The Endocrine System

The Endocrine System is a system of glands which secrete hormones, known as 'chemical messengers', for communication and control of organs. This is an alternative to the communication and control via the Nervous System. The pituitary gland is the master gland with feedback systems from the individual glands.

The Endocrine glands and their secretions

- Thyroid gland Thyroxin
- Pancreas Insulin
- Adrenal gland Adrenalin, cortisol
- Ovaries Oestrogen, progesterone
- Testes Testosterone
- Para-thyroids Parathormone, regulation of calcium metabolism

The control of endocrine secretion cascades from higher centres in the brain down through the hypothalamus, anterior pituitary gland, specific endocrine gland - the circulating hormone then reaches the target organ.

AT has the potential to balance endocrine activity.

Disorders of the Endocrine system

Diabetes Mellitus

Due to loss of insulin-producing cells, either total (type 1), or partial (type 2)

Insulin regulates carbohydrate metabolism and controls the blood sugar: release of insulin from the pancreas is stimulated and controlled by eating. Carbohydrate that is easily broken down into glucose such as sugars, causes a steep rise in blood sugar needing a corresponding insulin response. Complex carbohydrates are slower to break down into sugars and have a more gradual insulin response.

Diabetes can affect cellular metabolism in any system, causing pathological changes.

- Vascular: heart, arteries, brain
- Nervous System: dementia, peripheral neuropathy
- Kidneys
- Eyes

Treatment is by: lifestyle changes, diet, exercise, insulin, drugs.

Diabetes is a life sentence but liveable with.

Possible effects of AT:

- *may stimulate insulin production*
- *AT can support life changes and attitudes.*

Monitoring

Blood sugar monitoring is very important as insulin dose may need adjustment.

AUTOGENIC TRAINING AND PHSYCIAL ILLNESS

Thyroid disease

The Thyroid gland produces Thyroxine which acts like an accelerator and increases the metabolic rate.

Over activity causes Hyperthyroidism or Thyrotoxicosis

- Fast pulse, tremor, heat
- Weight loss
- Exophthalmos ; staring eyes
- Anxiety, panics , sleeplessness

Under activity causes Hypothyroidism or Myxoedema

- Slow pulse, weight gain, constipation
- Cold dry skin
- Loss of hair
- Mental changes, memory loss, depression.

Goitre

The thyroid gland is enlarged, known as 'Derbyshire neck'.

- Lack of Iodine
- Thyroid function may be normal (euthyroid), increased or decreased.

Treatment of thyroid disorder: carbamazepine or radioactive iodine for overactivity.

Replacement therapy for underactivity; surgery may be used in either disorder.

AT may help to stabilise thyroid function; it will also reduce anxiety and other symptoms.

The Adrenal glands

Two conditions:

i) Pheochromocytoma: a tumour arising in the medulla of the adrenal gland with hyper-secretion of adrenaline and nor-adrenaline causing symptoms similar to hyperthyroidism with additional rise in blood pressure.

ii) Addison's disease: failure of the adrenal medulla with hypo-secretion of catecholamines. This is difficult to diagnose.

Both of these conditions are rare.

The Reproductive System

The Reproductive System in Women is made up of:

- Ovaries
- Uterus (womb)
- Fallopian tubes
- Vagina
- Labia
- Breasts

Conditions of the female reproductive system and issues surrounding them

- Menstrual cycle: irregular, heavy bleeding, painful periods
- PMT – pre-menstrual tension
- Endometriosis
- Poly-cystic ovarian syndrome
- Infertility
- Miscarriage, termination
- Childbirth: difficulties, stillbirth, post-natal depression
- Infection
- Menopause
- Breast disease - dysmorphia

The Reproductive System in Men is made up of:

- Testes: producing spermatozoa and semen
- Prostate gland: secretions
- Penis: reproduction, urination, pleasure, pain.

Conditions of the male reproductive system and associated issues

- Prostatic hypertrophy causing urinary obstruction, urinary frequency and cancer
- Sexual potency and dysfunction
- Infertility
- Infections.

Relationships are an integral part of these conditions both for men and women.

The problems affect relationships so addressing them will involve at least two people.

AT can support the condition and the treatment recommended for it, and give hope.

Off-loading of grief, anger, anxiety.

The Renal System

The Renal system is made up of:

- Kidneys
- Ureters: tubes delivering urine from the kidneys to the bladder
- Bladder: stores urine prior to urination
- Urethra: a transit tube

Kidney function controls the body's biochemistry, particularly salt metabolism; it also controls fluid balance and is an excretory organ.

Bladder control involves co-ordination of both autonomic and voluntary nervous systems and pressure receptors in the bladder wall.

Conditions of the Renal system:

- Infection: cystitis, pyelonephritis, glomerulonephritis
- Enuresis
- Stress incontinence
- Obstruction: prostatic hypertrophy in men; renal stones
- Loo mania: anxiety causing faulty messages from the bladder
- Kidney and bladder cancer are common malignancies.

AT will reduce anxiety.

Personal affirmations and Off-loading exercises support the voluntary part of bladder functions.