

## 4 Brain Waves & Human Activities

14-30Hz	Waves	Beta [14 to 30Hz] : The highest and widest range among the waves. Over-sustained state causes disorder in the nervous system.
8-14Hz	Waves	Alpha [8 to 13Hz] : Frequently emitted when a person concentrates well.
4-8Hz	Waves	Theta [4 to 7Hz] : Usually prominent when dreaming
0-4Hz	Waves	Delta [0.5 to 3Hz] : Prominent when totally subconscious.

### Brain Waves & Hormonal Secretion

*hormone* (hor'-mon) : specific chemical substance secreted by an endocrine gland and conveyed in the blood to regulate the functions of tissues and organs elsewhere in the body. Recent researches suggest a high correlation between hormonal secretion and brain waves.

### Active hormones According to Brain Waves

waves: **[Somatostatin]**  
 Inhibits the release of growth hormones. Restrain the functions of the right hemisphere of the brain. Overactive secretion causes a person to feel emotionally unstable

**[Noradrenalin]**  
 Also inhibits the release of growth hormones and raises cholesterol and blood pressure. Overactive secretion causes insomnia, less appetite or irritation.

\* The hormones cause *autonomic ataxia* : the imbalance of automatic nervous system and malfunction of reflex control.

#### 2 Types of Autonomic Ataxia

1. Imbalance of Sympathetic Nervous System - insomnia, high blood pressure, high blood sugar level and etc.
2. Imbalance of Parasympathetic Nervous System - constipation, asthma, stomach ulcer, duodenal ulcer, hypotension etc.

waves: **[Acetylcholine]**  
 Growth hormone. It lowers cholesterol and blood pressure and balance the secretion of other prohormones. Most valuable in anti-oxidization. Overactive oxidation causes serious diseases, such as arteriosclerosis, cerebral hemorrhage or damages to DNA.

**[Dopamine]**  
 Ecstasy hormone. Increases cardiac output and blood flow to the kidney. Most valuable for hypotension and mood improvement.

**[Serotonin]**  
 Growth hormone. Improves blood flow, inhibits the secretion of gastric juice, and stimulates smooth muscles. Also valuable for the treatment of stomach ulcers and improves the process cycle of incoming information.

[**b** - Endorphins]

Assists the functions of serotonin. Consequently improving the mass-rapid information cycle of the brain

waves: [**Melatonin**]

A prohormone produced by the pineal gland. Appears to inhibit numerous hormonal functions. recent research shows that sunlight treatment stops its secretion; in depressed patients it results in mood improvemet.

waves: The brain temporarily seizes its functions in the range

### 3 Method to Induct - Waves

I Hemispheric Synchronization

II Sensory Consolidation

eg. "Close eyes and listen to calm" "Feel relaxed"

III Hypnotherapy

\* ALPHATHETA-C applies *Hemispheric Synchronization* . See "Principles and Effect of ALPHATHETA-C" for details.

\* Healing Music applies *Sensory Consolidation*.



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