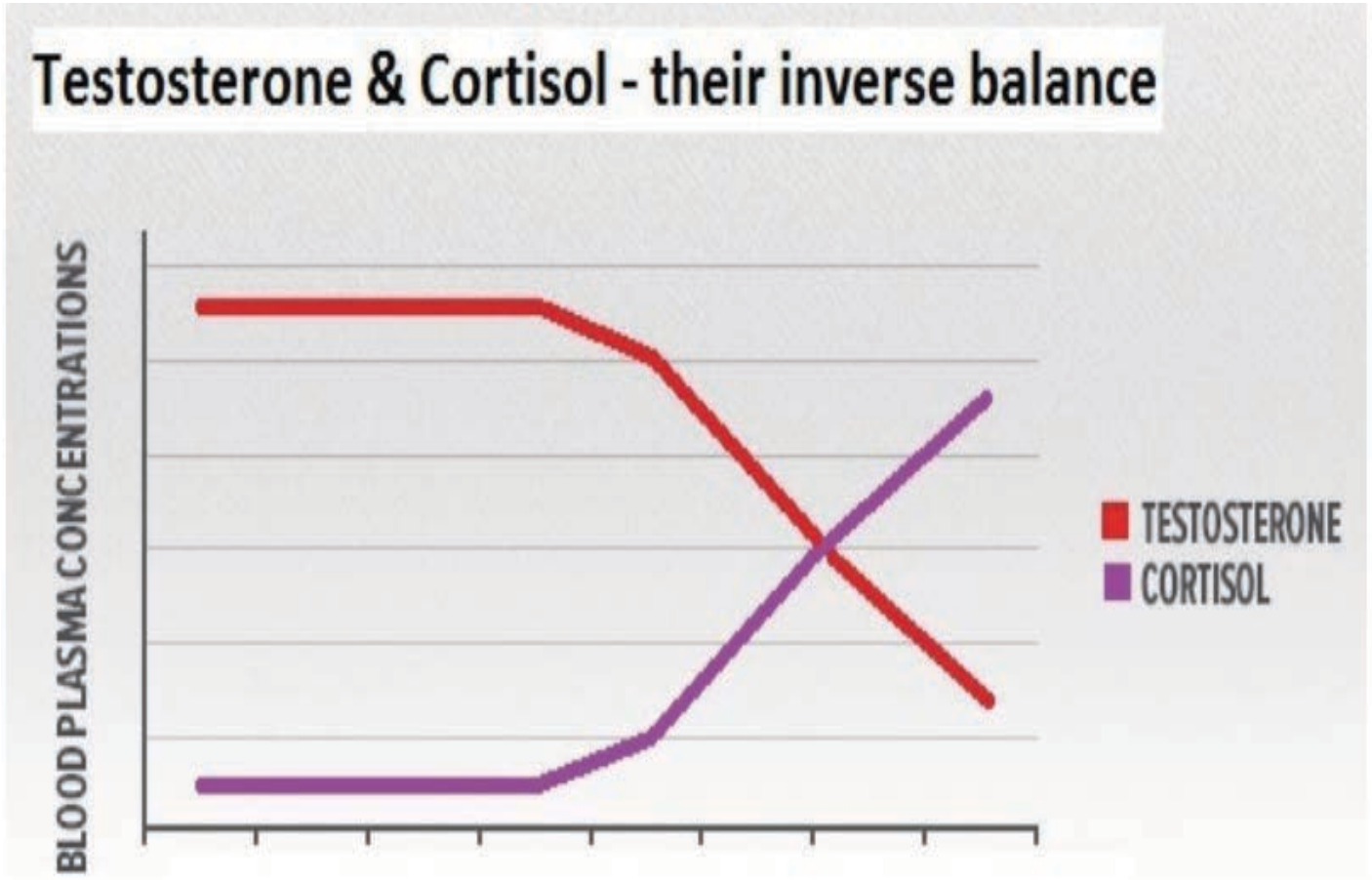
You WILL NOT Get This! ↑



You WILL Get This! ↑

VERY STRENUOUS EXERCISE IS NECESSARY TO GET RID OF VISCERAL FAT

Overtraining can cause greater hormone imbalance

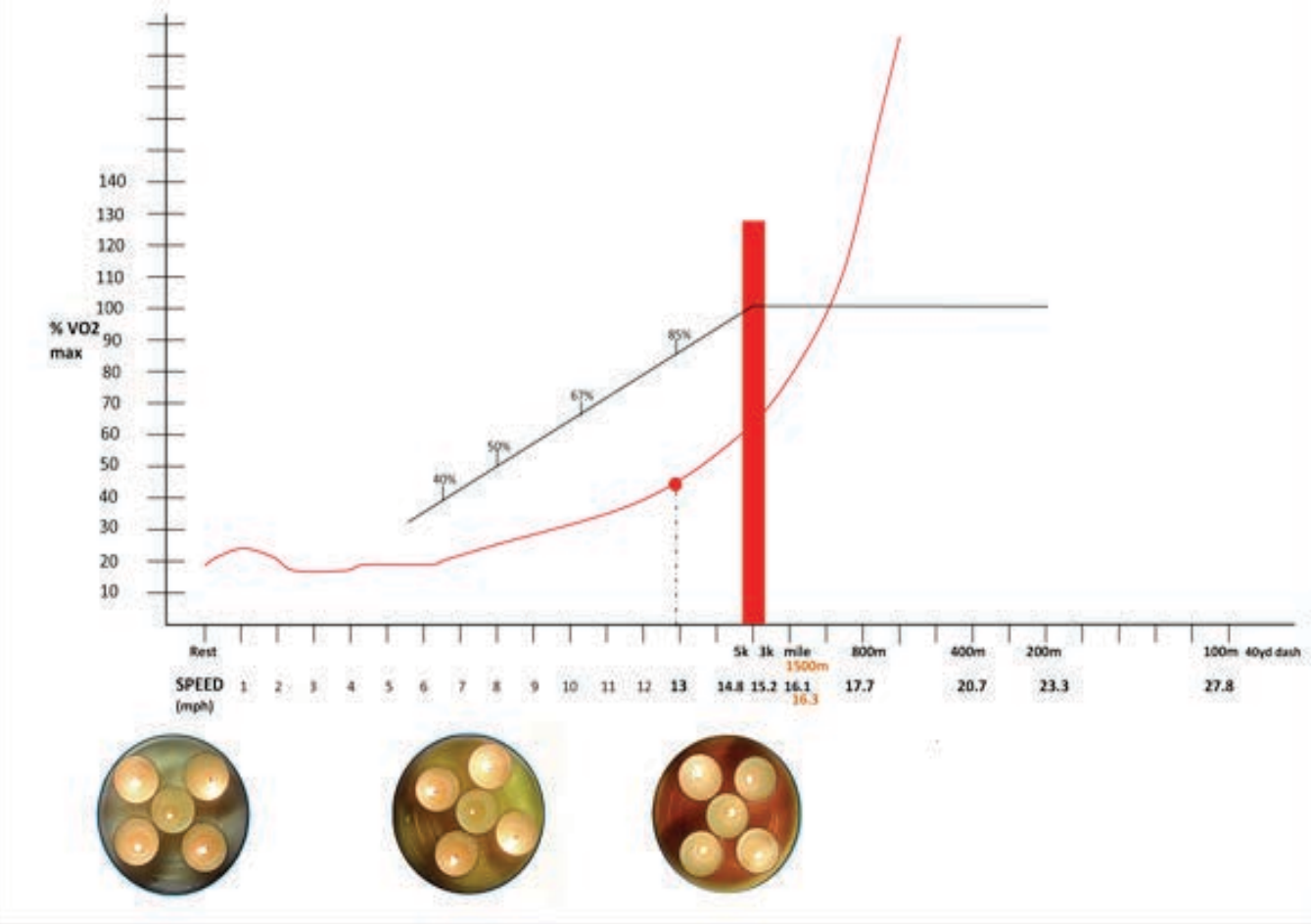


CORTISOL

TESTOSTERONE

VERY STRENUOUS EXERCISE IS NECESSARY TO GET RID OF VISCERAL FAT

Overtraining can cause Upsets PH balance



LACTIC ACID

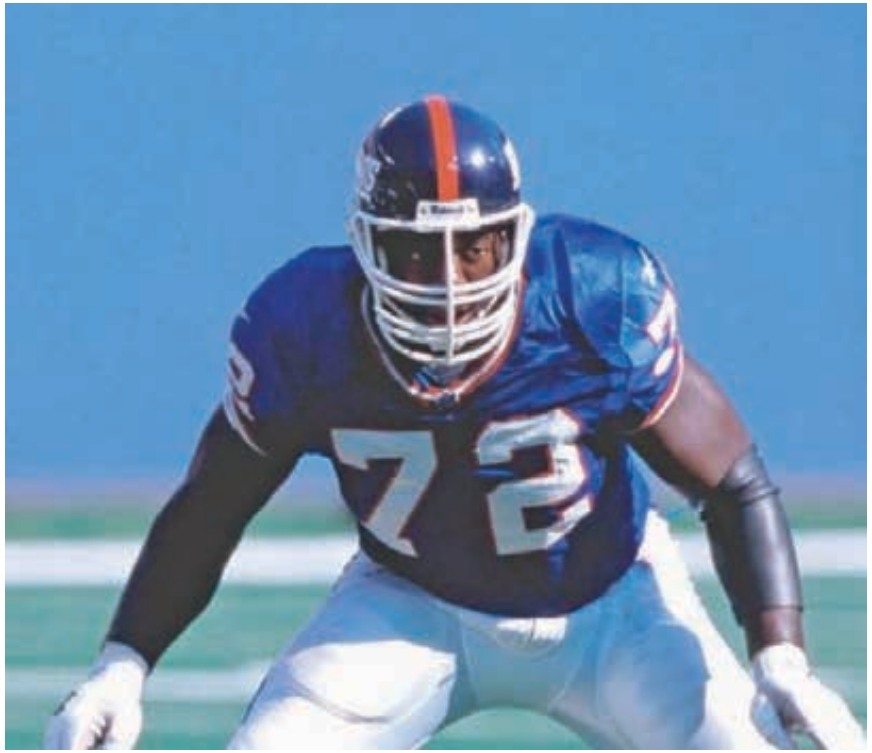
lactic acidosis

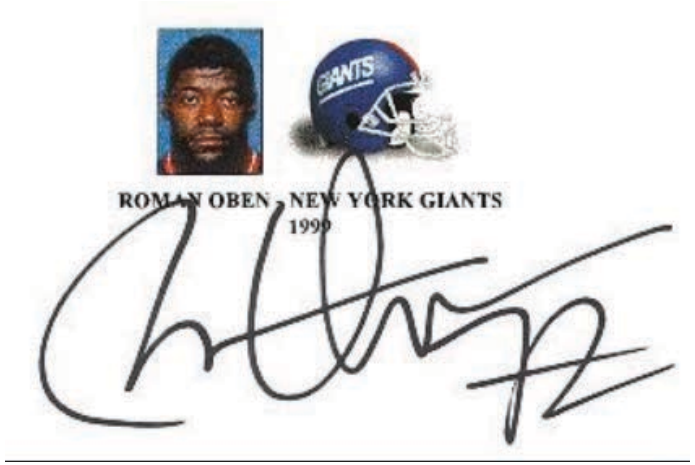
upsets the body's pH balance

Hormones are interconnected with Exercise

Hormones trigger the fat burning processes to form the energy that sustains exercise and build muscle

The brain is responsible for all movement
including the full muscle contractions during exercise





Lets use SIGNALING to activate
the Motor Nerves

Motor Nerves (part of the CNS)
MUST involve the Brain that can cause
the full body contractions

The Brain will order the necessary
Hormones to produce the energy
that will never exceed hormonal balance
due to negative feedback mechanisms

Result : **SIMULATED EXERCISE**

Dr Gerry Pollock's London University Research (1990)

Goldpink's research on Gene Expression

- Rapid muscular hypertrophy
- 250% increase in the RNA content of the muscles
- Repression of the fast-type genes and activation of the SKELETAL slow-type genes.

Biochemical Society Transactions

Stretch and force generation induce rapid hypertrophy and myosin isoform gene switching in adult skeletal muscle

Geoffrey Goldspink, Andrew Scutt, Jane Martindale, Thomas Jaenicke, Lucien Turay and Gerald-F. Gerlach
Unit of Molecular and Cellular Biology, The Royal Veterinary College, London University, Royal College Street, London NW1 0TU, U.K.

Summary
Using electrical stimulation to control force generation and limb immobilization to alter the degree of stretch, we have studied the role of mechanical activity in inducing hypertrophy and in determining fast and slow muscle fibre phenotype. Changes in gene expression were detected by analysing the RNA in hybridization studies employing cDNA probes specific for fast and slow myosin heavy chains and other genes. As a result of overload in the stretched position, the fast contracting tibialis anterior muscle in an adult rabbit is induced to synthesize much new protein and to grow by as much as 30% within a period as short as 4 days. This very rapid hypertrophy was found to be associated with an increase of up to 250% in the RNA content of the muscles and an abrupt change in the species of RNA produced. Both stretch alone and electrical stimulation alone caused repression of the fast-type genes and activation of the slow-type genes. It appears that the fast-type IIB genes are the default genes, but that the skeletal slow genes are expressed as a response to overload and stretch. These findings have implications as far as athletic training and rehabilitation are concerned.

Introduction
Muscle is a tissue in which gene expression is regulated to a large extent by mechanical signals. Mammalian muscle consists of populations of slow-contracting, oxidative fibres and fast-contracting fibres which are characterized by different protein isoforms. Therefore, post-natal growth and the differentiation into the fast type or the slow type of fibres must presumably involve the regulation of expression of different subsets of genes. Here we have focused on the expression of myosin heavy chain genes and their response to mechanical stimuli.

The intrinsic velocity of contraction ($V_{max.}$) of muscle fibres is related to the specific activity of their myosin ATPase [1]. Myosin is a double molecule that consists of two heavy chains each of about 220 kDa. The actin-attachment site and the ATPase site are located in the S1 region (head of the myosin molecule) of each heavy chain. Associated with the S1 fragment are smaller polypeptides called light chains which are believed to modulate the cross-bridge ATPase activity [2]. Subtypes of fast muscle fibre have been identified histochemically and these may exist because of different combinations of myosin heavy and light chains and different mitochondrial content. Slow fibres differ in several ways from fast fibres in that they have many more mitochondria, different cytoplasmic isoenzymes, as well as different isoforms of myofibrillar proteins. The isoforms of myosin have been shown to be the product of a multigene family and their expression is tightly regulated in a stage-specific and tissue-specific manner [3, 4]. Phenotypic expression of muscle genes is known to be influenced by thyroid hormone [5, 6] and altered patterns of innervation [7]. However, the influence of physical activity at the gene level was unclear. We have, therefore, studied changes in transcriptional levels of the fast and slow myosin heavy chain genes in response to stretch and force generation.

Abbreviation used: TA, tibialis anterior.

Methods

Stimulation and acute-stretch procedures
Tibialis anterior (TA) muscles in adult Netherland dwarf rabbits were stimulated using Teflon-coated stainless-steel electrode wires implanted into the popliteal fossa [8] under valium/Hypnorm anaesthesia. The electrode wires were externalized at the back of the neck and attached to a miniature stimulation circuit which was held in position by a small saddle fashioned out of an elastic bandage. Several circuit designs were used which generated biphasic pulses at frequencies ranging from 2 Hz continuous to 120 Hz intermittent. A 30 Hz intermittent circuit was designed to give the same number of pulses/min as a 2 Hz continuous, and a 120 Hz and 60 Hz intermittent circuit gave the same number of pulses/min as a 10 Hz continuous circuit. In this way, the hypothesis that it is the number of pulses delivered which determines muscle fibre phenotype could be tested. The pulse length was 0.1 ms and the pulse amplitude was adjustable from 1 to 3 V and each miniature stimulator was fitted with an on/off switch. Muscle

THE SUNDAY TIMES

INNOVATION 11

Keeping trim without the effort of exercise: the Arasys unit, already used in beauty salons, could be put to work in hospitals to tone the muscles of bedridden patients

Fighting the flab without sweat

A SCIENTIST has invented a machine he claims will keep people trim without the need for exercise and could help reverse muscle-wasting conditions such as multiple sclerosis, writes Sean Hargrave.

The Arasys exerciser unit (ARAdic SYStem), developed at London's South Bank University Technopark, is already being sold to health clubs and beauty salons for those who want to lose weight without putting in the effort.

Now the machine's designer, Gerry Pollock, is searching for hospitals and clinics that could help him test the system on disabled patients who are unable to exercise. He believes Arasys could prevent the muscle wastage common among those confined to bed or a wheelchair.

The machine flexes muscle by passing tiny electric currents through nerve endings at either end of muscle groups. This makes the tissue contract for two seconds, as if it were being put through a gym workout.

A typical session with the machine lasts 17 minutes. Pollock says this is because people can feel tired if they have a longer stint and do not notice as much benefit as from a shorter session. He claims each treatment is the equivalent of doing 300 sit-ups and that three sessions are all that are needed until weight loss can be measured.

The Arasys system can treat four sets of muscle simultaneously. In cosmetic use these are normally the stomach, bottom, thighs and calves. In medical use, this would change to exercise the parts of the body a patient cannot move.

Pollock, a chemist, claims his technology is superior to machines that make similar claims of effortless weight-loss because of the electric wave form he designed. He says his electronics expertise, that was used in the development of the first pacemaker, ensures the muscles are exercised at the correct speed for the optimum duration.

This involves controlling electrical impulse to avoid suddenly jerky muscle movements. To achieve this, Arasys generates smooth rather than spiked electrical signals so that the muscle is stretched in a manner more similar to way it behaves during real exercise.

"We only discovered how long and intense the signal should be through trial and error during the system's five-year development," says Pollock. "Just passing any old electrical signal across a muscle simply doesn't work."

Besides helping the disabled, Pollock believes his machine could be used to return strength to the elderly and those who suffer from multiple sclerosis.

His niece, Angela Sylvester, a qualified nurse, regularly uses Arasys on four ME sufferers who are unable to exercise. She claims they all report they feel stronger.

"One of the ladies used to be a fitness instructor, but because of her condition she cannot work out any more," says Sylvester. "She benefits from being able to stay trim and exercise muscles that would otherwise be hardly used."

Pollock hopes his invention will soon be put to its original healthcare use and is keen to talk with clinics and hospitals that believe they could help him tailor the system for individual conditions.

"I need to talk with experts so that we can decide if the present electrical signal is appropriate or if it needs changing," he says.

LONDON UNIVERSITY INVENTION

BY DR GERRY POLLOCK THE CO-INVENTOR OF THE FIRST PACEMAKER

In 1994 the Sunday Times, UK and other journals published several articles about Gerry Pollock's invention of SIMULATED EFFORTLESS EXERCISE in London University

Dr. Pollock spent 17 years of laboratory empirical (atheoretical / trial & error) research on this invention.

Since then all our research remains part of our IP and is therefore proprietary

Blueprint Motor Nerve Signal Driven in to the skin by Voltage

+

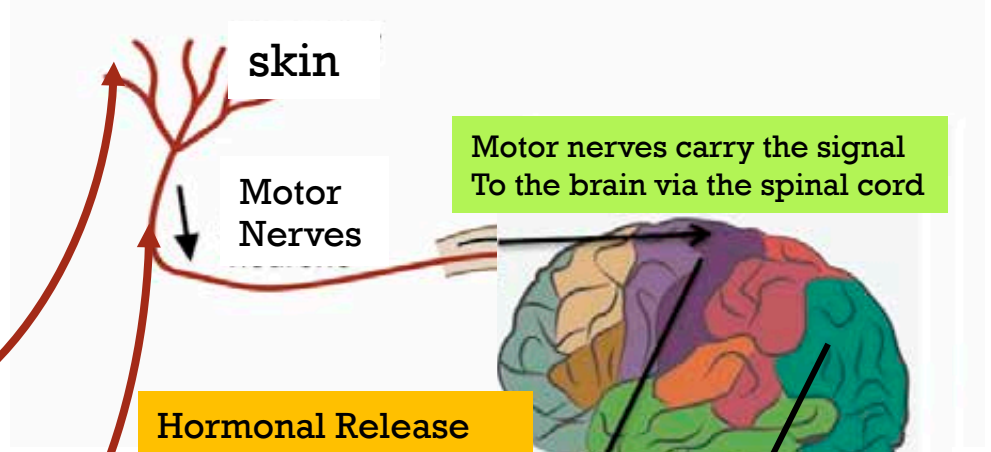
Motor Nerve at rest

=

Resonance / amplification

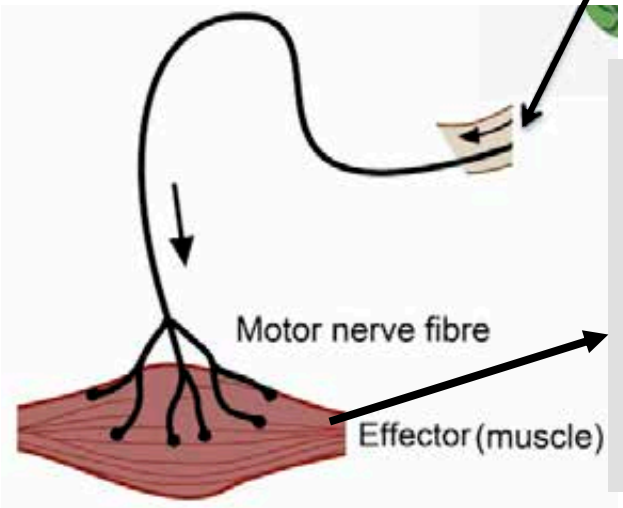
Motor Nerve is awakened / amplified

Awakened Motor Nerve Excites Motor Nerves Around it causing waves of motor nerve excitation

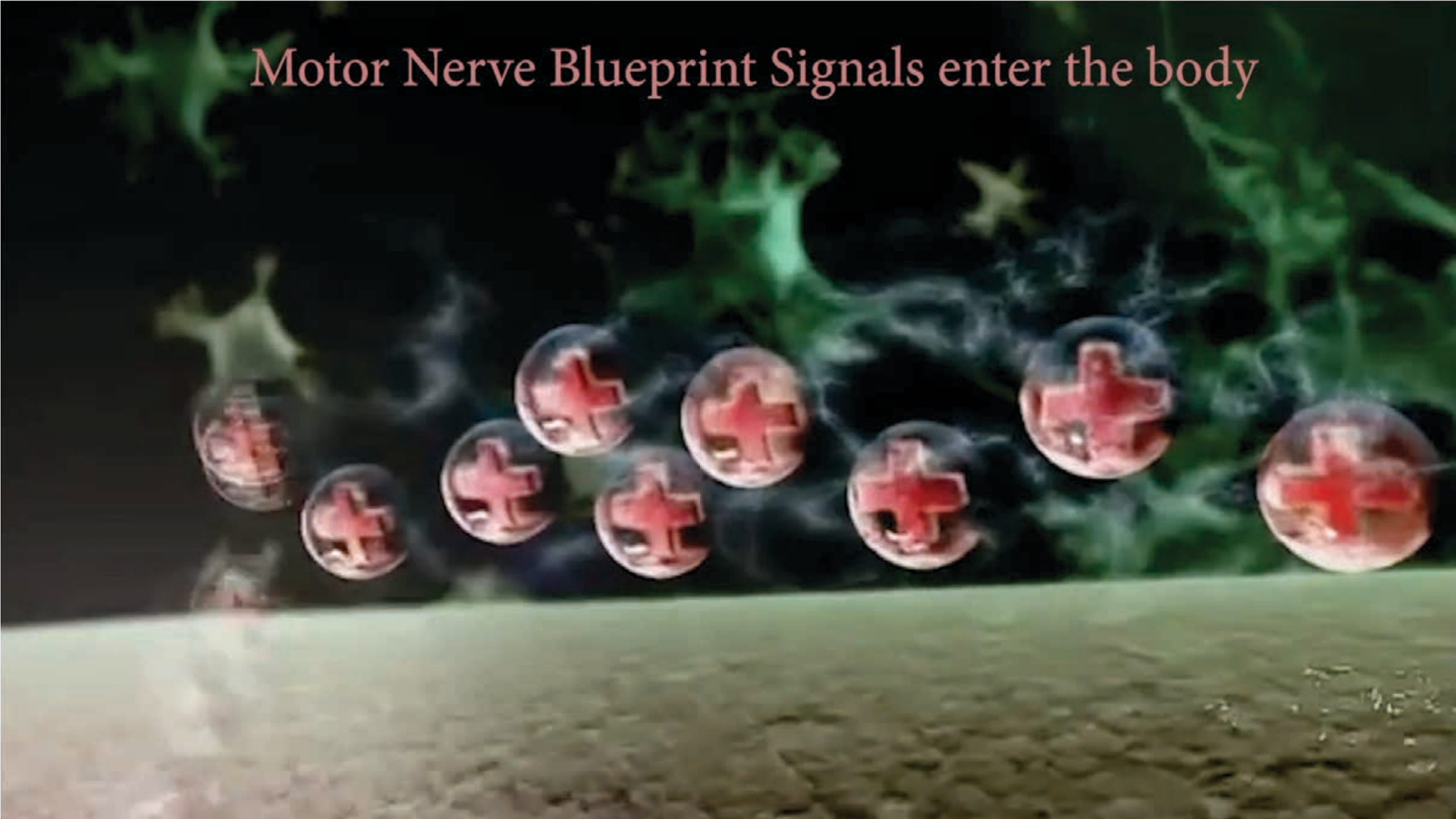


Motor nerves carry the signal To the brain via the spinal cord

Hormonal Release Triggering subcutaneous + visceral fat burning to produce energy (ATP) & power the contractions and eventual muscle building and optimum body functioning



FULL CONTRACTION OF LARGE **COORDINATED** MUSCLES (ABDOMEN, BUTTOCKS ARMS, LEGS) **CONTRACTING SIMULTANEOUSLY FOR 8 SECONDS** INVOLVING THE ENTIRE BODY AS IN REGULAR STRENUOUS EXERCISE


Motor Nerve Blueprint Signals enter the body

Visceral Fat Reduction

NORMAL Hormone Concentrations
AT YOUR PEAK

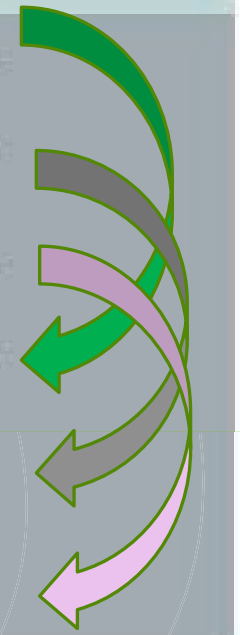
No significant changes in Cortisol

Increased RBC's separation / Increased Blood Flow

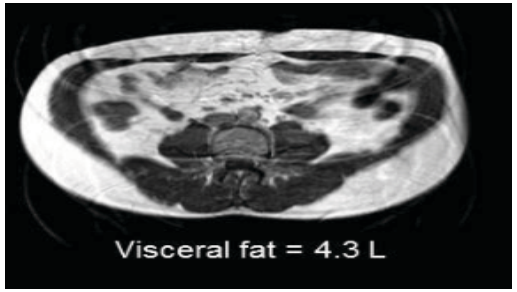
Increased Blood Circulation and DETOX

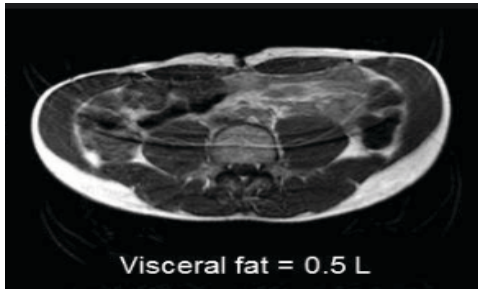
Gerry Pollock's STUDY ON CORTISOL / NO CORTISOL INCREASES AFTER VIRTUAL GYM TREATMI LONDON UNIVERSITY.

	Test	Specimen	Conventional Units
Before Treatment	Cortisol A.M.	Plasma	13.7 mg / dL
Before Treatment	Cortisol P.M.	Plasma	10.1 mg / dL
Before Treatment	Cortisol Urinary Free	Urine	37.1 mg / dL
After Treatment	Cortisol A.M.	Plasma	12.9 mg / dL
After Treatment	Cortisol P.M.	Plasma	10.8 mg / dL
After Treatment	Cortisol Urinary Free	Urine	38.8 mg / dL

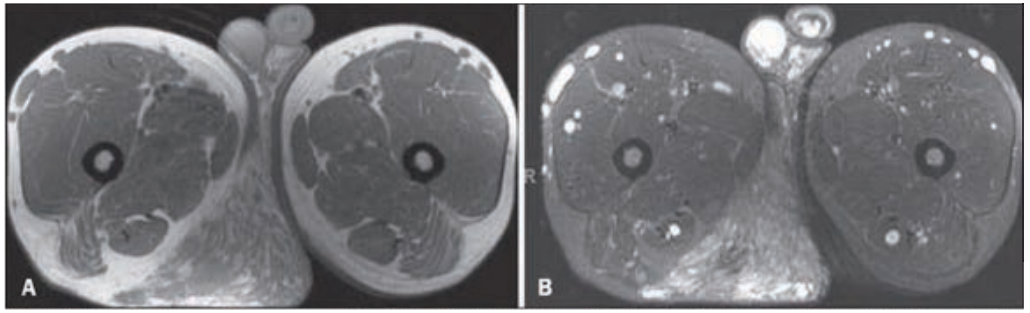


2012 / 2013 Experimental Studies
Design: 19 subjects receiving 3 treatments weekly
A/ Magnetic Resonance Imaging Test, (MRIs)
B/ concentrations of 1. T3
2. DHEA
3. Triglycerides





Visceral Fat Decrease - p< 0.01



increased muscle mass. - p< 0.01

1. **Significant increase in Free T3 p<0.05**

2. **Significant increase in DHEA p<0.01)**

DHEA increases
*bone density
*collagen

3. **Significant decrease Triglyceride Levels (p<0.01)**

2019 NEODERM STUDY REVEALED HIGH statistical significance in VLDL DECREASE, the bad cholesterol, & FREE T-3 INCREASE

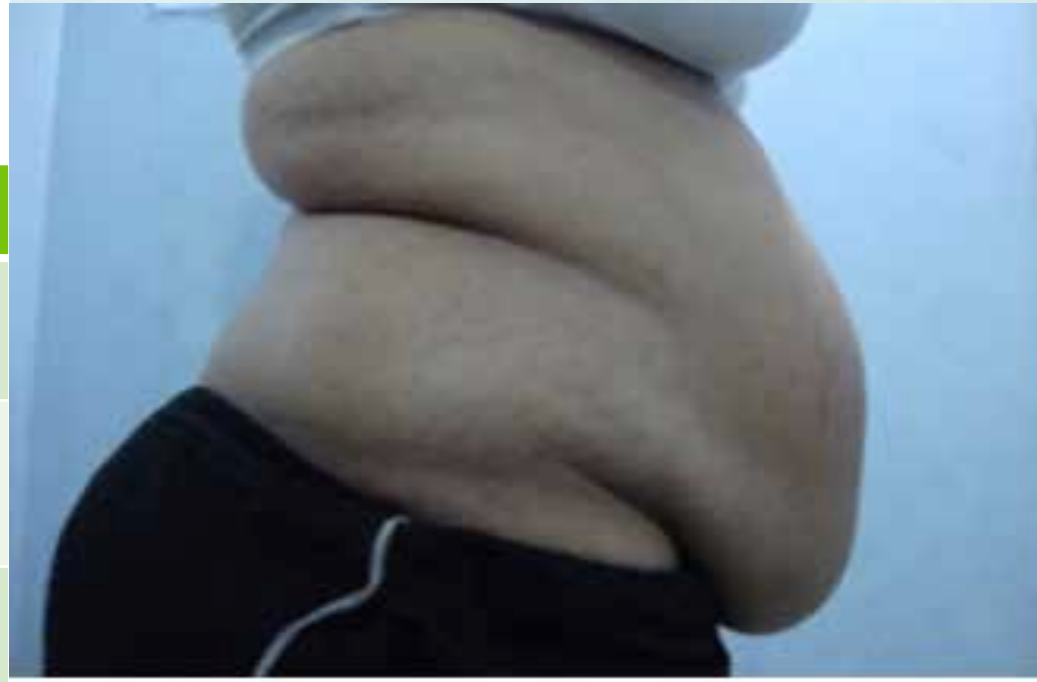
- **VLDL decrease probability level 99.99%. P<0.0001**
- **Free T-3 increase at 95% probability level p<0.05**
- **Cortisol remained unchanged.**
- **HDL the good cholesterol 80% increase - necessary to avoid cardiovascular disease**
- **IGF-1 increase at the 77%**
- **DHEA increase at 71%.**
- **Testosterone increase 90% for women p=0.016**

***All hormones remained within the normal range Subjects were at the peak of their hormonal balance.

Diabetic Patient with back Pain and Fatty Liver. Measures: Sonogram, Blood Test, Measuring tape, Tanita Scale, Self Reports

SHEETAL BADAMI. MD

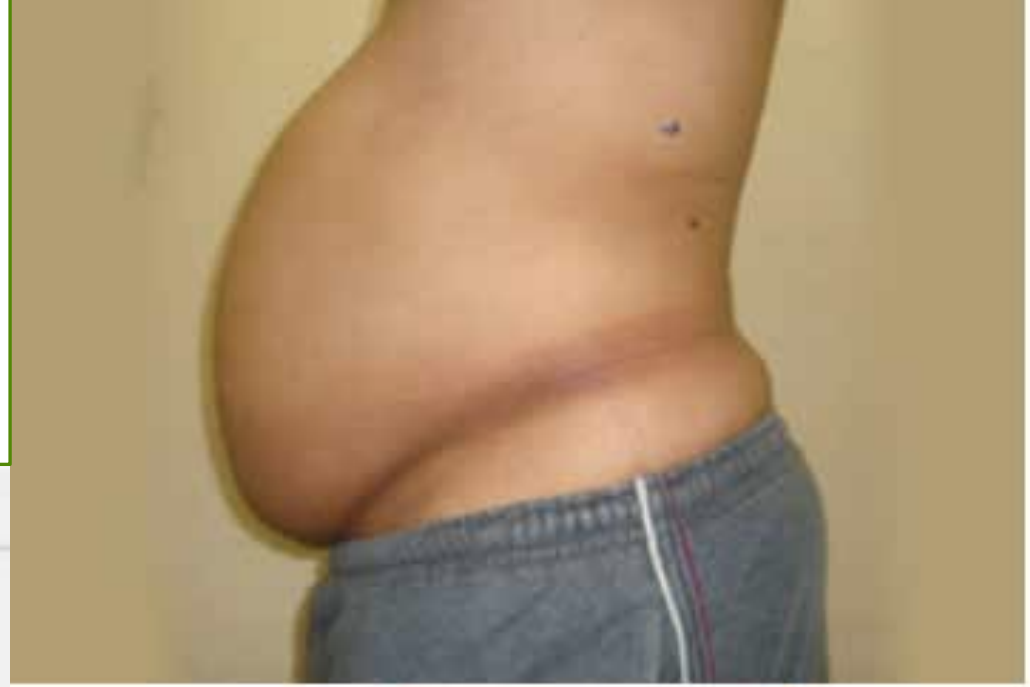
BEFORE	AFTER
Real Age: 43 y.o. female	METABOLIC AGE 32
Severe Obesity FAT 36.5 %	FAT% 25.8
Diabetic Status: On Insulin HbA1c- 10.8	On Oral Drugs HbA1c – 7.8
Visceral Fat Evidence Sonography Reports: Fatty Liver	NO FATTY LIVER
Lower Back Pain	NO BACK PAIN
Weight: 92.2 Kg	Significant Weight Loss 83.7 KG
Measurement: Umbilicus: 111cm	Significant Improvement:100cm
Measurement: Lower Abdomen: 115cm	Significant Improvement:100cm



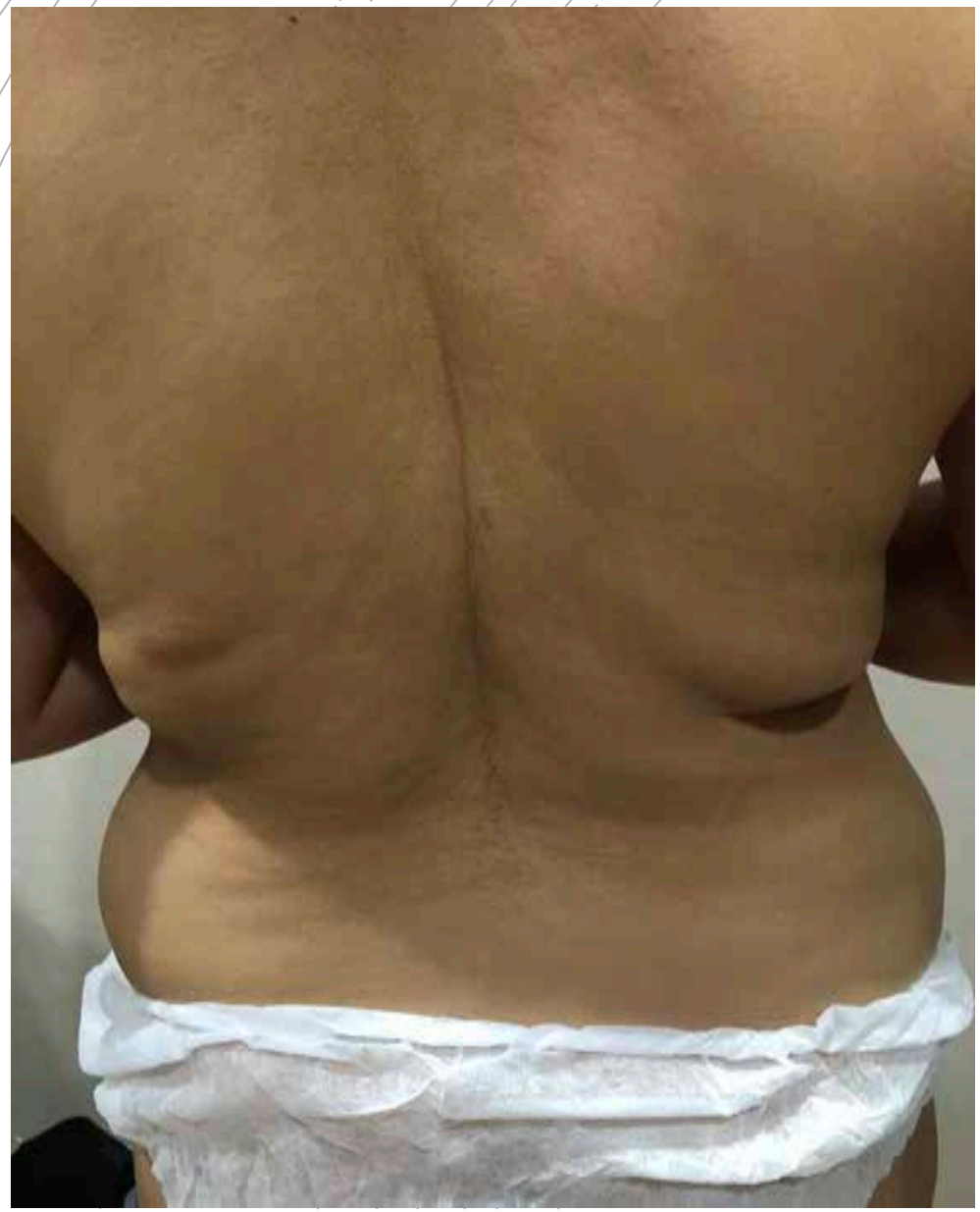
43 Year old Patient suffering from Insulin Resistance and Diabetes. Measures: Sonogram, Tanita scale, Blood Test, Measuring Tape, Self Reports

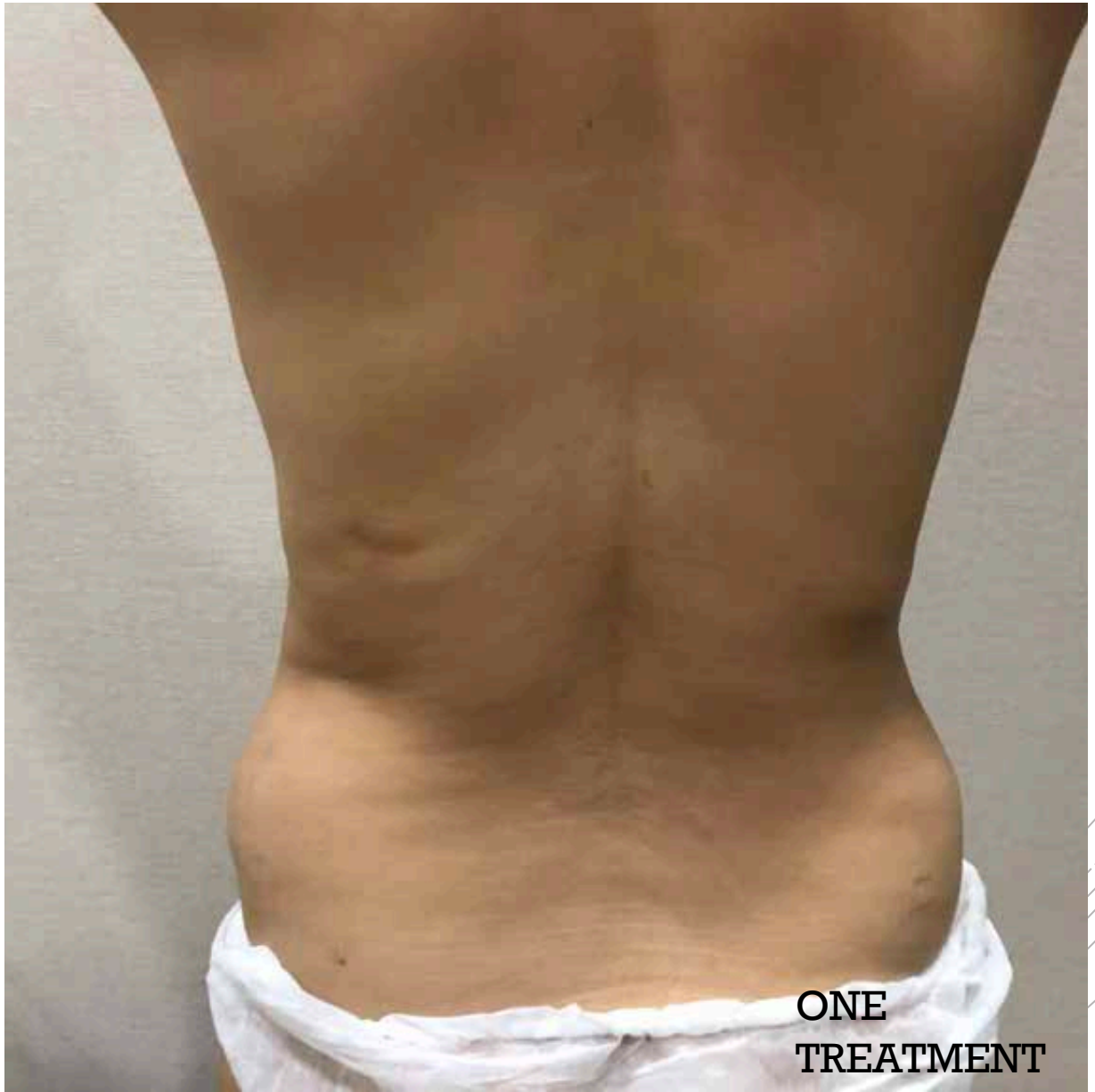
Sheetal Badami, MD

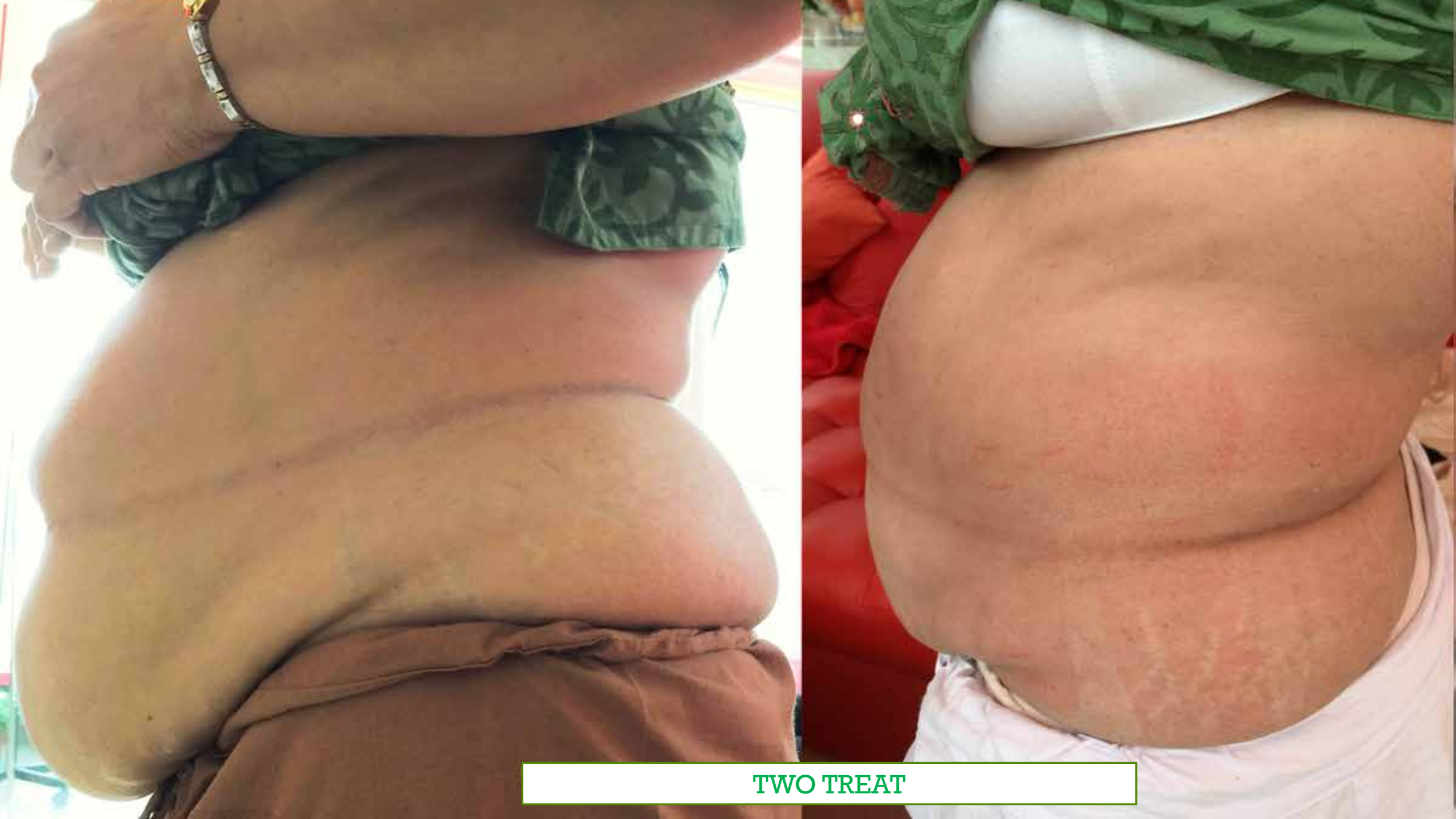
	Before treatment	After treatment
Weight (kg)	75.8	67.2
Fat %	36.5	25.8
Upper abdomen(cm)	97	82
Umbilicus (cm)	100	88
Lower abdomen (cm)	105	94
Insulin-Fasting(mIU/ml)	25.8	8.7
Insulin PP (mIU/ml)	136	14
Triglycerides (mg/dl)	294	197
HDL(mg/dl) good cholelserol	36	42
Back pain	Lower Back pain +++	Significant decrease in back pain



Results of this technology today after additional additional 25 years of research (a total of 44 years of combined research) offers visual body changes after 20-60 minutes



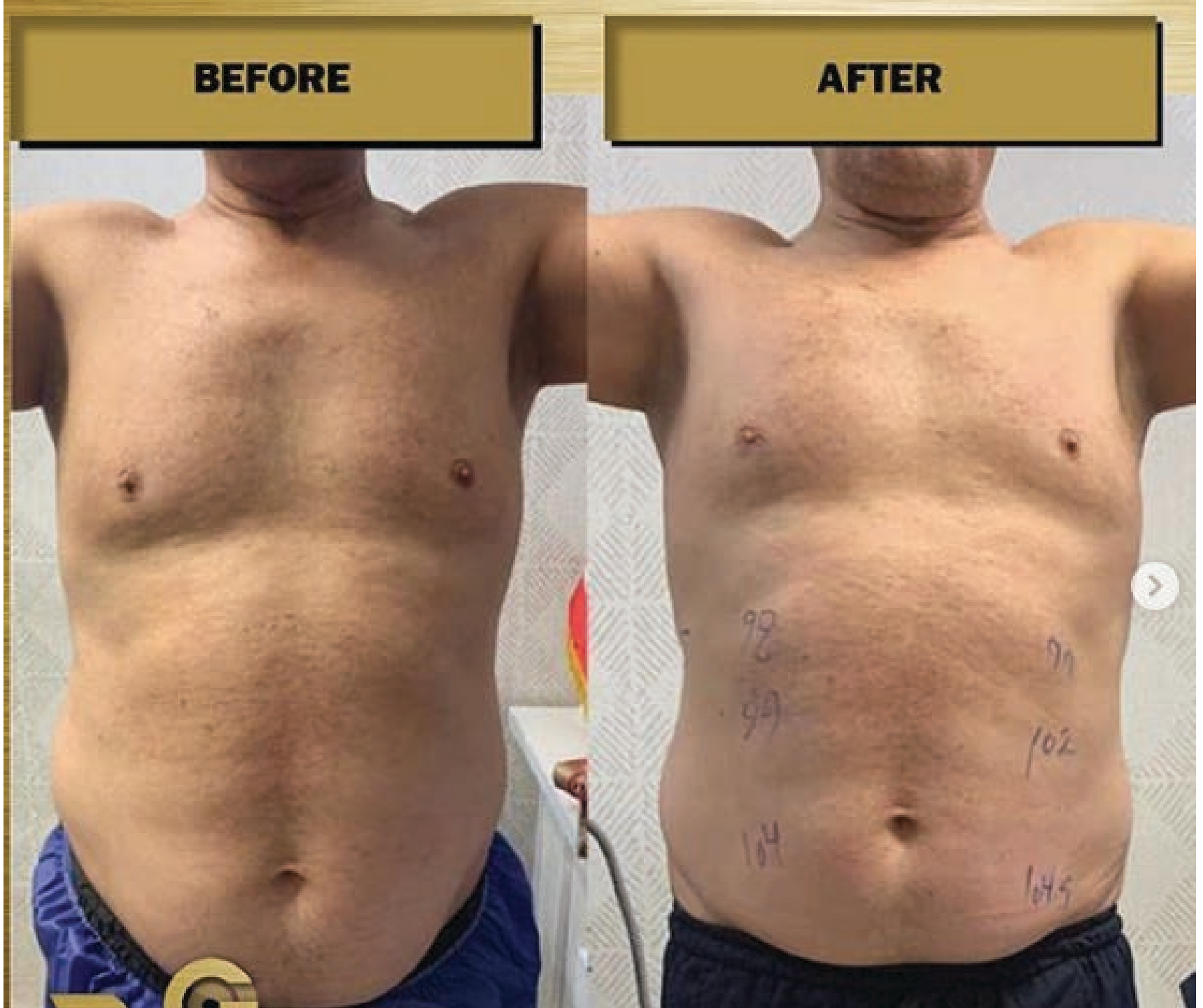




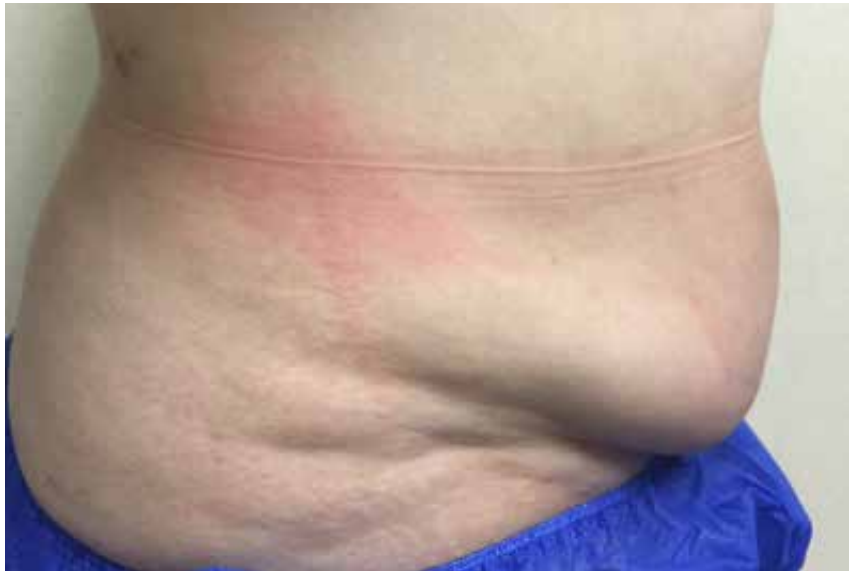
TWO TREAT

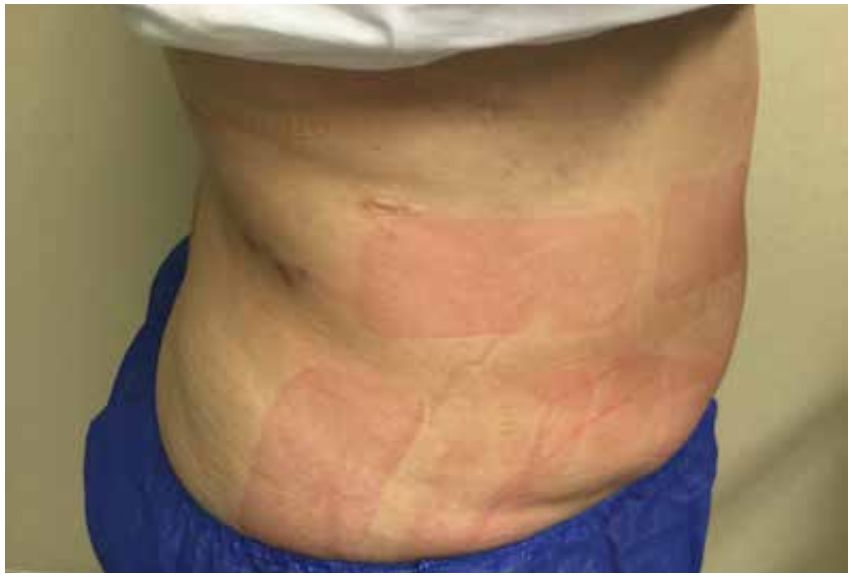

ONE
TREATMENT

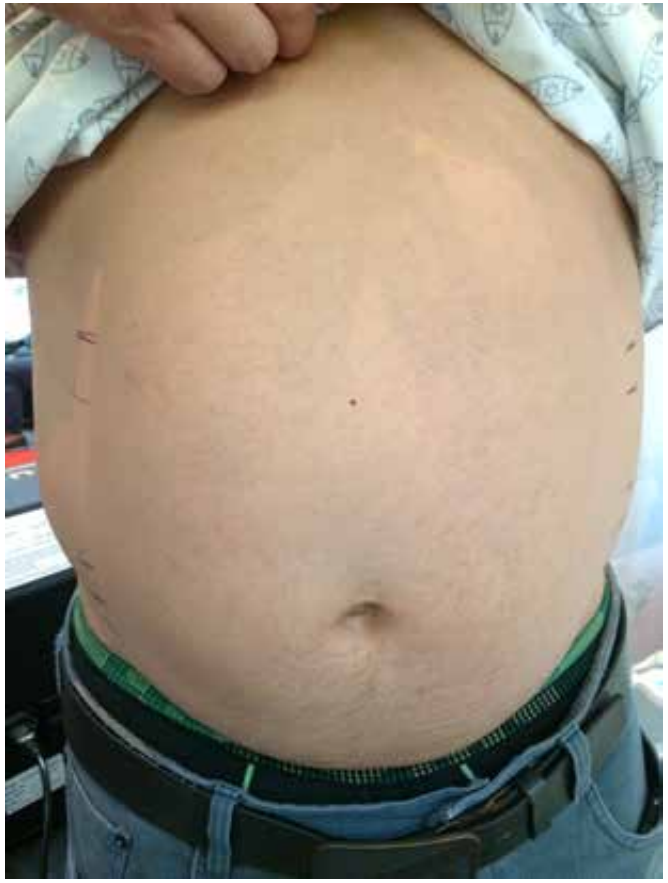
ONE
TREATMENT

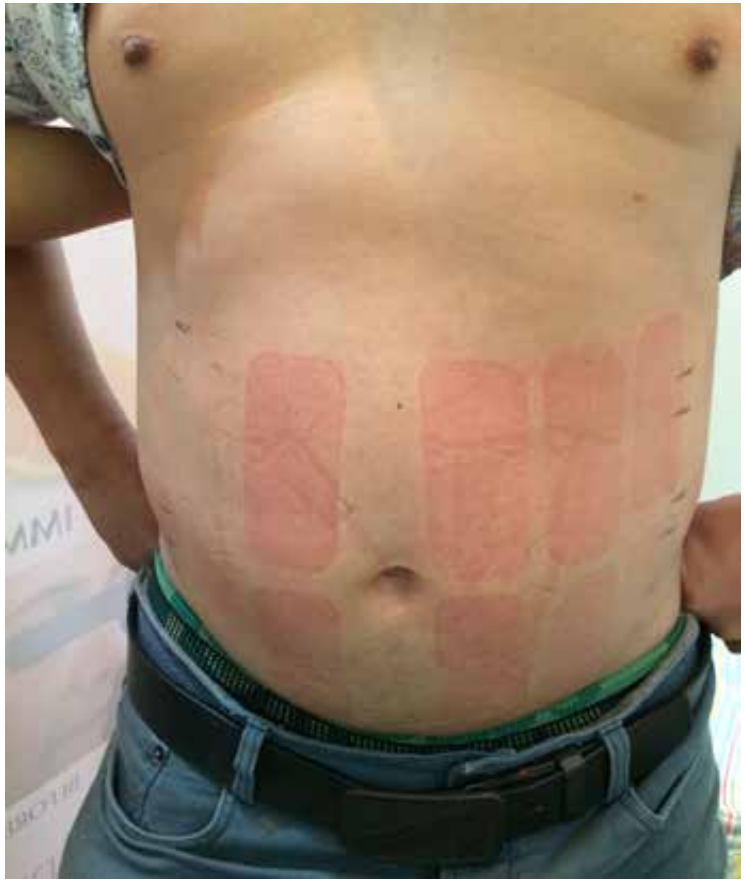


ONE TREATMENT









TWO TREAT

THANK YOU

Questions? Please e-mail:
science@iellios.com