"Looks aren’t everything. It’s what’s inside that really matters. Jan W. told me that."

**Anatomy Review - Endocrine System**

- Hypothalamus
- Pituitary in Hypothalamus
- Parathyroid
- Thyroid Glands
- Adrenal
- Ovary
- Pancreas (Islets of Langerhans)
- Testis

**General Characteristics of the Metabolic System**

**obj#1**

- **Functions**
  - Response to stress
  - Growth and Development
  - Reproduction
  - Homeostasis
  - Energy Metabolism
COMPONENTS OF ENDOCRINE SYSTEM

- Endocrine Glands
  - Ductless
  - Synthesize and store hormones
  - Responsive to specific stimuli

- Hormones
  - Chemical substances-messengers
  - Regulatory action on target tissues

- Target Cells (tissue)
  - Located throughout body
  - Hormone combines with receptor to initiate cellular process

Regulation of Hormonal Secretions

- Patterns or Rhythms
  - Circadian rhythms
  - Cyclic or Ultradian

Regulation of Hormonal Secretions

- Feedback Systems
  - Negative feedback
    - Decreases the deviation from an ideal normal value
  - Positive feedback
    - Increases the deviation from an ideal normal value
History and Interview

- Recent weight changes
- Change in activity tolerance
- Temperature intolerance
- Hoarseness
- Pain
- Constipation
- Mood swings
- Increased urine output
- Family hx
- Skin Changes
- Respiratory pattern

Assessment of the Endocrine System

- History/Interview
- Subjective Data
  - Past health hx
  - Medications
  - Surgery or Tx's

Assessment continued

- Functional Health Patterns
  - Health Perceptions
    - Vague, non-specific symptoms
    - Heredity
  - Nutritional-Metabolic Pattern
    - Changes in appetite and weight
    - Difficulty swallowing or change in neck size
    - Changes to skin, hair
Assessment continued

• Functional health patterns continued
  – Elimination Pattern
    • Increased urination
    • Bowel movements
  – Activity-Exercise Pattern
    • Energy levels
  – Sleep-Rest Pattern
    • Sleep disturbances

Assessment continued

• Functional Health Patterns continued
  – Cognitive-Perceptual Pattern
    • Apathy & depression
    • Memory deficits
    • Inability to concentrate
  – Self-Perception/concept Pattern
    • Physical changes affecting appearance
  – Role-Relationship Pattern
    • Unable to sustain life’s roles

Assessment continued

• Functional Health Patterns continued
  – Sexuality-Repro Pattern
    • Secondary sex characteristics
    • Problems with pregnancy and menstruation
    • Erectile dysfunction
  – Coping-Stress Tolerance Pattern
  – Value-Belief Pattern
Assessment continued

- Objective Data
  - Physical Exam
    - VS
    - Height and weight
    - Mental-emotional status
    - Integument
    - Head

Assessment continued

- Physical Exam continued
  - Head
  - Neck
  - Thorax
  - Abdomen
  - Extremities
  - Genitalia

Factors that Affect the Assessment

- Influencing Factors
  - Age
  - Gender
  - Lifestyle
Some Common Diagnostic Testing

- Blood Glucose
  - Fasting, OGTT, CSBG,
- Urine Ketones
  - dipstick
- Thyroid Function Studies
  - TSH
- Basal Metabolic Rate (BMR)

Alterations in Endocrine Function

- Pituitary/Hypothalamus
- Thyroid
- Parathyroid
- Adrenal
- Pancreas
- Gonads

Nursing Diagnosis

- Activity Intolerance
- Body Image, disturbed
- Fatigue
- Risk for unstable blood glucose
**Nursing planning and interventions**

Blood glucose monitoring

Monitors
Calibration
Adequate drop of blood
Recording results

Hypoglycemia  Hyperglycemia

**Medications**

- Insulin
  - Rapid acting
  - Short acting
  - Intermediate acting
  - Long Acting