

Diseases of the Endocrine System

Acromegaly—hypersecretion of growth hormone in adults; characterized by hyperglycemia; thickened, coarse skin; and enlargement of the head, jaw, nose, tongue, ears, hands, feet, and some internal organs.

Cause: usually an adenoma of the anterior pituitary gland.

Contraindications/indications: none.

Gigantism—rare hypersecretion of growth hormone during childhood; leads to increased bone thickness and length and increased soft tissue thickness; accompanied by hyperglycemia.

Cause: usually an adenoma of the anterior pituitary gland.

Contraindications/indications: none.

Dwarfism—deficiency of growth hormone during childhood; leads to decreased bone growth, short stature, hypoglycemia, muscle weakness, and retarded sexual development.

Cause: disturbance or trauma to the hypothalamus or anterior pituitary gland.

Contraindications/indications: none.

Diabetes insipidus—characterized by a deficiency of antidiuretic hormone (ADH) from the posterior pituitary gland.

Causes: inflammation or trauma to the hypothalamus or posterior pituitary gland; radiation to the hypothalamus.

Contraindications/indications: refer to doctor.

Graves disease—hypersecretion of thyroid hormones (hyperthyroidism); affects 8 to 10 times more women than men, usually between 30 and 50 years of age; leads to increased basal metabolic rate, weight loss, nervousness, fatigue, insomnia, diarrhea, heat sensitivity, increased sweating, tachycardia, and exophthalmos (protrusion of the eyeballs).

Cause: autoimmune disorder producing antibodies that bind to the thyroid-stimulating hormone (TSH) receptor sites and mimic the action of TSH, causing an increase in production of thyroid hormones.

Contraindications/indications: refer to doctor; massage is indicated and beneficial if no infection, inflammation, or tumor is present; avoid anterior portion of the neck.

Myxedema—hyposecretion of thyroid hormones in adults (hypothyroidism); characterized by fatigue, slowing of physical and mental activity, swelling around the eyes, cold intolerance, and coarsening of the skin, particularly on the face.

Causes: damaged thyroid gland; hereditary defects.

Contraindications/indications: refer to doctor; massage is indicated if no infection, inflammation, or tumor is present; avoid anterior portion of the neck.

Cretinism—hyposecretion of thyroid hormones in children (hypothyroidism); similar characteristics to myxedema, including swelling around the eyes, coarsening of the skin, and, depending on the age of onset, variable amounts of retarded bone and brain development.

Causes: damaged thyroid gland; hereditary defects.

Contraindications/indications: refer to doctor; massage is indicated if no infection, inflammation, or tumor is present; avoid anterior portion of the neck.

Goiter—enlargement of the thyroid gland.

Cause: iodine deficiency (\downarrow iodine \rightarrow \downarrow thyroid hormones \rightarrow \uparrow thyroid-stimulating hormone \rightarrow \uparrow thyroid growth).

Contraindications/indications: refer to doctor.

Diabetes mellitus—a group of disorders involving the pancreas; characterized by defective insulin response and/or utilization.

Insulin-dependent diabetes mellitus (IDDM)—also called **juvenile-onset diabetes** or **type 1 diabetes**; characterized by a deficiency of insulin production by the pancreas resulting from a reduction in β cells in the pancreatic islet cells; onset is usually before the age of 20; accounts for 10 to 20% of total cases of diabetes; hyperglycemia and polyuria (increased urine production) are common signs; treated with daily insulin injections.

Cause: genetic susceptibility along with autoimmunity to β cells.

Contraindications/indications: obtain advice and approval of client's doctor before performing bodywork.

Noninsulin-dependent diabetes mellitus (NIDDM)—also called **adult-onset diabetes** or **type 2 diabetes**; often seen in obese patients older than 40 years of age; accounts for most cases of diabetes; treated with exercise and diet therapy.

Causes: insulin resistance based on decreased receptor sensitivity on target tissues in the body; reduction in insulin production.

Contraindications/indications: obtain advice and approval of client's doctor before performing bodywork.

Cushing disease—characterized by excessive production of cortisol from the adrenal cortex; leads to obesity, weakness, fatigue, menstrual abnormalities, hypertension, and a rounded “moon face.”

Causes: hypersecretion of adrenocorticotropic hormone from the anterior pituitary gland; cortisol-secreting tumor.

Contraindications/indications: because of possible complications (e.g., osteoporosis), all massage should be light and relaxing; energy techniques may be most effective; obtain approval of client's doctor before performing bodywork if in doubt.

Addison disease—destruction of the adrenal glands leading to decreased production of adrenal hormones; results in muscle weakness, fatigue, hypotension, nausea, decreased tolerance for stress, and “bronzing” of the skin owing to increased production of adrenocorticotropic hormone.

Causes: autoimmunity against the adrenal gland; bacterial or viral infection; cancer.

Contraindications/indications: refer to doctor.

The chemical iodine is used as the foundation on which thyroid hormones are formed. Without sufficient amounts of dietary iodine, the body is not able to produce the proper amounts of thyroid hormones.

Both types of diabetes are accompanied by many serious complications, including myocardial infarction, ketoacidosis (decreased pH of the blood resulting from abnormally high ketones), stroke, peripheral neuropathy, decreased wound healing, gangrene (particularly in the lower extremities), retinopathy (leading to blindness), kidney problems, and increased susceptibility to infection.

As of July 1997, the American Diabetes Association changed “type I” and “type II” diabetes to “type 1” and “type 2” diabetes.

In Addison disease, the production of adrenal hormones decreases dramatically, causing increased production of adrenocorticotropic hormone (ACTH) by the anterior pituitary gland. This ACTH is broken down in the body; one of the byproducts is melanocyte-stimulating hormone (MSH). This hormone activates the melanocytes in the skin to cause the characteristic bronzing of the skin for those with Addison disease.