Genetics, Epigenetics, Biochemistry and the Emotions
Chris will be tying together the links between genetics, nutritional requirements and emotional states.

- Chris will be demonstrating how the epigenetic approach can modify genetic expression.
- Chris will be including in this module the five common conditions that are considered to have genetic predisposition which practitioners are faced with in their everyday practice.
  - Heart disease
  - Stroke
  - Cancer
  - Diabetes
  - Arthritis
- Chris will be identifying pathways linked to specific genetic polymorphisms.
- Chris will be offering new solutions to traditionally held views about the conundrum of using activated vitamins (co-enzymes) in the treatment of genetic disorders.
- Chris will be introducing the new epigenetic technique of sensory input challenge to tackle the emotional component of genetic disorders.
PATIENT PROCEDURE

1. Bilateral Therapy
   Localisation to abdomen to test for a cranial compression.
2. Tap patellar reflexes for crossed extensor reflexes.
3. Challenge for genetic expression.
4. Challenge with RED, GREEN and BLUE acetates over both eyes and individually.
5. Challenge amygdala points right to left and left to right. Make correction if needed.
6. Challenge with DCD colours and identify primary meridian.
7. Identify primary muscle weakness.
8. From weakness challenge all eye positions for etiology.
9. Treat each positive one. Challenge for SNIP when nutrition shows up.
10. Challenge and treat ESR for conscious emotions.
11. Challenge each sensory input for subconscious emotions.
12. Retest primary muscle.
Heart disease
Hypertension
Cholesterol and triglycerides
Homocysteineamia
Asymmetrical dimethylarginine
Atherosclerosis
Angina pectoris
Myocardial infarct
Cardiac myopathy
BLOOD PRESSURE and
HEART RATE
Flow = Difference in pressure
Resistance

All neurotransmitter deficiencies and excesses can potentially lead to blood pressure changes.
CHOLESTEROL
and
TRIGLYCERIDES
Glucose → Pyruvate → Acetyl CoA → Electron transport ATP

Cholesterol → Triglycerides

hormone sensitive lipase

Beta oxidation

↓ T3
↓ T4
<table>
<thead>
<tr>
<th>Nutritional and Natural medicines</th>
</tr>
</thead>
<tbody>
<tr>
<td>B3</td>
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<tr>
<td>Vit C</td>
</tr>
<tr>
<td>Copper</td>
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<tr>
<td>O2 (B12, Fe)</td>
</tr>
<tr>
<td>B5 (CoA),</td>
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<tr>
<td>Taurine</td>
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<tr>
<td>Glycine</td>
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<tr>
<td>Phosphatidylcholine (Plant oils)</td>
</tr>
<tr>
<td>Iodine</td>
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<tr>
<td>Selenium</td>
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<tr>
<td>Cayenne pepper</td>
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<td>Garlic</td>
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HOMOCYSTEINEAMIA
Asymmetrical dimethylarginine (ADMA) is an endogenous inhibitor of the nitric oxide (NO) synthase enzymes. Elevation of serum ADMA has been proven to be a novel independent risk factor for endothelial dysfunction and coronary heart disease.
Markedly high serum ADMA levels have been detected in **hypercholesterolaemia** as well as in congenital heart disease, **hypertension** and renal failure. On autopsy study of atherosclerotic carotid arteries, the thickness of the intima and media has been found to be strongly related to serum ADMA levels.
Tissue accumulation of ADMA is considered a causative factor in the development of multiple organ failure acting by critical reducing of nitric oxide production.
Nutritional and Natural medicines

Vitamin A
Magnesium
Pyridoxal phosphate
(all for the activation of *dimethylarginine dimethylaminohydrolase*, the enzyme specifically inactivating ADMA)
Vitamin B12 cobalamin (for the stimulation of demethylation, an alternate pathway of ADMA degradation).
Atherosclerosis
Nutritional and Natural medicines

Vitamin E
Phosphatidylcholine
(Plant oils)

Cayenne pepper
Garlic

B3
Vit C
Copper
O2 (B12, Fe)
B5
Iodine
Selenium

Challenge with Oxidised Cholesterol
Angina pectoris
Nutritional and Natural Medicines

Vitamin E

Plant oils

Cayenne pepper
Myocardial infarct
<table>
<thead>
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<th>Nutritional and Natural Medicines</th>
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<tbody>
<tr>
<td>Magnesium</td>
</tr>
<tr>
<td>CoQ10</td>
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<tr>
<td>Plant oils</td>
</tr>
<tr>
<td>Vitamin E</td>
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<td>Garlic</td>
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<tr>
<td>Ginger</td>
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<tr>
<td>Onions</td>
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</table>
Cardiac myopathy
Nutritional and Natural medicines

- Zinc
- Vitamin B5
- CoEnzyme Q10 (magnesium)
- Vitamin E
- Black walnut
Stroke
Stroke

Hemorrhagic stroke - Consider homocysteine factors P5P, Vit C, Methylcobalamin, Methyl H4 folate.

Ischemic stroke – oxidised cholesterol - Omega 3 plant oils to prevent platelet aggregation. Magnesium, ginger, garlic to stimulate prostacyclins.
Cancer
Cancer indicators
BLUE body type
Weakens to D. Lactic acid
Hypoxia
Low acetyl CoA
High Pyruvate
Guilt and blame
Sleep disturbances
Methylation defects
DIABETES TYPE 1
10% of diabetics have insulin dependant type 1 diabetes mellitus.
Structure of Human Proinsulin

Trypsin like enzyme

Carboxypeptidase like enzyme

Trypsin like enzyme

Carboxypeptidase like enzyme

Trypsin like enzyme
**Insulin** is a polypeptide consisting of two chains A and B linked by two inter-chain disulfide bridges and a third connecting residues 6 and 11 of A chain.
Zinc is present in high concentration in the B cells of the pancreas and forms complexes with insulin and proinsulin.

B24 (Phe) and B26 (Tyr) each form dimers containing two atoms of zinc respectively.
Insulin regulation

1. High plasma glucose levels indirectly results in an inhibition of ATP-sensitive K⁺ channels causing depolarisation of the B cell and activation of voltage sensitive Ca⁺⁺ channels. The Ca⁺⁺ influx results in insulin secretion.
2. Hormone factors

Adrenalin inhibits insulin release. Cortisol, Estrogens, Progestins, Growth hormone, Placental lactogen all increase insulin secretion. (Insulin secretion is higher in the later stage of pregnancy).
Pathophysiology of Insulin deficiency

- Decreased glucose uptake
- Increased glucose production
- Increased protein catabolism
- Increased lipolysis

- Hyperglycemia, glycosuria, osmotic diuresis, electrolyte depletion
- Increased plasma amino acids, nitrogen loss in urine
- Increased plasma FFA, ketogenesis, ketonuria, ketonemia

Dehydration, acidosis
Nutritional and Natural medicines

Zinc
Manganese
Sulfur
Plant oils
DIABETES TYPE 2
90% of diabetics have non insulin dependant type 2 diabetes mellitus.

Such patients are often obese, have elevated plasma insulin levels and have down regulated insulin receptors.
Characteristics of Type 2 Diabetes
Most common in adults, although more younger people are developing this type.
Usually slow onset with thirst, frequent urination, weight loss developing over weeks to months
Usually runs in families. Most people who get this type are overweight or obese.

**Treatment** usually begins with diet and exercise, progressing to use of oral medications and later to insulin as the disease advances.
Blood glucose levels may improve with weight loss, change in diet and increased exercise.

May be prevented or delayed in high-risk individuals by moderate weight loss and exercise.
Type 2 diabetes is a progressive disease that can cause significant, severe complications such as heart disease, kidney disease, blindness and loss of limbs through amputation.
Treatment differs at various stages of the condition. In its early stages, many people with type 2 diabetes can control their blood glucose levels by losing weight, eating properly and exercising.
Nutritional and Natural medicines

Chromium
Manganese
Zinc

Cinnamon
**Cinnamon**

USDA research indicates that Cinnamon reduces the amount of insulin necessary for glucose metabolism. Furthermore, Cinnamon has been shown to stimulate glucose uptake and glycogen synthesis to similar level as insulin.
Osteo arthritis
Key Tissues in Degenerative Joint Diseases

1. Collagen type 1 and 3
2. Elastin
3. Lubricin and Hyaluronic acid
4. Hyalin cartilage
The Steroid Hormones and Body Tissues

Fat – Estrogen
Muscle – Testosterone
Cartilage - Androstenedione
Bone – DHEA
Ligament – Aldosterone
Elastin - Progesterone
**Extracellular matrix** consists of

1. Fibrous tissue i.e. collagen (90% of connective tissue)
2. Elastin and Fibrin designed to withstand stretching tensions.
3. Fibrillin, Fibronectin and Laminin, which act as scaffolding for collagen and elastin.
4. Proteoglycans or Ground Substance designed to withstand compression forces.
Collagen
COLLAGEN TYPE 1  Most connective tissues including skin, blood vessels, cornea, bone, ligaments and tendons. Thick fibres.
COLLAGEN TYPE 11  Cartilage (?O/A) intervertebral disc, vitreous humor and tendons. Thin fibres.
COLLAGEN TYPE 111  Extensible connective tissue such as skin, lung and the vascular system
COLLAGEN TYPE 1V  Basement membranes. Very fine fibres.
COLLAGEN TYPE V  Minor component of tissues containing type 1 especially tendons and bone
Collagen Synthesis
(Gly-X-Y-Gly-X-Y-)

Intracellular DNA transcription to RNA in the ribosomes.

Zinc

Proline

prolyl hydroxylase

Fe Vit C α-ketoglutarate

Hydroxyproline

Endoplasmic Reticulum

Golgi apparatus

Glycine

lysyl hydroxylase

Hydroxylysine

glucose or galactose

Vit A Manganese

Pro-chains

Pro-collagen Triple helix

Interchain and Intrachain disulfide bonds

Glycosylated hydroxylysine

Lysine

Fe Vit C α-ketoglutarate

Vital for Collagen synthesis.
Extracellular

Cleavage of amino and carboxyl terminal pro-peptides

aminoproteinase
carboxyproteinase

Assembly of collagen fibres in quarter staggered alignment

Oxidative deamination of amino groups of lysyl and hydroxylysyl residues to aldehydes

lysyl oxidase

Formation of intra and inter cross links via Schiff bases and aldol condensation products
Positive sustained challenge – skin tug

Negated by
Collagen Type 1
Collagen Type 2
Collagen Type 3
Collagen Type 4
Collagen Type 5

Challenge against
Zinc
Iron
Vit C
Manganese,
Vit A
Sulfur,
Copper
Si, (silicia for scarring),
Vit E
Green tea cream
Elastin
Positive Elastin challenge

Challenge against Copper
Zinc
Vitamin B6
Vitamin B3
Anthocyanidins
Progesterone (Wild yam cream)

Negated by Elastin
Hyaluronic Acid
Consists of an unbranched chain of repeating disaccharide units containing Glucuronic acid and N. Acetyl Glucosamine. It is rich in synovial fluid, cartilage, loose connective tissue and the vitreous body of the eye.
Normal synovial fluid contains 3-4 mg/ml hyaluronic acid. Synovial fluid also contains lubricin secreted by synovial cells. It is chiefly responsible for so-called boundary-layer lubrication, which reduces friction between opposing surfaces of cartilage.
The role of lubricin is not to reduce friction, but rather to protect sliding surfaces from wear by forming a protective barrier between them. The three constituents of joint fluid, lubricin, hyaluronic acid (HA) and lipids (45% phosphatidylcholine), are thought to play a role in mediating the friction incurred by joint motion.
Therapy localise joint

If positive challenge against Synovial fluid, then Hyaluronic acid. Challenge against

Hyaluronic acid formula
If Hyaluronic acid does not strengthen then challenge against Plant oils
Crystals found in synovial fluid

1. Cholesterol
2. Monosodium urates
3. Calcium pyrophosphate dihydrate.
4. Hydroxyapatite
5. Corticosteroid crystals
6. Calcium oxalate
Activated Sulfur

\[ \text{SO}_3 \xrightarrow{\text{ATP-sulfurylase Mn}^{++}} \text{SO}_4 \]

\[ \text{Cysteine} \rightarrow \text{ATP} \]

\[ \text{ATP-sulfurylase Mn}^{++} \rightarrow \text{ATP} \]

\[ \text{adenyl kinase Mg}^{++} \rightarrow \text{ADP} \]

\[ \text{Phospho Adenosine Phosphosulfate (PAPs)} \rightarrow \text{Ascorbic acid} \]

\[ \text{Ascorbate 2-Sulfate} \rightarrow \text{Dehydroascorbic acid} \]

\[ \text{N. Acetyl Galactosamine} \rightarrow \text{Sulfate radical (SO}_3^-) \]
Positive Therapy Localisation to joint or “Grind Test”

Challenge against:
- Magnesium
- Vitamin B5
- Vitamin B3
- Sulfur
- Vitamin C
- Manganese
- Calcium fluoride

Negated by Chondroitin 4-sulfate or Chondroitin-6 sulfate
**Calcium fluoride (Thyme)** Protector of tooth enamel. Stimulates osteoblastic and (slows osteoclastic) activity, fibroblasts for connective tissue and chondroblasts, cAMP, produces anticoagulant effects in blood. Enhances rate of wound healing. Fluoroapatite replaces hydroxyapatite in teeth which is acid resistant.
Silica or silicon dioxide stimulates growth, initiates calcification of bone and the synthesis of connective tissue cross-linking especially cartilage, ligament, skin, hair and nails. It provides the seed crystal that calcium phosphate builds upon. Needed for the synthesis of GAGs. Used to prevent scar tissue.
Enzymes are protein catalysts that regulate the rates at which physiological processes take place.

There are 4000 enzymes catalogued in the ENZYME DATABASE.
There are two types
1) those that require a **coenzyme** such as the oxido-reductases. 22% of known enzymes require coenzymes to function.
There are two types
1) those that require a coenzyme such as the oxido-reductases. 22% of known enzymes require coenzymes to function.
2) those that do not require a coenzyme such as the digestive enzymes.
Enzymes are proteins that increase the rates (catalyse) of chemical reactions. All chemical processes in living cells are carried out by enzymes.
Enzymes are proteins that increase the rates (catalyse) of chemical reactions. All chemical processes in living cells are carried out by enzymes.

Enzymes are very specific and usually catalyse only one specific reaction. The set of enzymatic reactions by converting a substrate to the -
end product is called the metabolic pathway. Some are duplicated by other sets of enzymes, others are unique. Enzymes involved into pathways which are not duplicated in living cells and crucial for normal cell functioning are called "essential enzymes".
EC 1 Oxidoreductases - these enzymes catalyse oxido-reduction
EC 2 Transferases - these enzymes catalyse the transfer of a chemical group from donor to acceptor. e.g. *Methyltransferases.*
EC 3 Hydrolases - these enzymes catalyse the hydrolysis of various bonds.
EC 4 Lyases - these enzymes cleaving bonds by other means than by hydrolysis or oxidation.
EC 5 Isomerases - these enzymes catalyse changes within one molecule.
EC 6 Ligases - these enzymes catalyse the joining of two molecules with concomitant hydrolysis of the diphosphate bond in triphosphates.
Four parts

1. The **apoenzym**e is the “active” protein part of an enzyme.
Four parts

1. The apoenzyme is the “active” protein part of an enzyme.

2. The coenzyme is required for the activation of an enzyme.
3. Metal ion catalysts
   a) Metalloenzymes contain tightly bound metal ions most commonly transition metal ions such as Fe\(_2^+\), Fe\(_3^+\), Cu\(_2^+\), Zn\(_2^+\), Mn\(_2^+\) or Mol\(_2^+\).
3. Metal ion catalysts
a) Metalloenzymes contain tightly bound metal ions most commonly transition metal ions such as Fe$_2^+$, Fe$_3^+$, Cu$_2^+$, Zn$_2^+$, Mn$_2^+$ or Mo$_{2+}$.

b) Metal activated enzymes loosely bind metal ions from solution, usually alkaline earth metal ions Na$_+$, K$_+$, Mg$_2^+$ or Ca$_2^+$.
4. Low molecular weight **allosteric effectors** modulate the catalytic activity of certain regulatory enzymes.
Factors affecting enzyme function

1. Temperature
2. Enzyme concentrations
3. Substrate concentration
4. pH
5. Inhibitors can poison enzymes e.g. certain chemicals, mycotoxins, toxic metals and radiation.
Challenge for Enzyme Down regulation

1. Strong muscle weakens to the substrate.
2. Weak muscle then strengthens to the end product.
3. Weak muscle strengthens to enzyme co-factor(s) and / or associated co-enzyme.
Challenge for Enzyme Up regulation

1. Strong muscle weakens to the end product.
2. Weak muscle then strengthens to the substrate.
3. Weak muscle strengthens to enzyme co-factor(s) and/or associated co-enzyme.
The **nucleus** of the cell is the chemical brain of the cell. Where the brain of the CNS operates by electrical sensory input and motor output, the nucleus operates by chemical messenger input and gene expression output.
Genes are build from chains of Deoxyribonucleic Acid (DNA)

Genes are modulated by primary and secondary messengers. “Turning the gene on” is known as gene expression.
Primarily, genes encode for the synthesis of **proteins** that act as enzymes.

The human genome possesses about 40,000 genes.

Plants encode for about 28,000 genes.

Fruit flies encode for 30,000 genes.
The message coded within the gene is first transcribed into a template mirror image of the coding strand of the DNA by messenger Ribonucleic Acid (mRNA).

RNA contains the same bases as DNA except that Uracil replaces Thymine.
mRNA translates the gene expression from the gene to the ribosome to synthesise protein enzymes.
(transfer) tRNA serves as an adapter molecule for the translation of mRNA into protein sequences.
(ribosomal) rRNA contributes to the formation of ribosomes.

Ribosomes are RNA molecules and can in themselves act as enzymatic catalysts.
**NUCLEUS**

Primary RNA transcript

Modified transcript

Processed nuclear mRNA

**CYTOPLASM**

mRNA

Protein

---

**DNA**

5' → CAAT → TATA → Exon → Intron → Exon → AATAAA → 3'

Noncoding region

**Transcription**

Primary RNA transcript

**Modification of 5' and 3' ends**

Cap

AAA→A Poly(A) tail

**Removal of introns and splicing of exons**

**Transmembrane transport**

AAA→A

**Translation**

NH₂ → COOH
Both DNA and RNA are composed of Nucleotides derived from either purine or pyrimidine bases.

The purine bases are Adenine and Guanine.

The pyrimidine bases are Cytosine, Uracil and Thymine.
Nucleosides are bases that have ribose or deoxyribose sugar linked via a covalent bond. **Nucleotides** are mono-phosphorylated nucleosides.
### Building Nucleic acids

<table>
<thead>
<tr>
<th>Bases</th>
<th>Adenine, Cytosine, Guanine, Thymine, Uracil</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nucleosides</td>
<td>Adenosine, Cytidine, Guanosine, Thymidin, Uridine</td>
</tr>
<tr>
<td>Nucleotides</td>
<td>AMP, CMP, GMP, TMP, UMP, dAMP, dCMP, dGMP, dTMP, dUMP</td>
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<tr>
<td>Nucleic acids</td>
<td>RNA, DNA</td>
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<tr>
<td>Base Formula</td>
<td>Base</td>
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<td><img src="image" alt="Adenine" /></td>
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<tr>
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<tr>
<td><img src="image" alt="Cytosine" /></td>
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<td><img src="image" alt="Uracil" /></td>
<td>Uracil U</td>
</tr>
<tr>
<td><img src="image" alt="Thymine" /></td>
<td>Thymine T</td>
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</table>
A segment of one strand of a DNA molecule
Base pairing

A = T
T = A
C = G
G = C

Minor groove

Major groove

3.4 nm
2.0 nm
The double stranded structure of **DNA** and the template function of each old strand (shaded) on which a new complementary strand is synthesised.
<table>
<thead>
<tr>
<th>First Letter</th>
<th>Second Letter</th>
<th>Third Letter</th>
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<tbody>
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DNA Coding and Template strands

The relationship between the sequences of an RNA transcript and its gene, in which the coding and template strands are shown with their polarities. The RNA transcript with a 5’ to 3’ polarity is complementary to the template strand with its 3’ to 5’ polarity. Note that the sequence in the RNA transcript and its polarity is the same as that in the coding strand, except that the U of the transcript replaces the T of the gene.
<table>
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Nucleotides are synthesised by

1. De novo synthesis from amphibolic intermediates
2. Ingestion from foods
3. Repair of damaged molecules
De novo synthesis of purines

- Respiratory CO2
- Glycine
- Aspartate
- N5-N10-Methylene tetrahydrofolate
- N10-Formyl tetrahydrofolate
- Amine nitrogen of Glutamine
Nucleotides are synthesised by

1. De novo synthesis from amphibolic intermediates
2. Ingestion from foods
3. Repair of damaged molecules
Nucleic acids released from ingested food and nuclear proteins in the intestinal tract are degraded to mononucleotides by ribonucleases, deoxyribonucleases and polynucleotidases.
Nucleotidases and phosphatases hydrolyze the mononucleotides to nucleosides, which either are absorbed or are further degraded by intestinal phosphorylase to purine and pyrimidine bases.
While little dietary purine or pyrimidine is incorporated into tissue nucleic acids, parenterally (non intestinal) administered compounds are incorporated, e.g. injected (3H) Thymidine is incorporated into newly synthesized DNA. This provides a technique for measuring rates of DNA synthesis.
Nucleotides are synthesised by

1. De novo synthesis from amphibolic intermediates
2. Ingestion from foods
3. Repair of damaged molecules
DNA Repair

The initiation of DNA synthesis requires priming by a short length of RNA.
The process is regulated by **DNA polymerase** which is a zinc dependant metalo-enzyme.
The selection of the entering deoxyribonucleotide is dependant upon proper base pairing with the other strand of the DNA molecule.
A deficiency in DNA polymerase may lead to the insertion of an incorrect base into the DNA sequence thus creating a single nucleotide polymorphism (SNIP).
According to Bruce Ames each cell in the body suffers between 25,000-100,000 oxidative hits per day.

This figure is obtained by measuring the quantity of oxidised deoxyguanosine in the urine per day and dividing by the number of cells in the body.
The same cofactors apply to RNA repair by RNA polymerase, also a zinc dependant enzyme.
So for optimal DNA / RNA repair there must be

1. An adequate pool of nucleotide bases and

2. Zinc for the dependant DNA polymerase and RNA polymerase enzymes.
Think of DNA polymerase as the cement needed to repair the wall and think of DNA as needed to replace the broken bricks.
Optimal forms of zinc

Zinc chloride + Zinc sulfate aqueous solution with citric acid
SNIP’s
There are normal variations of DNA sequences known as **polymorphisms**.

They occur once in every 500 nucleotides, or about 107 times per genome.

They occur mostly in the non-coding regions of DNA.
CELL MUTATIONS

Result when changes occur in the nucleotide sequence due to

1. Nutritional deficiencies.
2. By Pathogens, Chemicals, Mycotoxins, Ultra-violet and ionizing Radiation induced oxidative damage.
3. Depurination from thermal lability.
According to Bruce Ames
As many as one third of mutations in a gene result in the corresponding enzyme having an increased Michaelis constant or Km (decreased binding affinity) for a coenzyme, resulting in a lower rate of reaction.
The \textbf{Km} is a measure of the binding affinity of an enzyme for its ligand (i.e. substrate or coenzyme) and is defined as the concentration of ligand required to fill one half of the ligand binding sites.
About **50 human genetic diseases** due to defective enzymes can be remedied or ameliorated by the administration of high doses of the corresponding vitamin coenzyme, which at least partially restores enzymatic activity.
Many **Single Point Mutations (SNIPs)**, in which the variant amino acid reduces coenzyme binding and thus enzymatic activity, are likely to be remediable by raising cellular concentrations of the vitamin coenzyme.
Mutations maybe

1. Single Point Mutations (SNIPs).
2. Deletions, Insertions and Rearrangements of DNA (Cut and Pastes).
Single base point mutations (SNIPs) maybe

1. Transitions where a given purine is changed to the other purine or a given pyrimididine is changed to the other pyrimididine.
PURINES

ADENINE ↔ GUANINE

PYRIMIDINE

CYTOSINE ↔ THYMINE
or where Uracil from (dUMP) is incorporated into the Thymine (dTMP) position in DNA.
2. Transversions are changes from a purine to either of the two pyrimidines or the change of a pyrimidine into either of the two purines.
ADENINE       THYMINE

GUANINE       CYTOSINE
Single base changes will be replicated within the mRNA transcription.

There maybe
1. No detectable effect.
2. A mis-sense effect
3. A nonsense codon effect.
SNIP Challenge

1. Challenge each vial of nucleotide bases from strength to weakening over lower abdomen.

2. Note which one weakens.
1. Adenine
2. Cytosine
3. Guanine
4. Thymine
5. Uracil
3. Challenge weakening nucleotide base against each of the other nucleotide bases to identify which negates. e.g. G>T

This will indicate the specific single nucleotide polymorphism (SNIP).
There is always an associated **co-enzyme** with each SNIP. This indicates that a greater than normal amount of the coenzyme is required to bring an enzyme up to a more correct rate of reaction.
Each SNIP defect maybe apparent to Nutritional deficiency of the necessary substrates and Cofactors to activate the vitamin to become a coenzyme.
Each **SNIP defect** is caused by

1. Inherited polymorphism (Miasm)

2. Acquired – Due to Zinc deficiency leading to reduced DNA / RNA polymerase function for the repair caused by ROS as a result of exposure to pathogens especially viruses, toxic metals, mycotoxins, chemicals and / or ionising radiation.
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<td>NADP(H)</td>
<td>Oxidation-reduction</td>
<td>Blackberry</td>
<td>Pertussis</td>
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<tr>
<td>T&gt;C</td>
<td>FMN(H)</td>
<td>Oxidation-reduction</td>
<td>Bilberry</td>
<td>Hepatitis</td>
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<tr>
<td>T&gt;G</td>
<td>Lipoamide</td>
<td>Acyl transfer</td>
<td>Watermelon</td>
<td>Herpes Zoster</td>
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<tr>
<td>T&gt;U</td>
<td>CoQ10</td>
<td>Oxidation-reduction</td>
<td>Black grape</td>
<td>Mononucleosis</td>
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</tr>
<tr>
<td>U&gt;A</td>
<td>CH H4Folate</td>
<td>One carbon transfer</td>
<td>Raspberry</td>
<td>Syphilis</td>
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<td></td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>U&gt;C</td>
<td>H4 Folate (Folic acid + NADH)</td>
<td>One carbon transfer</td>
<td>Gooseberry</td>
<td>Adeno virus</td>
<td></td>
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<tr>
<td>U&gt;G</td>
<td>CoA</td>
<td>Acyl transfer</td>
<td>Elderberry</td>
<td>Salmonella, Varicella</td>
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<tr>
<td>U&gt;T</td>
<td>CH2 H4 Folate (Methylene)</td>
<td>Methylation of uracil</td>
<td>Green pepper</td>
<td>Human Papilloma</td>
<td></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>
Assessing the optimal nutrient(s)

1. With the weakening nucleotide base on the patient challenge with the appropriate co-enzyme. Should strengthen.

2. Cross TL now to GV20 (28). If maintains strength then the co-enzyme should be prescribed.
Examples

P-5-P
Adenosylcobalamin
Methylcobalamin
Vitamin C
CoQ10
a-Lipoic acid
3. Cross TL to GV20 weakens the muscle then body wants patient to synthesise their own co-enzyme.

First challenge for the specific co-enzyme substrate and then for minerals, other vitamins or fatty acids.
Epigenetics
**EPIGENETIC MECHANISMS**

- Development (in utero, childhood)
- Environmental chemicals
- Drugs/Pharmaceuticals
- Aging
- Diet

---

**DNA methylation**

Methyl group (an epigenetic factor found in some dietary sources) can tag DNA and activate or repress genes.

---

**Histones** are proteins around which DNA can wind for compaction and gene regulation.

---

**Histone modification**

The binding of epigenetic factors to histone “tails” alters the extent to which DNA is wrapped around histones and the availability of genes in the DNA to be activated.

---

**HEALTH ENDPOINTS**

- Cancer
- Autoimmune disease
- Mental disorders
- Diabetes
Methylation
Some Methylation functions
Phosphatidylethanolamine to phosphatidylcholine
Noradrenalin to adrenalin
Metabolism Dopamine, Noradrenalin, Serotonin
Metabolism of Estrogens and Testosterone?
DNA methyltransferase
Methyl Caps DNA /RNA
Polyamine biosynthesis
Synthesis of Creatine, Carnitine
Histone methyltransferases
Synthesis of myelin
Neurotransmitters and Perception
Awareness

Consciousness / Unconscious

Subconscious

Chemistry

Physical
All must be in perfect harmony or balance for perfect health.
Diagnostic entries into a person's state of well being
Body types via coloured acetates
Therapy localisation
Weak muscle
Energy (ATP) levels
Hormones
Neurotransmitters
Meridians
Regeneration / Degeneration
The development of quantum physics in the 1920’s changed the world we see and thought we understood from a material world to one of energy. Atoms were discovered to be bundles of energy and not solid matter as previously thought.
As all three aspects of a **State of Being** should be in harmony, disharmony would mean an imbalance in the person’s energy fields i.e. their meridian system. Chi equates to prana (breath, life, vitality of the spirit) or vital energy. Meridians are energy channels that flow in specific and predictable patterns.
We can measure meridian imbalances at specific acupuncture points. Meridians are waves of energy. Energy is composed of both wavelengths and frequency. Thus each meridian has a specific colour associated with it (wavelength) and a specific sound associated with it (frequency).
Body types Hormones and Colour
Light or so called “white light” is composed of an equal blend of **RED**, **GREEN** and **BLUE** components of the visible spectrum.

These 3 colours are also the sensitivities of the human trichromate cones.
Human cones are off-set to:

- 619nm  **Orange / Red**
- 550nm  **Yellow / Green**
- 440nm  **Violet / Blue**
Visual challenge
Challenge against the BLACK acetate. Indicates low vital energy. If weakens use therapies that increase vitality such as light therapy, cranial, VEP spray, aromatherapy.
Visual challenge

If the BLACK acetate does not weaken challenge against
The CONE acetates

RED
GREEN
BLUE
Strong muscle will weaken to one of the **cone acetate** colours.

Then challenge each eye individually for any less dominant colour.

- **RED/RED**  **RED/GREEN**  **RED/BLUE**
- **GREEN/GREEN**  **GREEN/RED**  **GREEN/BLUE**
- **BLUE/BLUE**  **BLUE/RED**  **BLUE/GREEN**
The three coloured acetates and their relationship to body types and the endocrine glands.
RED Thyroid Endomorph Kapha Morphology

Key is leanness. The thyroid elevates metabolism. Hands are long with thin straight fingers often with knuckles. Nails are hard and moons pronounced. Lots of eye brows often meeting above the nose. Fine hair and small white teeth.
Long bones and thin. Thyroid is stimulated by anything that raises blood glucose thus they crave sweets, coffee, chocolate, juices and alcohol. Do best on high protein, moderate in fat and low in carbohydrates. Breakfast is the most important meal. Tendency to arthritis and skin problems.
Emotions

Tend towards depression. Regular ups and downs in energy and temperament. They tend to be intuitive.

Do best on an early to bed and early to rise sleep pattern.
Long thin fingers. Palm length equal or longer than fingers. Overall appearance is lean and possibly moist.

**RED THYROID TYPE**

Women 5ft5-5ft-7  
Men 5ft6-5ft8
RED Thyroid Endomorph Kapha
Affinity to Aluminium
Homocysteine
Low Methyl tetrahydrofolate so increased risk of heart attacks.
+ve to APOE4
Cholesterol and Triglycerides
Require hypoiodite by their immune systems
Natural carnivores React to wheat lectin
Avoid broccoli as Thyroid. Sensitive to sulfites.
Cytochrome p450 defective alleles
Diet

High protein – red meat and fish
Moderate fats
Low carbohydrates
Breakfast most important meal.
Avoid wheat
Avoid broccoli but cabbage ok
Supplements

Vitamins – to be taken in water 3x a day with meals

Vitamin B2 (Riboflavin-5-phosphate)
Vitamin B6 (Pyridoxine)
Folic acid
Vitamin B12 (Hydroxycobalamin)
Inositol
Vitamin C
Minerals – to be taken in water 3x a day with meals

Iodides - magnesium and potassium
Manganese
Molybdenum
Selenium
Silica
Zinc
Oils all organic and cold pressed. To be taken with the evening meal.

Flax
Hemp
Olive
Pumpkin
Herbs and Spices as beverage. All organic. To be taken in hot water 3x a day between meals.

<table>
<thead>
<tr>
<th>HERBS</th>
<th>SPICES</th>
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<tbody>
<tr>
<td>Coriander</td>
<td>Cumin</td>
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<tr>
<td>Oregano</td>
<td>Fenugreek</td>
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<tr>
<td>Rosemary</td>
<td>Ginger</td>
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<td></td>
<td>Mace</td>
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</table>
Probiotics
To be taken last thing at night. Put powder into a glass and then add room temperature mineral water. Stir well and drink.

L. Plantarium
Substitution of Arginine for Cysteine in Apo E3 and Apo E4 at Positions 112 and 158 Results in Loss of Potential Binding Sites for Sulfhydryl Reactive Heavy Metals such as Mercury
APO E4 and the Cone Acetates

**RED** cone denotes APO E4 allele

**GREEN** cone denotes APO E2 allele

**BLUE** cone denotes APO E3 allele
GREEN Adrenal cortex Mesomorph Pitta

The key feature is muscular development and intramuscular water retention. Tends to be taller than other types and be strongly built. Hands are square with tubular fingers about as long as the palm. The face tends to be triangular.
Good resistance to disease and get well quickly. They work and play hard. Thymus and thyroid tend to be their weakest glands and may suffer asthma and allergies. The adrenals are stimulated by sodium and cholesterol and so crave salt and salty foods and greasy foods like crisps and chips.
They get stronger and stronger as the day progresses and those who stimulate their adrenals tend to drink alcohol in the evenings to relax. They tend towards high blood pressure and some types of heart disease.

Diet Pritikins diet – low calorie, plenty of fruit and vegetables. Low fat.
Emotions

They are hard working, intelligent and positive but very sensitive. Temperament can be explosive.

Late to bed and late to rise is the norm.
Fingers are strong and muscular with squared tips. Palm is square and muscular. Fingers and palm lengths tend to be equal.

**GREEN**

**BODY TYPE**

**Morphology**

Women 5ft8 and above
Men 5ft8 and above

**Weight gain**
GREEN Adrenal cortex Mesomorph Pitta

Affinity to Nickel (spice tincture)

Require hypobromite (walnuts) by their immune systems

Chemically sensitive individuals. Alpha Solenine foods (spice tincture)
Casein in cow cheese.
<table>
<thead>
<tr>
<th>Phase 1</th>
<th>Biomarkers</th>
<th>Phase 2</th>
<th>Biomarkers</th>
<th>Key nutrients</th>
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<tbody>
<tr>
<td>CYP 1A1</td>
<td>Estradiol</td>
<td>Glutathione</td>
<td>Naphthalene</td>
<td>Cysteine, NAC,</td>
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<tr>
<td></td>
<td>Estrone</td>
<td>(Reduced</td>
<td>Aspartame</td>
<td>Glycine, Glutamic</td>
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<td></td>
<td>Ethoxyresorufin,</td>
<td>Glutathione)</td>
<td>MSG</td>
<td>acid, P5P, Vit C,</td>
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<td>PAH,</td>
<td></td>
<td></td>
<td>Panethine, EFAs,</td>
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<td>Benzopyrene</td>
<td></td>
<td></td>
<td>Brassicas</td>
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<td>CYP 1A2</td>
<td>Caffeine</td>
<td>Glucuronidation</td>
<td>Benzoic acid</td>
<td>Glucuronic acid NAD</td>
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<td>10%</td>
<td>Estradiol</td>
<td>(UDP-</td>
<td>Bilirubin</td>
<td>Mg, Fish oil</td>
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<tr>
<td></td>
<td>Estrone</td>
<td>Glucuronic</td>
<td>Phenylbarbitol</td>
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<tr>
<td></td>
<td>Ethoxyresorufin</td>
<td>acid)</td>
<td>Vanillin</td>
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<tr>
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<td>PAH</td>
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<tr>
<td>CYP 1B1</td>
<td>Estradiol</td>
<td>Sulfation (PAPS</td>
<td>Acetaminophen (Paracetamol)</td>
<td>PAPs Methionine,</td>
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<td>Estrone</td>
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<td>Acetone</td>
<td>SAM</td>
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<td>SAM</td>
<td>DDT/DDE</td>
<td>Cysteine, P5P</td>
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<td>PAH</td>
<td>Taurine</td>
<td>Ethylene glycol</td>
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<td>Gluc sulphate</td>
<td>Toluene</td>
<td>Mol</td>
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<td></td>
<td>MSM</td>
<td>TRIC</td>
<td>Mg, Vit B2, Mn</td>
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<td></td>
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<td>Sulfur</td>
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<td>α-Lipoic</td>
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<td>MSM, Sulfur,</td>
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<td></td>
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<td>α-Lipoic acid</td>
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<td>BHT</td>
<td>Sulfoxidation</td>
<td>Sodium</td>
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<td></td>
<td>Phenobarbital</td>
<td>(Sulfite oxidase)</td>
<td>metabisulfite</td>
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<td>CYP 2C9</td>
<td>Ibuprofen</td>
<td>Acetylation (Acetyl CoA)</td>
<td>Isoniazide</td>
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<td>Newsprint</td>
<td>Panethine Vit B5</td>
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<td></td>
<td>Petroleum</td>
<td>P-5-P</td>
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<td></td>
<td>SLS</td>
<td>Cysteine, Mg, Vit C</td>
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<tr>
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<td>Phenobarbital</td>
<td>Methylation</td>
<td>Caffeine Phenol</td>
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<td>Diazepam</td>
<td>(SAM)</td>
<td>Nicotine</td>
<td>Methionine Mg Zn</td>
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<tr>
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<td>Codeine</td>
<td>Glycine</td>
<td>Aspirin</td>
<td>Glycine, Co-factors (Folic Acid, P5P, Mg, Zn, B2, B3)</td>
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<tr>
<td>30%</td>
<td></td>
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<td>Cholyl-CoA</td>
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<td></td>
<td></td>
<td>Sodium benzoate</td>
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<tr>
<td>CYP 2E1</td>
<td>Acetaminophen (Paracetamol)</td>
<td>Taurine</td>
<td>Carbon tetra chloride</td>
<td>Taurine, Cysteine</td>
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<td>Benzene</td>
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<td>Cholyl-CoA</td>
<td>Vit B3, Iron</td>
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<td>Carbon tetrachloride</td>
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<td>P-5-P, Mg</td>
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<td></td>
<td>Ethanol</td>
<td></td>
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<td>Zn</td>
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<tr>
<td></td>
<td>Isoniazid</td>
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<td>Cu, Vit C</td>
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<tr>
<td>CYP 3A4</td>
<td>Acetaminophen Aflatoxin B1, G1</td>
<td>Cysteine</td>
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<td>Cysteine, Methionine</td>
</tr>
<tr>
<td>50%</td>
<td>Codeine</td>
<td></td>
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<td>Mg, Zn, P5P</td>
</tr>
<tr>
<td></td>
<td>Nicotine</td>
<td></td>
<td></td>
<td>Vit C</td>
</tr>
<tr>
<td></td>
<td>Testosterone</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Warfarin</td>
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</tr>
</tbody>
</table>

**Cytochrome p450 defective alleles**
Diet
Pritikin-Plenty of fruits, vegetables, legumes (such as black beans and pinto beans), whole grains such as brown rice, starchy vegetables like yams, lean meat, and seafood. Avoid as much as possible potatoes, tomatoes, green peppers, chilli. Avoid cheese especially cooked.
Supplements
Vitamins – to be taken in water 3x a day with meals

Vitamin B1 (Thiamine)
Vitamin B6 (Pyridoxine)
Folic acid
Vitamin B12 (Hydroxycobalamin)
Choline
Minerals – to be taken in water 3x a day with meals

Boron
Copper
Selenium
Silica
Zinc
Oils all organic and cold pressed. To be taken with the evening meal.

Grape seed
Hazelnut
Peanut
Sesame
Herbs and Spices as beverage. All organic. To be taken in hot water 3x a day between meals.

<table>
<thead>
<tr>
<th>HERBS</th>
<th>SPICES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rosemary</td>
<td>Cumin</td>
</tr>
<tr>
<td>Lemon balm</td>
<td>Ginger</td>
</tr>
<tr>
<td></td>
<td>Star anise</td>
</tr>
</tbody>
</table>
Probiotics
To be taken last thing at night. Put powder into a glass and then add room temperature mineral water. Stir well and drink.

L. Rhamnossis
The key feature is short and sexual development. Classically far eastern body shape. Men tend to be short and stouter with softer musculature than the green person but with ample body hair often on the back. Small hands with tapered fingers which are shorter than the palm. Hair is usually thick and course.
Skin tends to be smooth and elastic. Consistent physical fight with weight gain.
Emotions

Tend to be even tempered and cool down quickly if angered. Tend to be positive and helpful people. Are capable, industrious and loyal.
Small hand with tapered fingers

Morphology

Women 5ft5-5 and below
Men 5ft6 and below

BLUE

BODY TYPE

Weight gain
BLUE Gonads Ectomorph Vata

Affinity to Mercury. (spice tincture)
Low Methylene tetrahydrofolate so increased risk of cancer. B12 (spinach)
Require hypochlorite by their immune systems. (seafood)
Natural vegetarians.
React to milk lactose. (milk contains IGF1)
Alcohol intolerant. Tyramine sensitive
Pesticides (estrogen mimics, spice tincture)
Cytochrome p450 defective alleles
Diet

Low animal protein. Plenty of fruit and vegetables. No cow’s milk or lactose products. Beware of old or aging cheese, avocados, bananas, chocolate and other tyramine foods. Avoid Aspartame and MSG. Limit alcohol
Supplements

Vitamins – to be taken in water 3x a day with meals

Vitamin B1 (Thiamine)
Folic acid
Vitamin B12 (Hydroxycobalamin)
Choline
Minerals – to be taken in water 3x a day with meals

Boron
Iron
Magnesium
Selenium
Sulphur
Zinc
Oils all organic and cold pressed. To be taken with the evening meal.

Flax seed
Pumpkin
Walnut
Herbs and Spices as beverage. All organic. To be taken in hot water 3x a day between meals.

<table>
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<tr>
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<tbody>
<tr>
<td>Basil</td>
<td>Chilli</td>
</tr>
<tr>
<td>Coriander</td>
<td>Cinnamon</td>
</tr>
<tr>
<td>Dill</td>
<td>Paprika</td>
</tr>
</tbody>
</table>
Probiotics
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L. Casei
Primary colours

Complementary colours

Cone colours

Complementary cone colours
Complementary colours

A person is at their best when using the person’s complementary coloured acetates. Use always when testing for adverse substances such as toiletries cosmetics and food allergy / intolerances.
Both the weakening acetates and the complementary acetates appear to function clinically more powerfully over the Frontal eminences. This brain region has been implicated in planning complex cognitive behaviour, personality expression, decision making and moderating social behaviour.
The basic activity of this brain region is considered to be orchestration of thoughts and actions in accordance with internal goals. The most typical psychological term for functions carried out by the prefrontal cortex area is executive function.
Executive function relates to abilities to differentiate among conflicting thoughts, determine good and bad, better and best, same and different, future consequences of current activities, working toward a defined goal, prediction of outcomes, expectation based on actions, and social "control."
What to do when a person shows to different colours in each eye or body structure does not fit with the weakening colour(s).

1. Challenge for a subconscious emotion using the amygdala points.
Amygdala
Therapy localise to the greater wing of the right and then left sphenoid. Then reverse therapy localisation.
2. Whilst maintaining the positive therapy localisation administer 1 minute of Miron glass light therapy through the umbilicus.

3. Subconscious emotion challenge will now be negated + the true constitution will now be displayed.
Miron Violet glass blocks the complete spectrum of visible light with the exception of the violet part. At the same time it allows a certain part to be permeable for radiation in the spectral range of UV-A, and infra red light. This unique combination offers optimal protection against the ageing processes that are released by visible light, thus lengthening durability and potency of products.
Digital Computer Diagnostics
The human brain generates waves of electro-magnetic phenomena.

The **two hemispheres** are considered as two independent generators.
The two hemispheres carry out various functions. The left hemisphere answers for consciousness, logic, basically for the realised mental activity. Logic is understood as realized mental, practical mind, concrete thinking, ability of information perception (recognition) besides censorship of the super-consciousness,
allowing quickly and easily to distinguish the quantitative characteristics and details of the environmental world, to carry out differentiated analysis of a situation, to show refinement, ingenuity and resourcefulness (relation to extraversion). By logic, a man creates a strategy of behaviour.
Besides the logic allows the man to realize intuitively perceived images of the real world and to describe them clearly for other people. The logic provides a survival of the man in the physical environment, therefore it is conditionally possible to name it as mind consciousness.
The **right hemisphere** answers for super-consciousness, intuition, basically for the non-realized mental activity. Intuition is shown as super-consciousness, figurative thinking, non-realised communication with the regular basis of nature, general spirit, joint knowledge and also – as ability of a situation recognition as a whole
without the analysis of details, ability of recognition of quality of the environmental world without differentiated analysis, through itself (relation with introversion). Intuition provides a survival of the man in the spiritual environment, therefore it is conditionally possible to name it as spirit.
The **subconscious** concerns non-realized mental and is the function of both hemispheres. The subconscious unloads consciousness and is a storehouse of the unnecessary and intolerable information. In the subconscious there is that which was earlier realized and has turned to psychological automatisms -
skills, reflexes and what became intolerable for mentality and was superseded in the subconscious. The mental traumas superseded in the subconscious, represent the latent feelings, fears, which the man does not experience in the direct sensations,
but in an extreme situation they operate the behaviour of the man together with instincts and reflexes.
Model of a man’s psyche

Conscious
logical (mind)

Super-conscious
Intuitive (spirit)

LEFT
hemisphere

RIGHT
hemisphere

Subconscious
Psychological automaticity
Reflexes
Skills
Knowledge
Superseded feelings

Topography of Anuashvili
Scientific Basis of Psychology
\[ F_r = A_r e^{i(\omega_r t + \phi_r)} \]
\[ F_l = A_l e^{i(\omega_l t + \phi_l)} \]

**Phase mixer**
\[ I_c = A_l e^{i(\omega_l t + \phi_l)} \ast A_r e^{-i(\omega_r t + \phi_r)} = A_l A_r e^{i\Delta \phi} \text{ (Coherent component)} \]

**Coherency of oscillatory processes**
\[ C = \frac{1}{T} \int_{t_0}^{t_0+T} A_l A_r e^{i\Delta \phi} \, dt \]

\[ \Delta A = A_l - A_r \]

**Hemisphere domination**

**Degree of harmony of a person**
\[ H = \sin \left( \frac{C}{2} \right) \left[ 1 + \left( \frac{\sin \left( \frac{\Delta A}{C} \frac{\pi}{2} \right)}{\frac{\Delta A}{C} \pi} \right)^2 \right] \]
Domination of one hemisphere (ΔA) and the degree of coherence (coordination) of the oscillatory processes in the hemispheres (C) determines a degree of harmony of the person (H). The greatest degree of harmony of a person is achieved at the maximum stability of the relation between the hemispheres and equal amplitudes.
Graphic dependence of the degree of harmony (H) on the domination of one hemisphere (ΔA) and the stability of the relationship between the two hemispheres. (degree of coherence C)
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<thead>
<tr>
<th></th>
<th>Air</th>
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<tbody>
<tr>
<td><strong>Hellenic physics</strong> - Aristotle</td>
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Hellenic physics - Threophrastus

Autumn

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<th>Winter</th>
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<td>L_60^S_80 H=75 (ENFJ)</td>
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<tr>
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<td>L_70^S_70 H=60</td>
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<tr>
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<td>L_60^S_60 H=55 (ISFP)</td>
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| L_80^SD H=50 (ESFP) | L_70^SD H=50 | L_60^SD H=50 |
| L_80^D_60 H=45 (ESTJ) | L_70^D_60 H=45 | L_60^D_60 H=45 |
| L_80^D_70 H=40 | L_70^D_70 H=35 | L_60^D_70 H=35 |
| L_80^D_80 H=30 (ESFP) | L_70^D_80 H=25 | L_60^D_80 H=25 |

| L_80^D_80 H=35 (ENTP) | L_70^D_80 H=30 | L_60^D_80 H=20 |

| L_80^D_80 H=40 (INFJ) | L_70^D_80 H=45 | L_60^D_80 H=45 |
| L_80^D_80 H=40 | L_70^D_80 H=35 | L_60^D_80 H=35 |

Summer

dry

Spring
Four Humors of Hippocrates

Blood

Phlegm

Yellow bile (Liver bile)

Black bile
Four characteristics of Galen

**Sanguine**
courageous, hopeful, amorous

**Phlegmatic**
calm, unemotional

**Choleric**
easily angered, bad tempered

**Melancholic**
despondent, sleepless, irritable
## Four characteristics of Galen

<table>
<thead>
<tr>
<th></th>
<th>Sanguine</th>
<th>Phlegmatic</th>
<th>Choleretic</th>
<th>Melancholy</th>
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</table>

* (ESTJ) | (ENTJ) | (ISTJ) | (INTJ)
The four temperament types
Each of the four types of humours corresponded to a different personality type.
Sanguine
A person who is sanguine is generally light-hearted, fun loving, a people person, loves to entertain, spontaneous, and confident. However they can be arrogant, cocky, and indulgent. He/She can be day-dreamy and off-task to the point of not accomplishing anything and can be impulsive, possibly acting on whims in an unpredictable fashion.
Choleric
A person who is choleric is a doer. They have a lot of ambition, energy, and passion, and try to instill it in others. They can dominate people of other temperaments, especially phlegmatic types. Many great charismatic military and political figures were cholerics.
Melancholic

A person who is a thoughtful ponderer has a *melancholic* disposition. Often very kind and considerate, melancholics can be highly creative – as in poetry and art - but also can become overly pre-occupied with the tragedy and cruelty in the world, thus becoming depressed. A *melancholic* is also often a perfectionist, being very particular about what they want and how they want it in some cases. This often results in being dissatisfied with one's own artistic or creative works and always pointing out to themselves what could and should be improved. They are often loners and most times choose to stay alone and reflect.
Phlegmatic

While phlegmatic are generally self-content and kind, their shy personality can often inhibit enthusiasm in others and make themselves lazy and resistant to change. They are very consistent, relaxed, rational, curious, and observant, making them good administrators and diplomats. Like the sanguine personality, the phlegmatic has many friends. However the phlegmatic is more reliable and compassionate; these characteristics typically make the phlegmatic a more dependable friend.
## Video Computer Psychodiagnostics by Avtandil Anuashvili

L=Logic, I=Intuitive, S=Stable, D=Destable, H=Harmony

<table>
<thead>
<tr>
<th>Logical stable (Gladness)</th>
<th>Intuitive stable (Calmness)</th>
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<td><strong>L80S80 H=65 (ESTJ)</strong></td>
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<td><strong>I70S70 H=70 (ENTP)</strong></td>
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</table>
Logical stable (Gladness)

Intuitive stable (Calmness)

Video Computer Psychodiagnstics by Avtandil Anuashvili

L=Logic I=Intuitive S=Stable D=Destable H=Harmony

Super conscious

Mind

Subconscious

Logical impulsive (Anger)

Intuitive impulsive (Depression)
Hemispheres and Meridians

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<th>Ht C</th>
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Lu | Liv | Kid | SI | St | TW | CV | LI | GB | BI
Right and Left Brain sides reversed
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<td>Apathy and Despair</td>
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<td>Shame and Humiliation</td>
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<td>Reason and Understanding</td>
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<tr>
<td>Willingness and Optimism</td>
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<td>Courage and Affirmation</td>
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<tr>
<td>Anger and Hate</td>
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<tr>
<td>Pride and Scorn</td>
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## SCALE of CONSCIOUSNESS

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<tr>
<th>God-view</th>
<th>Life-view</th>
<th>Level</th>
<th>Log</th>
<th>Emotion</th>
<th>Process</th>
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<td>700-1000</td>
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<td>Pure Consciousness</td>
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<td>Perfect</td>
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<td>Miserable</td>
<td>Shame</td>
<td>20</td>
<td>Humiliation</td>
<td>Elimination</td>
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### Scale of Consciousness:

- **God-view**: Self, All-Being, One, Loving, Wise, Merciful, Inspiring, Enabling, Permitting, Indifferent, Vengeful, Denying, Punitive, Disdaining, Condemning, Vindictive, Despising
- **Life-view**: Is, Perfect, Complete, Benign, Meaningful, Harmonious, Hopeful, Satisfactory, Feasible, Demanding, Antagonistic, Disappointing, Frightening, Tragic, Hopeless, Evil, Miserable
- **Log**: 700-1000, 600, 540, 500, 400, 350, 310, 250, 200, 175, 150, 125, 100, 75, 50, 30, 20
- **Emotion**: Ineffable, Bliss, Serenity, Reverence, Understanding, Forgiveness, Optimism, Trust, Affirmation, Scorn, Hate, Craving, Anxiety, Regret, Despair, Blame, Humiliation
Liver meridian (YIN). The emotions associated with this meridian are PRIDE and SCORN. Pride is defensive and vulnerable because it is dependent upon external conditions. The inflated ego is vulnerable to attack. Pride remains weak because it can be knocked off its pedestal into Shame, which is the threat that fires the fear of loss of pride. Pride is divisive and gives rise to factionalism. Man has habitually died for pride known often as nationalism. Pride is accompanied by arrogance and denial. These characteristics block growth; in pride recovery from addiction is impossible, because emotional problems or character defects are denied.
Gallbladder meridian (YANG). The emotions associated with this meridian are GUILT and BLAME. This is used to manipulate and punish, manifests itself in a variety of expressions such as remorse, self-recrimination, masochism and all the symptoms of victimhood. Unconscious guilt results in psychosomatic disease, accident proneness, and suicide behaviours. Guilt domination results in a preoccupation with sin, an unforgiving emotional attitude frequently exploited by religious demagogues, who use it for coercion and control. Such sin and salvation merchants, obsessed with punishment, are likely either acting out their own guilt or projecting it into others. Guilt provokes rage, and killing frequently is its expression.
Lung meridian (YIN).
The emotions associated with this meridian are ANGER and HATE. Anger can lead to either constructive or destructive action. Anger can be a fulcrum by which the oppressed are eventually catapulted to freedom. Anger over social injustice, victimisation and inequality has created great movements that led to major changes in the structure of society. Anger more often expresses itself as resentment and revenge and is therefore volatile and dangerous. Anger is exemplified by irritable, explosive people who are oversensitive to slights and become injustice collectors, quarrelsome, belligerent or litigious.
Large intestine meridian (YANG). The emotions associated with this meridian are APATHY and DESPAIR. Characterized by poverty, despair and hopelessness. The world and the future look bleak. Pathos is the theme of life. It is a state of helplessness, its victims needy in every way, lack not only resources, but the energy to avail themselves of what maybe available. Unless external energy is supplied by care givers, death through passive suicide can result. Without will to live, the hopeless stare blankly, unresponsive to stimuli. They are seen as a drain on resources. It is the level of abandonment of hope and few have the courage to really look it in the face.
Kidney meridian (YIN).
The emotions associated with this meridian are ANXIETY and FEAR. The world looks hazardous, full of traps and threats. Fear is the tool for control by oppressive totalitarian agencies, and insecurity is the stock-in-trade of major manipulators of the marketplace. Fear becomes obsessive and may take any form, fear of loss of relationship leads to jealousy and a chronically high stress level. Fearful thinking can balloon into paranoia and generate neurotic defensive structures and because it is contagious, become a social trend. Fear limits growth of the personality and leads to inhibition. The fearful seek strong leaders to lead them.
Bladder meridian (YANG).
The emotions associated with this meridian are SHAME and HUMILIATION. Early life experiences such as sexual abuse, which lead to shame, warp the personality for a lifetime unless these issues are resolved. Shame produces neurosis. It is destructive to emotional and psychological health and leads to psychosomatic disorders. The personality is often shy, withdrawn and introverted. Shame is used as a tool of cruelty and its victims often become cruel themselves. They are prone to hallucinations of an accusatory nature, as well as paranoia; some becoming psychotic or commit bizarre crimes. Some compensate by perfectionism and rigidity and become driven and intolerant.
Governing vessel meridian (YIN).
The emotions associated with this meridian are CRAVING and DESIRE. Desire motivates vast areas of human activity, including the economy. Advertisers play on desires. Desire for money, power and prestige runs their lives. It is the level of addicts, wherein desire becomes a craving more important than life itself. Desire for sexual approval. Desire is insatiable so that satisfaction of one desire is replaced by unsatisfied desire for something else. It is the emotion most often associated with much crime as criminals basically crave more material objects, money and thus prestige.
Conception vessel meridian (YANG).
The emotions associated with this meridian are GRIEF and REGRET. This is the level of sadness, loss and despondency. People live a life of constant regret and depression. This is the level of mourning, bereavement and remorse about the past. It is the level of habitual losers and those chronic gamblers who accept failure as part of their life style, often resulting in loss of jobs, friends, family and opportunity, as well as money and health. They see sadness everywhere and it colours their entire vision of existence. At this level, such emotional losses may trigger a serious depression or death.
Circulation sex meridian. *Sounds sanguine YIN*

The emotions associated with this meridian are COURAGE and AFFIRMATION. It is the start of the level of empowerment. It is characterised by exploration, accomplishment, fortitude and determination. Life is seen to be exciting, challenging and stimulating. Courage implies the willingness to try new things and deal with the vicissitudes of life. People are able to cope with and handle effectively the opportunity of life. Growth and education become attainable goals. There is the capacity to face fears and to grow despite them and anxiety does not cripple endeavour. They put back into the world as much energy as they take.
Triple warmer meridian. *Sounds phlegmatic YANG*

The emotions associated with this meridian are NEUTRALITY and TRUST. The neutral condition allows for flexibility and non-judgmental. Realistic appraisal of problems. It means to be relatively unattached to outcomes; not getting one’s way is no longer experienced as defeating, frightening or frustrating. It is the beginning of inner confidence, sensing one’s power, one is not easily intimidated. One is not driven to prove anything. They generally have a sense of well being and have confident capability to live in the world. They are easy to get along with, safe to be around and associate with, they are comfortable and basically undisturbed emotionally.
Spleen meridian. *Sounds left brain Yin sanguine*

The emotions associated with this meridian are WILLINGNESS and OPTIMISM. Work is done well and success in all endeavours is common. Growth is rapid. They have overcome inner resistance to life and are committed to participation. They are genuinely friendly, and social and economic success seem to follow automatically. They do not feel demeaned by service jobs or by starting at the bottom. They are helpful to others and contribute to the good of society. They are willing to face inner issues and do not have major learning blocks. Self esteem is high and is reinforced by positive feedback from society in the forms of recognition, appreciation and reward.
Stomach meridian. *Sounds right brain yang phlegmatic*

The emotions associated with this meridian are ACCEPTANCE and FORGIVENESS. A major transformation of awareness that one is oneself the source and creator of the experiences of one’s life. It is characterized by the capacity to live harmoniously with the forces of life. The source of happiness is within one’s self. It allows engagement in life on life’s own terms, without trying to make it conform to an agenda. There is emotional calm and perception is widened as denial is transcended. They see things without distortion or misinterpretation; the context of experience is expanded so that one is capable of “seeing the whole picture”.
Heart meridian. *Sounds left brain Yin*

The emotions associated with this meridian are REASON and UNDERSTANDING. Intelligence and rationality rise to the forefront. Reason is capable of handling large, complex amounts of data and making rapid, correct decisions; of understanding the intricacies of relationships, graduations and fine distinctions and of expert manipulation of symbols as abstract concepts become increasingly important. Intellectualizing can become an end in itself. Reason is limited in that it does not afford the capacity for the discernment of essence or of the critical point of a complex issue. It lacks the capability to resolve discrepancies in data and conclusions.
Small intestine meridian. *Sounds right brain Yang*

The emotions associated with this meridian are LOVE and REVERENCE. Characterized by the development of a love which is unconditional, unchanging and permanent. It does not fluctuate because its source within the person who loves is not dependent on external factors. It relates to the world by forgiveness, nurturing and support and emanates from the heart and not the mind. They can discern essence, the core of an issue becomes the centre of focus. There arises the capacity for instantaneous recognition of the totality of a problem and a major expansion of context; especially regarding time and process.
Assessing the two portraits

1. Readiness for action is present. Which one is looking at you. Which one perceives information from the external world. Which one is going forward. Who will win a fight. Who people will choose as a leader.
Inverse question.
Readiness for action is not present.

Jamming, rush to internal world, introversion.
Absent minded.
A fright or fear, perplexed
Appears suppressed, extinct or lost.
2. Difference in Readiness for Action

Large – immediately evident
Average – is appreciable.
Small - slight
3. Wisdom – Calmness is present on the sum of the two portraits.

Stability, mental ballast, balanced Impregnability, inflexibility.

Arrogance, superiority.

Monumentalism, statue like.

Shows few emotions but knows about everything.

Silent pleasure
Inverse question
Wisdom – calmness not present

Fear or fright
Absent minded or absent look
Depression, confusion, does not know what to do.
Extreme tension.
Beast look, snap at, showing one’s teeth.
4. Focus is present on the sum of the two portraits.
   This person is well motivated.

Inverse question
Focus is not present.
   Depression, despair, apathy has lowered hands – grief Bewilderment. Does not know what to do.
Neurology
Occulomotor nerve 111

**supplies**
- Levator palpebrae superioris
- Medial rectus
- Inferior oblique
- Superior rectus
- Inferior rectus
- Ciliary ganglion
- Sphincter pupillae
- Ciliariis

Abducens nerve IV

**supplies**
- Lateral rectus

Trochlear nerve VI

**supplies**
- Superior oblique
There is general agreement that the occulomotor fibres, somatic and automatic, are almost completely ipsilateral in their midbrain course. At the most some axons may cross into the opposite occulomotor nerve to innervate the rectus superior and the Levator palpebrae superioris.

Gray’s Anatomy 25th edition
Facial nerve VII

- Occipito-frontalis temporal branches
- Temporoparietalis temporal branches
- Auricularis anterior temporal branches
- Auricularis superior temporal branches
- Auricularis posterior posterior auricular branch
- Orbicularis oculi temporal and zygomatic branches
- Corrugator supercili temporal branches
- Levator palpebrae superioris superior division of the oculomotor nerve
- Procerus buccal branch
- Compressor naris buccal branch
- Depressor septi buccal branch
- Dilator naris buccal branch
- Levator labii superioris buccal branch
- Levator labii superioris alaeque nasi buccal branch
- Levator anguli oris buccal branch
- Zygomaticus minor buccal branch
- Zygomaticus major buccal branch
- Risorius buccal branch
- Depressor labii inferioris mandibular and buccal branch
- Depressor anguli oris mandibular branch
- Mentalis mandibular branch
- Buccinator buccal branch
- Orbicularis orbis buccal branch
Facial nerve nucleus receives fibres from both cortico-nuclear tracts in the lower part of the pons or by aberrant pyramidal fibres which descend in the medial lemmiscus. The fibres from the contralateral side contribute to that part of the nucleus which supplies the muscles of the lower part of the face. The fibres to that part of the nucleus supplying the muscles around the eyes and forehead are bilateral.
Temporal (frontal) branch of the facial nerve
Zygomatic branch of the facial nerve
Buccal branch of the facial nerve
Marginal mandibular branch of the facial nerve
Cervical branch of the facial nerve
Facial processing has been studied using measurements of mean cerebral blood flow velocity in the middle cerebral arteries bilaterally. During facial recognition tasks, greater changes in the right middle cerebral artery (RMCA) than the left (LMCA) have been observed. It has been demonstrated that men were right lateralised and women left lateralised during facial processing tasks.
Conscious / Unconscious emotions
Emotional Stress Reflexes
Emotional Stress Reflexes

Challenge right to left and left to right.
Maintain positive Therapy Localisation and treat with Miron light for 1 minute to the umbilicus.
Subconscious emotions
Subconscious emotions are put in through the 5 senses.

Vision
Hearing
Smell
Taste
Touch
Therapy localise each right to left and left to right. Maintain therapy localisation to positive sensory input and treat with Miron light for 1 minute through the umbilicus.