**Oberon Biofeedback Training: Understanding and Addressing Atherosclerosis**

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**Introduction to Atherosclerosis**

* **Overview**
	+ Atherosclerosis is a condition where plaque builds up in the arteries, leading to reduced blood flow and an increased risk of cardiovascular disease. This affects various systems, including cardiovascular, endocrine, osteo and metabolic pathways.



* **Key Concepts:**
	+ Role of arteries in transporting oxygenated blood.
	+ Importance of maintaining arterial health for overall wellness.

**Foundational Concepts: Glucose, Glycogen, and Glucagon**

* **Glucose:**
	+ Role of glucose as the body's main energy source.
	+ Breakdown of carbohydrates into glucose, with emphasis on enzymes like sucrase, maltase, and lactase.
	+ Locations: Haemoglobin, tongue, teeth, and stomach.
* **Glycogen:**
	+ Explanation of glycogen as the storage form of glucose.
	+ Importance of glycogen in liver and muscle tissue.
	+ Locations: Haemoglobin, liver tissue.
* **Glucagon:**
	+ Function of glucagon in blood sugar regulation.
	+ Conversion of glycogen back into glucose during hypoglycemia or energy demand.
	+ Locations: Haemoglobin, liver tissue, pancreas.



**3. Hormonal Interactions and Atherosclerosis**

* **Glucagon-like Peptide-1 (GLP-1):**
	+ Role in glucose metabolism and influence on the pancreas, intestine, and brainstem.
	+ Brain structures associated with GLP-1: basal ganglia, grey matter (nucleus of the solitary tract).
* Hormones secreted by the small intestine, including somatostatin, motilin, cholecystokinin, neurotensin, vasoactive intestinal peptide, and enteroglucagon.

**4. Adipose Tissue and its Role in Atherosclerosis**

* Overview of adipose tissue types:
	+ White Adipose Tissue (WAT): Energy storage.
	+ Brown Adipose Tissue (BAT): Heat generation.
* Hormones produced by adipose tissue (e.g., leptin, estrogen, resistin, cytokine TNFa) and their potential link to inflammatory diseases – causing increased plaque build up.



**5. Neurological and Endocrine Contributions**

* **Adrenal Glands (L/R):**
	+ Role in stress response and secretion of adrenaline.
* **Neurotransmitters:**
	+ Connection between neurotransmitters and smooth muscle activity.
* **Striated Muscle:**
	+ Creatine’s role in recycling adenosine triphosphate (ATP), providing energy for physical activity and cellular functions.
* **Glucose, Glycogen, and Glucagon** naturally fit into the "Foundational Concepts" section early in the training, as they provide a basis for understanding metabolic contributors to atherosclerosis.
* **GLP-1 and Small Intestine Hormones** belong in the "Hormonal Interactions" section since they connect directly to metabolic processes and gut-brain interactions.
* **Adipose Tissue** is crucial for the "Adipose Tissue" section because it ties to energy storage and inflammatory signaling relevant to atherosclerosis.
* **Adrenal Glands, Neurotransmitters, and Striated Muscle** can be incorporated into the "Neurological and Endocrine Contributions" section to emphasize the systemic nature of atherosclerosis.



**Remedies and Therapies**

* **NUTRICEVTICS AND PARAPHARMACEUTICALS and Yoga - Drugs:**
	+ L-Arginine for improving nitric oxide production and vascular function.
	+ Omega 3/60 for clients without digestive or nervous system issues.
	+ Omega-3 Optima for clients without osteo or eye issues.
* **ALLOPATHY:**
	+ GROFIBRATE (Poland, PROLFA): targets arterial health.
	+ Cardio a support (56) – Argo: Statins: These block the liver enzyme that promotes cholesterol production (check the find preparat for the topic).
* **(INV) PATHOLOGY, ALLOPATHY, NUTRICEVTICS AND PARAPHARMACEUTICALS:**
	+ Obesity remedies to target weight-related risks.
	+ Support for kidneys, spleen, and thymus gland to improve metabolic processes and immune function.

**Functional Anatomy for Atherosclerosis Management**

* **Targeted Body Regions:**
	+ Arteries of the head and neck: promote blood flow to the brain and organs.
	+ Pulmonary tissue and alveolar ducts: enhance oxygen exchange.
	+ Longitudinal and transverse sections of heart and veins: focus on blood supply and drainage.
* **Critical Cell Types:**
	+ Endothelial cells: maintain the blood-brain barrier and arterial wall integrity.
	+ Muscle cells: regulate arterial contraction and relaxation for vasodilation.
	+ Lymphocytes: support immune function and inflammation control.

**Core Biological Components**

**1. DNA 1 - 11 - 01 - Z - 19: Atherosclerosis**

* **Gene/Locus**: This notation likely refers to a specific genetic locus associated with atherosclerosis.
* **Relevance**: Genetic variations at certain loci have been linked to an increased risk of atherosclerosis, a condition characterized by the buildup of plaque in arterial walls. Genome-wide association studies (GWAS) have identified multiple loci associated with coronary artery disease, many of which are situated in intergenic regions.
* Role: Regulates genetic predisposition to plaque buildup in arteries.
* Application: Helps predict coronary artery disease risk.
* Key Focus: Lifestyle changes to mitigate inherited risks.

**2. DNA 6 - 5 - 06 - 270 - 12: Adenyl Cyclase 6 / Vitamin D Receptor (Cardio Issues)**

* **Gene/Locus**: This sequence may correspond to genes encoding Adenyl Cyclase 6 and the Vitamin D receptor.
* **Relevance**:
	+ **Adenyl Cyclase 6 (ADCY6)**: Involved in the conversion of ATP to cyclic AMP, playing a crucial role in cardiac function. Alterations in ADCY6 expression or function can impact heart muscle contraction and overall cardiovascular health.
	+ **Vitamin D Receptor (VDR)**: Mediates the effects of vitamin D, which is essential for cardiovascular health. Polymorphisms in the VDR gene have been studied for associations with cardiovascular diseases, although findings have been inconsistent.
	+ Adenyl Cyclase 6: Facilitates conversion of ATP to cyclic AMP, regulating cardiac output and energy signaling.
	+ Vitamin D Receptor: Modulates inflammation and supports vascular function. Deficiency linked to higher cardiovascular risks.

**3. DNA 6 - 1 - 06 - Z90 - 9: Guanylate Cyclase B**

* **Gene/Locus**: This notation likely refers to the gene encoding Guanylate Cyclase B.
* **Relevance**: Guanylate Cyclase B is involved in the regulation of vascular tone and blood pressure through the production of cyclic GMP. Alterations in its function can affect vasodilation and contribute to cardiovascular conditions.
* Function: Governs vasodilation and vascular resistance.
* Clinical Relevance: Dysfunction increases hypertension and arterial stiffness.

**4. DNA 4 - 3 - 05 - 270 - 20: Cystatin C**

* **Gene/Locus**: This sequence may correspond to the gene encoding Cystatin C.
* **Relevance**: Cystatin C is a cysteine protease inhibitor and a biomarker of kidney function. Elevated levels of Cystatin C have been associated with an increased risk of cardiovascular events, including heart failure and atherosclerosis.
* Significance: Acts as a kidney health marker and predicts cardiovascular complications.
* Application: Monitoring levels can inform risk of heart failure or stroke.

**5. DNA 6 - 1 - 12 - 180 - 3: Glutathione Peroxidase**

* **Gene/Locus**: This notation likely refers to the gene encoding Glutathione Peroxidase.
* **Relevance**: Glutathione Peroxidase is an antioxidant enzyme that protects cells from oxidative damage. Oxidative stress is a key factor in the development of atherosclerosis, and adequate activity of this enzyme is important for cardiovascular health.
* Role: Neutralizes oxidative stress, a key driver of atherosclerosis.
* Focus: Antioxidant therapy (e.g., glutathione supplementation) as a preventive measure.

**6. DNA 3 - 2 - 03 - 0 - 8: Glutathione Reductase**

* **Gene/Locus**: This sequence may correspond to the gene encoding Glutathione Reductase.
* **Relevance**: Glutathione Reductase plays a critical role in maintaining the balance of reduced and oxidized glutathione within cells, crucial for protecting the cardiovascular system from oxidative stress.
* Function: Ensures adequate levels of reduced glutathione for cellular protection.
* Impact: Insufficient activity heightens oxidative damage in vascular tissues.

**7. DNA 1 - 6 - 13 - Z180 - 1: Haploid/Nucleus - Ovum**

* **Gene/Locus**: This notation suggests a genetic sequence associated with haploid cells and the nucleus of the ovum.
* **Relevance**:
	+ **Haploid Cells**: These are single-set chromosome cells (e.g., ova or sperm). Any genetic abnormalities in haploid cells can lead to inherited cardiovascular conditions.
	+ **Reproductive Connection**: Maternal genetic contributions can influence predispositions to conditions such as atherosclerosis through mitochondrial DNA or specific maternal-effect genes.
	+ **Mitochondrial Link**: Maternal haploid contributions often include mitochondria, which are critical for energy production in cells, including cardiac cells.
	+ Maternal Influence: Highlights mitochondrial inheritance and its impact on cardiac energetics.

**8. DNA 6 - 1 - 19 - 270 - 3: Haploid**

* **Gene/Locus**: This appears to reference a sequence related to haploid cells, potentially with roles in cellular energy or signaling.
* **Relevance**:
	+ **Cellular Energy and Cardiovascular Health**: Haploid contributions influence mitochondrial functionality, affecting energy supply for the heart and vascular system.
	+ **Genetic Disorders**: Variations in mitochondrial DNA (commonly inherited maternally) can lead to cardiomyopathies or conditions like mitochondrial encephalomyopathy.
	+ Relevance: Mitochondrial DNA mutations contribute to cardiomyopathies and compromised energy supply.

**9. DNA 5 - 1 - 07 - Z - 270 - 14: Nucleus - Osteocyte/Ostem Osseous/Tissue Tooth (Molar)**

* **Gene/Locus**: Likely related to osteocytes (bone cells) and osseous tissue.
* **Relevance**:
	+ **Cardiovascular Health Connection**:
		- **Calcification in Atherosclerosis**: Osteocytes and osseous tissues are critical in calcium homeostasis. Vascular calcification in atherosclerosis mimics bone formation processes, where osteocyte-like cells deposit calcium in arterial walls.
		- **Dental and Cardiovascular Link**: Periodontal health (e.g., molar tissue health) is strongly associated with cardiovascular diseases. Poor oral health can lead to chronic inflammation, promoting atherosclerosis.
	+ **Bone-Heart Axis**: Osteocytes release factors like osteocalcin, influencing vascular and cardiac health.
	+ Focus: Examines connections between bone health, vascular calcification, and systemic inflammation.
	+ Practical Application: Periodontal care to reduce systemic inflammation linked to cardiovascular risks.

**10. DNA 3 - 1 - 01 - Z - 21: Amyloid B (A4) Precursor**

* **Gene/Locus**: This sequence is associated with the **Amyloid Beta Precursor Protein (APP)** gene.
* **Relevance**:
	+ **Cardiovascular Health**:
		- Amyloid-beta plaques are commonly linked to Alzheimer’s disease but also play roles in vascular health. Cerebral amyloid angiopathy involves deposits in arterial walls, leading to compromised blood flow to the brain.
		- APP is implicated in endothelial dysfunction and vascular inflammation, both key contributors to atherosclerosis.
	+ **Cognitive and Vascular Connection**: APP alterations can contribute to neurovascular issues, where arterial health and cerebral blood flow are interdependent.
	+ **Inflammatory Role**: Amyloid-beta promotes inflammation, exacerbating conditions like atherosclerosis and vascular aging.
	+ Dual Role: Links neurovascular health with cardiovascular integrity.
	+ Clinical Monitoring: Targeting amyloid-beta's role in inflammation and arterial health.

**General Observations:**

1. **Haploid and Mitochondrial DNA**:
	* These strands emphasize the influence of maternal genetics on cardiovascular health through energy metabolism and mitochondrial functionality.
2. **Osteocyte and Dental Connections**:
	* Highlights the bone-cardiovascular link via calcium regulation and inflammation stemming from oral health.
3. **Amyloid-Beta and Vascular Health**:
	* Demonstrates the dual role of APP in both cognitive and cardiovascular conditions, reflecting the importance of vascular integrity.
4. **Overall Impact on Cardiovascular Health**:
	* These DNA strands collectively showcase a multifaceted approach to understanding cardiovascular health—incorporating genetics, energy metabolism, bone health, inflammation, and vascular integrity.

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**Atherosclerosis Case Studies**

**Case Study 1: Eye Conditions and Atherosclerosis**

**Background:**

A 58-year-old client reports recurring cataracts and mild glaucoma. They have difficulty focusing and experience frequent eye strain. Client had gallbladder removed and also a section of thyroid Initial scans show mild atherosclerosis and **Root Cause Connection**: Eyes may be affected due to inadequate oxygen supply caused by narrowing of arteries.

* **Focus Areas**:
	+ **Cardiovascular system**: Include Metatherapy for hemoglobin and capillaries.
	+ **Digestive system**: Ensure proper enzyme production and breakdown of nutrients.
	+ **Liver health**: Optimize detoxification for better nutrient utilization.

**Therapy Plan:**

* **Full Body Scan**: Identify regions with low oxygenation and narrow arteries.
* **Metatherapy Preset**: Updated Flush with Atherosclerosis protocol included (digestive, sensory, and endocrine systems)
* **Remedies**: Incorporate L-arginine, Omega-3, bile acids, and antioxidants targeting retinal, and endocrine health.
* **Lifestyle Guidance**: Recommend dietary changes focused on eye health, such as increased lutein and zeaxanthin intake.

**Case Study 2: Teeth and Oral Health as a Starting Point**

**Background:**

A 45-year-old client with atherosclerosis reports gum sensitivity, frequent cavities, and early-stage periodontal disease.

**Key Insights:**

* **Root Cause Connection**: Poor oral health impedes enzyme production, compromising nutrient breakdown and triggering plaque formation in arteries.
* **Focus Areas**:
	+ Teeth and gum health
	+ Digestive system
	+ Cardiovascular health

**Therapy Plan:**

* **Full Body Scan**: Highlight any abnormalities in the oral cavity and digestive enzymes.
* **Metatherapy Preset**: Updated Flush with Atherosclerosis protocol included (digestive system)
* **Remedies**: Add structured enzymes, L-arginine, and calcium-binding agents.
* **Lifestyle Guidance**: Suggest switching to enzyme-rich foods, improved dental hygiene, and regular water intake for flushing toxins.

**Case Study 3: Gallbladder Health and Atherosclerosis**

**Background:**

A 62-year-old client with a history of gallbladder removal reports chronic indigestion, high cholesterol, and fatigue. Atherosclerosis appears in multiple scans across the digestive and cardiovascular systems.

**Key Insights:**

* **Root Cause Connection**: The absence of a gallbladder reduces bile acid production, impairing the breakdown of fats and cholesterol, leading to plaque buildup in arteries.
* **Focus Areas**:
	+ Gallbladder and bile production
	+ Pancreas and duodenal health
	+ Arteries and capillaries

**Therapy Plan:**

* **Full Body Scan**: Examine the digestive tract, pancreas, and arteries for abnormalities.
* **Metatherapy Preset**: Updated Flush with Atherosclerosis protocol included (digestive system)
* **Remedies**: Incorporate L-arginine, bile acid supplements, papaya enzymes, and Omega-3s.
* **Lifestyle Guidance**: Create a bile-supportive diet emphasizing healthy fats, bitter greens, and digestive enzymes.

**Case Study 4: Digestive Health and Atherosclerosis**

**Background:**

A 50-year-old client presents with indigestion, bloating, and high LDL cholesterol. Atherosclerosis is noted in the duodenal and abdominal arteries.

**Key Insights:**

* **Root Cause Connection**: Impaired digestive health leads to incomplete nutrient breakdown and systemic inflammation, contributing to arterial plaque buildup.
* **Focus Areas**:
	+ Duodenum and pancreas
	+ Digestive enzyme production
	+ Cardiovascular system

**Therapy Plan:**

* **Full Body Scan**: Focus on digestive health markers and arterial health.
* **Metatherapy Preset**: Updated Flush with Atherosclerosis protocol included (digestive system)
* **Remedies**: Add bile salts, L-arginine, and Omega-3 fatty acids.
* **Lifestyle Guidance**: Advise a high-fiber, low-sugar diet to reduce systemic inflammation.

**Case Study 5: Spine Health and Atherosclerosis**

**Background:**
A 55-year-old female client with a history of high physical activity and a significant spinal injury (auto accident) presented with fatigue, joint pain, chronic constipation, and metabolic irregularities. Biofeedback scans identified **diffuse goiter**, **gallbladder dyskinesia**, **atherosclerosis**, and widespread **vertebral misalignment**.

**Key Insights:**

* **Root Cause Connection:**
Spinal misalignment can inhibit enzyme production and oxygen flow, leading to poor digestion, hormonal disruption, and impaired vascular function. These deficiencies increase toxic buildup, contributing to **atherosclerosis** and systemic inflammation.
* **Focus Areas:**
	+ Cervical and lumbar vertebrae (enzyme & oxygen pathways)
	+ Gallbladder, liver, and digestive lining
	+ Thyroid gland (diffuse goiter and hormonal regulation)
	+ Vascular health (arteries, blood flow, plaque formation)

**Therapy Plan:**

* **Full Body Scan:**
Include digestive, endocrine, cardiovascular, and osteo-spinal systems with a focus on intestinal wall, thyroid, and vertebrae.
* **Metatherapy Preset:**
Weekly focus on:
	+ **Spine and Cartilage Regeneration**
	+ **Thyroid and Hormone Axis Reset**
	+ **Gallbladder and Liver Detox**
	+ **Cardiovascular and Arterial Health**
* **Lifestyle Guidance:**
	+ Hydration with added trace minerals or cell food
	+ Gentle chiropractic care
	+ Enzyme-rich foods and magnesium supplementation
	+ Baking soda water (1/4 tsp in 8 oz water) daily to support digestion

**Case Study 6: Vascular Health Focus: Atherosclerosis & Varix Dilatation**

**Example:**

**What the Scan Shows:**

* **Atherosclerosis**: Present in the **aorta, pancreas, cerebellum, and adrenal medulla**, which indicates **early to moderate arterial plaque formation**.
* **Varix Dilatation**: Seen in **medium veins**, **capillaries**, and **neurovascular bundles**, which points to **venous valve weakness**, often a sign of **chronic stagnation or liver burden**.

**Systems Connection: Spine – Enzymes – Organ Axis**

1. **Spinal Misalignment + Neuralgias**
	* Her scan reflects **radiculopathy**, **spondylarthrosis**, **intercostal neuralgia**, and **osteoporosis**, all of which suggest **nerve impingement in the spine**.
	* These issues can disrupt **autonomic regulation** of the **digestive system**, reducing **pancreatic enzyme secretion**, **bile flow**, and **vascular tone**.
2. **Organ Circuit Breakdown**
	* **Liver**: Involved in lipid clearance, cholesterol regulation, and venous blood filtering
	* **Gallbladder**: Bile stagnation can increase **intestinal toxicity** and impair **fat-soluble vitamin absorption**
	* **Thyroid-Brain**: Imbalances in **TSH or T3/T4** impact metabolic rate and vascular elasticity
	* **Gut**: Dysbiosis and leaky gut may trigger systemic **inflammation and plaque formation**

**Recommended Oberon Protocol (for Atherosclerosis & Varix Dilatation)**

**Meta Therapy Zones (3x/week)**

1. **Vertebral Column + Cervical/Thoracic Spine** (to address root nerve dysfunction)
2. **Aorta, Capillaries, Arterial & Venous Tissue**
3. **Liver + Gallbladder + Pancreas**
4. **Thyroid + Hypothalamus/Pituitary + Brainstem**

**Microbiota Reset: Small Intestine, Colon, and Lymphatics**

**Metatherapy Preset Table**

|  |  |
| --- | --- |
| Item | Rationale |
| Arteries of the Head and Neck | Promote oxygenated blood to the brain and organs of the head, reducing risks of ischemic events caused by atherosclerosis. |
| Arteries of the Cerebrum | Supports blood flow to critical areas of the brain (ACA, MCA, PCA), preventing complications such as strokes due to arterial narrowing. |
| Arteries of the Brain (Below) | Improves overall cerebral perfusion and addresses systemic vascular blockages. |
| Arterial Vessel | Enhances arterial wall integrity, addressing plaque buildup and improving elasticity. |
| Body of Man/Woman | Addresses systemic imbalances and supports all organ systems affected by poor oxygenation due to arterial narrowing. |
| Capillary | Focuses on microcirculation, ensuring oxygen and nutrient delivery to peripheral tissues impacted by atherosclerosis. |
| Cardiac Veins | Improves venous return from the heart, reducing systemic congestion and aiding in oxygen delivery to the myocardium. |
| First - Fifth Neck (Cervical) Vertebra (C1-C5) | Improves intake of oxygen into the body by supporting optimal nervous system communication between the brain and respiratory system, critical for cardiovascular health. |
| Heart (Front and Behind) | Supports overall heart function, addressing structural and functional impairments caused by reduced arterial blood flow. |
| Left Lung | Enhances oxygen intake and distribution, compensating for reduced systemic perfusion. |
| Lung Tissue | Supports alveolar health, facilitating efficient gas exchange critical for mitigating oxygen deficits linked to atherosclerosis. |
| Longitudinal Section of the Heart | Focuses on specific myocardial sections prone to oxygen deprivation from arterial narrowing. |
| Trachea & Bronchi | Supports optimal airflow, ensuring the cardiovascular system receives sufficient oxygen to compensate for impaired blood flow. |
| Alveolocyte and Secretory Alveolar Cell | Maintains respiratory efficiency by preserving alveolar function, vital for oxygenating blood affected by systemic atherosclerosis. |
| Tongue | Ensures oral enzyme production necessary for proper carbohydrate breakdown, reducing systemic inflammatory markers contributing to atherosclerosis. |
| Teeth (Right) | Ensures proper oral health and enzymatic activity for breaking down carbohydrates into glucose, supporting overall digestive and cardiovascular health. |
| Teeth (Left) | Promotes balanced enzymatic action and reduces risks of systemic inflammation caused by oral pathogens contributing to vascular damage. |
| Transverse Section of the Vein Vessel | Addresses venous drainage, improving systemic circulation and reducing vascular congestion. |
| Horizontal Cross-Section of the Truck at the level of Umbilicus | Optimizes oxygenated blood return to the heart, supporting systemic perfusion. |
| Transverse Section of Aorta | Focuses on the largest artery, addressing central plaque formation and preventing severe complications. |
| Veins of the Head and Neck | Facilitates efficient venous drainage, ensuring proper blood circulation and reducing pressure on cerebral vasculature. |
| Vessels of the Posterior Heart Wall | Supports the heart’s “brain irrigation system,” ensuring adequate myocardial perfusion and oxygenation. |
| Cerebral Section Larynx and Trachea | Addresses upper airway function, ensuring adequate oxygen intake for cardiovascular health. |
| Arteries Section Left & Right Foot | Enhances peripheral circulation and prevents ischemic complications in extremities. |
| Coronal Section of the Chest at the Hollow Vein (Front View) | Improves systemic circulation and reduces strain on the cardiovascular system. |
| Veins of the Stomach | Acts as a drainage system for the stomach and transports blood that needs oxygen, addressing systemic congestion. |
| Vessels of the Anterior Heart Wall | Supplies all parts of the heart with blood, ensuring myocardial health and reducing risks of infarction. |
| Endothelial Cells | Supports the blood-brain barrier and addresses inflammation at the vascular level, a key contributor to plaque formation. |
| Epithelial Cells (All of Them) | Focuses on maintaining the integrity of epithelial linings throughout the body, reducing systemic inflammation and plaque deposition. |
| Neurocyte | Improves neurological health by enhancing oxygen delivery to brain tissues affected by arterial narrowing. |
| Pancreas/Spleen | Acts as the center of the endothelial system, supporting immune modulation and systemic detoxification. |
| Muscle Cells (Smooth Muscle) | Supports arterial flexibility and contraction, improving blood flow and reducing plaque buildup. |
| Kidneys | Filters waste and toxins from the blood, reducing systemic strain and improving overall cardiovascular function. |
| Cholesterin/Cholesterol | Addresses the regulation of cholesterol levels in the body, reducing arterial plaque formation and improving cardiovascular health.  |
| Liver All Areas | Balances glycogen and glucagon production, supporting over 300 vital liver functions essential for cardiovascular and systemic health. |
| Gallbladder | Produces bile for digestion and emulsification of fats, aiding in cholesterol metabolism and reducing the risk of arterial plaque buildup. |