Empty Sella Syndrome

What is Empty Sella Syndrome ?
Empty Sella Syndrome (ESS) is a disorder that involves the *sella turica*, a bony structure at the base of the brain that surrounds and protects the pituitary gland. ESS is a condition that is often discovered during tests for pituitary disorders, when radiological imaging of the pituitary gland reveals a sella turica that appears to be empty. There are two types of ESS: primary and secondary. **Primary ESS** happens when a small anatomical defect above the pituitary gland increases pressure in the sella turica and causes the gland to flatten out along the interior walls of the sella turica cavity. Primary ESS is associated with obesity and high blood pressure in women. The disorder sometimes results in a build-up of fluid pressure inside the skull and the pituitary gland may be smaller than usual. **Secondary ESS** is the result of the pituitary gland regressing within the cavity after an injury, surgery, or radiation therapy. Individuals with secondary ESS due to destruction of the pituitary gland have symptoms that reflect the loss of pituitary functions, such as the ceasing of menstrual periods, infertility, fatigue, and intolerance to stress and infection. In children, ESS may be associated with early onset of puberty, growth hormone deficiency, pituitary tumors, or pituitary gland dysfunction. MRI scans are useful in evaluating ESS and differentiating it from other disorders that produce an enlarged sella.

Is there any treatment?
Unless the syndrome results in other medical problems, treatment for endocrine dysfunction associated with pituitary malfunction is symptomatic and supportive. In some cases, surgery may be needed.

What is the prognosis?
ESS is not a life-threatening illness.

What research is being done?
The NINDS supports and conducts studies aimed at understanding neurological conditions such as ESS. The goal of this research is to understand what causes these disorders and to discover new ways to diagnose, treat, and prevent them.