

Introduction to Clinical Pharmacology

Chapter 41

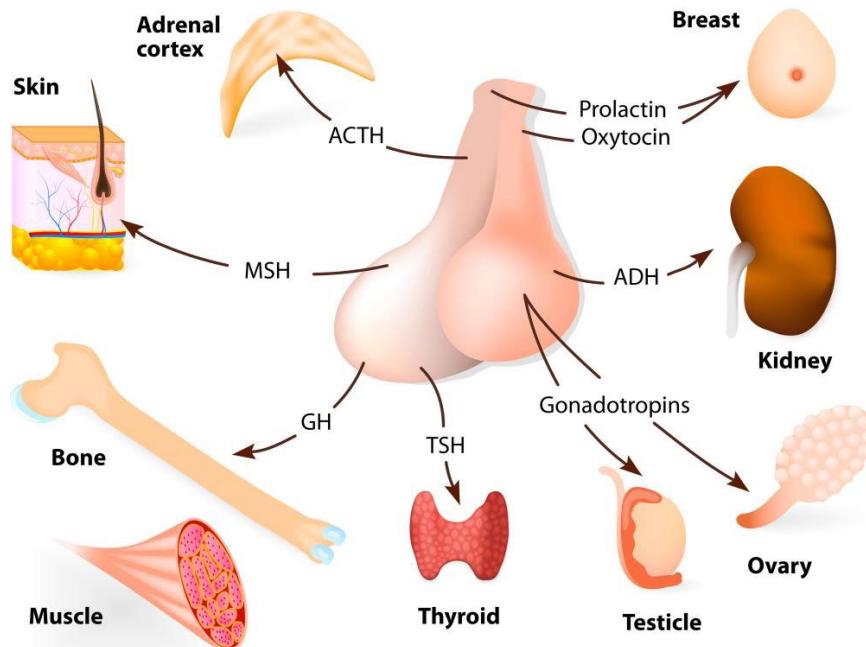
Pituitary and Adrenocortical Hormones

Learning Objectives

1. List the hormones produced by the pituitary gland and the adrenal cortex.
2. Explain general actions, uses, adverse reactions, contraindications, precautions, and interactions of the pituitary and adrenocortical hormones.
3. Distinguish important preadministration and ongoing assessment activities the nurse should perform with the client taking a pituitary or adrenocortical hormone.
4. List nursing diagnoses particular to a client taking a pituitary or adrenocortical hormone.
5. Examine ways to promote an optimal response to therapy, how to manage common adverse reactions, and important points to keep in mind when educating clients about the use of pituitary and adrenocortical hormone

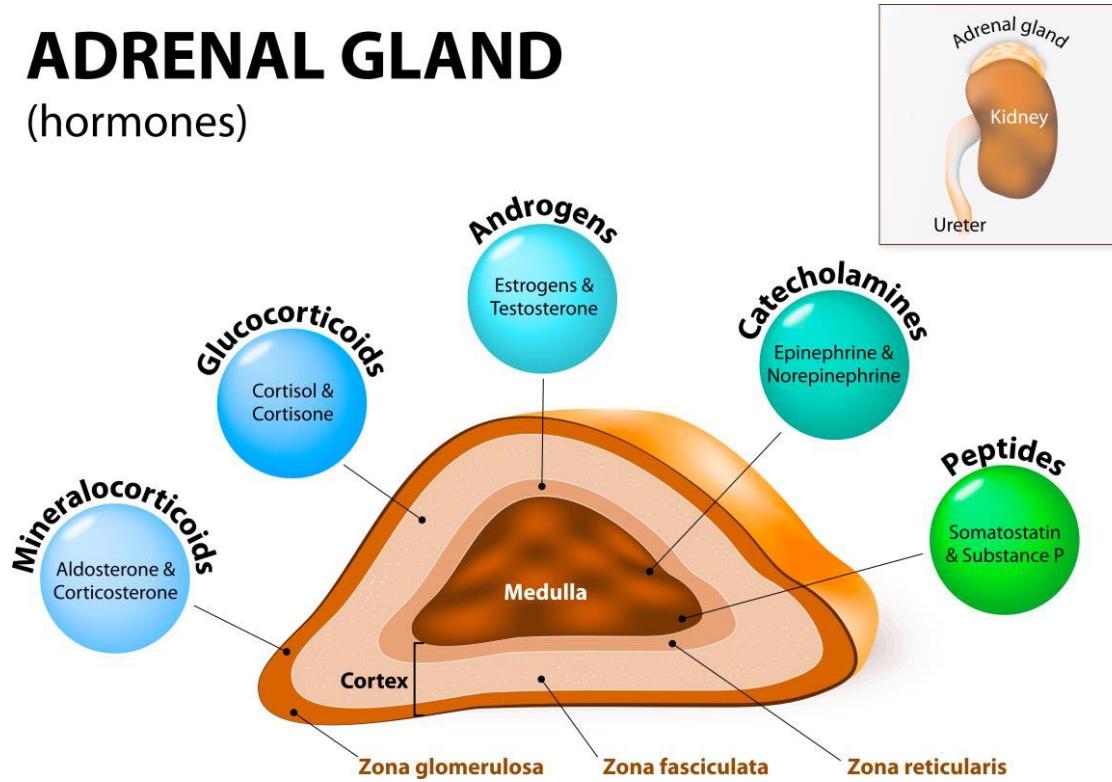
Pituitary Gland Hormones

PITUITARY GLAND



Adrenal Gland Hormones

ADRENAL GLAND (hormones)



Hormone Drug Classes Covered in This Lesson

❖ Posterior Pituitary Hormones

- Vasopressin

❖ Anterior Pituitary Hormones

- Gonadotropins
- Somatotropin
- Adrenocorticotrophic hormone

❖ Adrenocortical Hormones

- Glucocorticoids
- Mineralocorticoids

Vasopressin—Actions and Uses

- ❖ Actions: vasopressin and desmopressin regulate reabsorption of water by the kidneys; exhibits greatest activity on the renal tubular epithelium; promotes water resorption and smooth muscle contraction throughout the vascular bed; also has vasopressor activity
- ❖ Used to:
 - restore normal urination and thirst in clients with diabetes insipidus
 - prevent and treat postoperative abdominal distention
 - dispel gas interfering with abdominal roentgenography

Vasopressin—Adverse Reactions

❖ Common Adverse Reactions

- Tremor, sweating, vertigo
- Nasal congestion
- Nausea, vomiting, abdominal cramps
- Water intoxication

❖ Occasional Reaction

- Hypersensitivity



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Vasopressin—Contraindications and Precautions

❖ Contraindicated in clients:

- With hypersensitivity to the drug or any of the components of the drug
- With type 1 diabetes

❖ Used cautiously in clients with:

- History of seizures, migraine headaches, asthma, heart failure or vascular diseases, and perioperative polyuria
- Pregnancy (desmopressin acetate is a pregnancy category B drug)



Vasopressin–Interactions

Interacting Drug	Common Use	Effect of Interaction
Norepinephrine	Neurostimulant	Decreased antidiuretic effect
Lithium	Management of psychological problems	
Oral anticoagulants	Prevent blood clots	
Carbamazepine	Anticonvulsant	Increased antidiuretic effect
Chlorpropamide	Antidiabetic agent	

Nursing Process—Client Receiving Vasopressin #1

- ❖ Preadministration Assessment
- ❖ Objective Data
 - General client appearance, emphasis on signs of dehydration
 - Vital signs, weight, measurement of intake and output over a specified time period
 - Lab results: serum electrolytes, sodium
 - Urinalysis (sample and 24-hour specimen fluid deprivation study)
 - MRI of internal organs
 - If being administered for relief of abdominal distention, auscultate the abdomen, measure abdominal girth, and document findings

Nursing Process—Client Receiving Vasopressin #2

❖ Preadministration Assessment

- Subjective Data
 - Symptoms experienced by client regarding fluid intake/output
 - Family history of diabetes or other chronic health conditions



Nursing Process—Client Receiving Vasopressin #3

❖ Ongoing Assessment

- During hospitalization:
 - Monitor vital signs every 4 hours or as ordered by primary healthcare provider
 - Strict fluid intake and output assessment
 - After administration monitor client every 10 to 15 minutes for signs of excessive dosage (e.g., blanching of skin, abdominal cramps, nausea)



Nursing Process—Client Receiving Vasopressin #4

❖ Nursing Diagnosis

- Dehydration related to inability to replenish fluid intake secondary to diabetes insipidus
- Acute Pain related to abdominal distention

Nursing Process—Client Receiving Vasopressin #5

❖ Planning

- Expected client outcomes may include:
 - Optimal response to therapy
 - Support of client needs related to the management of adverse drug reactions
 - Confidence in an understanding of the prescribed medication regimen

Nursing Process—Client Receiving Vasopressin #6

❖ Implementation

- Promoting Optimal Response to Therapy
 - Vasopressin can be given IM, subcutaneously, or IV inpatient for diabetes insipidus
 - To prevent abdominal distention, give first dose 2 hours before x-ray and second dose 30 minutes before testing; enema may also be given prior to x-ray
 - Desmopressin may be given orally, intranasally, subcutaneously, or IV
 - Instruct client with chronic conditions on the proper self-administration of the drug; regulation of dose based on response; higher dose may be taken at night

Nursing Process—Client Receiving Vasopressin #7

❖ Implementation

- Monitoring and Managing Client Needs
 - Decrease adverse effects of drug by administering with one to two glasses of water
 - If adverse reactions occur, explain to client that the symptoms are not serious and will subside in minutes
 - Monitor for the signs of excessive dosage/water intoxication (drowsiness, listlessness, headache, confusion) and notify provider if signs are present



Nursing Process—Client Receiving Vasopressin #8

❖ Implementation

- Monitoring and Managing Client Needs
 - Dehydration:
 - Refill drinking containers frequently
 - Reassure the client that the drug will relieve the symptoms of excessive thirst and urination
 - Monitor fluid intake and output and for signs of dehydration
 - If hourly urine specific gravity and volume measurements are ordered, document the results in chart
 - Clients with diabetes insipidus should wear a medical alert band

Nursing Process—Client Receiving Vasopressin #9

❖ Implementation

- Monitoring and Managing Client Needs
 - Acute Pain:
 - If administering for abdominal distention, explain to the client the reason for administering, details of the problem, and monitoring
 - If rectal tube is ordered, lubricate tube and insert into rectum past the anal sphincter and taped in place; leave in place for 1 hour
 - Auscultate abdomen every 15 to 30 minutes
 - Measure abdominal girth hourly

Nursing Process—Client Receiving Vasopressin #10

❖ Implementation—Educating the Client and Family

- Provide client instruction on the administration of nasal desmopressin or self-administration of injection (rotate sites)
- Instruct client to adhere to the prescription and not change dose unless instructed by provider
- Teach the client and family to:
 - Wear medical identification bracelet
 - Have fluids and medication available at all times
 - Monitor fluids and avoid alcohol
 - Report any changes in fluid output or other adverse effects to provider

Nursing Process—Client Vasopressin

❖ Evaluation

- Was the therapeutic effect achieved?
- Were adverse reactions: identified, reported, and managed?
 - Fluid volume balance is maintained
 - Acute pain is relieved
- Did client and family express confidence and demonstrate understanding of drug regimen?

Gonadotropins: Follicle Stimulating Hormone and Luteinizing Hormone—Actions

- Actions:
 - Gonadotropins influence the secretion of sex hormones, the development of secondary sex characteristics, and the reproductive cycle in both men and women
 - Drugs are purified preparations of FSH and LH
 - Clomiphene and the gonadotropin-releasing hormone agonists are synthetic nonsteroidal compounds that bind to estrogen receptors, decreasing the amount of available estrogen receptors and cause the anterior pituitary to increase the secretion of FSH and LH

Gonadotropins: Follicle Stimulating Hormone and Luteinizing Hormone—Uses

- Gonadotropin drugs are used:
 - To induce ovulation and pregnancy in anovulatory women (clomiphene and the gonadotropin-releasing hormone agonists)
 - In assistive reproductive technology programs to stimulate multiple follicles for in vitro fertilization
 - To treat males with prepubertal cryptorchism and hypogonadotropic hypogonadism (HCG)
 - To induce sperm production (follistim AQ)

Gonadotropins: Follicle Stimulating Hormone and Luteinizing Hormone—Adverse Reactions #1

- Hormone-Associated Reactions:
 - Vasomotor flushes
 - Breast tenderness
 - Abdominal discomfort, ovarian enlargement
 - Hemoperitoneum



Gonadotropins: Follicle Stimulating Hormone and Luteinizing Hormone—Adverse Reactions #2

- Generalized Reactions:
 - Nausea, vomiting
 - Headache, irritability, restlessness, fatigue
 - Edema and irritation at the injection site



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Gonadotropins: Follicle Stimulating Hormone and Luteinizing Hormone—Contraindications

- Contraindicated in clients:
 - Who are hypersensitive to the drug or any drug components
 - Who are pregnant (pregnancy category X)
 - With high gonadotropin levels, thyroid dysfunction, adrenal dysfunction, liver disease, abnormal bleeding ovarian cysts, sex hormone-dependent tumors, or an organic intracranial lesion



Gonadotropins: Follicle Stimulating Hormone and Luteinizing Hormone— Precautions and Interactions

- Gonadotropins are used cautiously in clients with:
 - Epilepsy
 - Migraine headaches
 - Asthma
 - Cardiac or renal dysfunction
 - During lactation
- Interactions: No known clinically significant interactions



Pharmacology in Practice Exercise #1

- ❖ A nurse is caring for a client who is taking ganirelix for ovulation induction? When are these injections given to the client?
- a) When pregnancy is established to prevent miscarriage
 - b) 2 weeks postpartum
 - c) Before pregnancy to stimulate ovulation
 - d) If pregnancy attempts are unsuccessful in women with thyroid disease



Nursing Process—Client Receiving a Gonadotropin #1

❖ Preadministration Assessment

- **Objective Data**

- General client appearance
- Vital signs
- Weight
- Diagnostic testing for ovarian function and tubal patency
- Pelvic examination to rule out ovarian enlargement, pregnancy, or uterine problems



Nursing Process—Client Receiving a Gonadotropin #2

❖ Preadministration Assessment

- Subjective Data
 - Symptoms experienced by client
 - Medical and family history

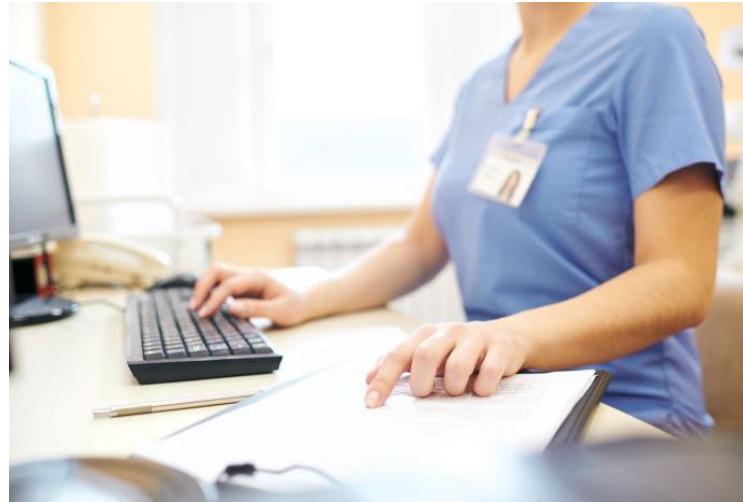


Nursing Process—Client Receiving a Gonadotropin

#3

❖ Ongoing Assessment

- At the time of each office visit:
 - Ask the client about the occurrence of adverse reactions
 - Document the client's vital signs and weight



Nursing Process—Client Receiving a Gonadotropin

#4

❖ Nursing Diagnosis

- Acute Pain related to adverse reactions (ovarian enlargement, irritation at injection site)
- Anxiety related to inability to conceive, treatment outcome, other factors

Nursing Process—Client Receiving a Gonadotropin

#5

❖ Planning

- Expected client outcomes may include:
 - Optimal response to therapy
 - Support of client needs related to the management of adverse drug reactions
 - Reduction in anxiety
 - Confidence in an understanding of the prescribed medication regimen

Nursing Process—Client Receiving a Gonadotropin

#6

❖ Implementation

- Promoting Optimal Response to Therapy
 - Cannot be given orally
 - Injections can be given at the provider's office or self-administered
 - Injection sites are rotated and previous sites checked for redness and irritation
 - Monitor client for visual disturbances; ophthalmology consult may be indicated



Nursing Process—Client Receiving a Gonadotropin

#7

❖ Implementation

- Monitoring and Managing Client Needs
 - Acute Pain:
 - Assess for signs of excessive ovarian enlargement/ hyperstimulation syndrome (abdominal pain, distention, pain, ascites)
 - Discontinue drug if signs are present
 - Hospital admission may be necessary
 - Anxiety:
 - Allow the client time to talk about her concerns and the proposed treatment program

Nursing Process—Client Receiving a Gonadotropin

#8

❖ Implementation—Educating the Client and Family

- Evaluate the client's understanding of the primary healthcare provider's directions regarding sexual activity
- Provide instruction to the client on how to inject the drug
- Encourage the client to keep all appointments with the provider
- Teach client about adverse reactions and when to contact the provider



Nursing Process—Client Receiving a Gonadotropin

#9

❖ Implementation—Educating the Client and Family

- Hormonal Ovarian Stimulants
 - Before therapy, explain to the client the risk of multiple births and birth defects
 - Teach client to use a calendar to track ovulation and treatment schedule
 - Instruct client to report bloating, abdominal pain, flushing, breast tenderness, and pain at the injection site



Nursing Process—Client Receiving a Gonadotropin

#10

- ❖ **Implementation—Educating the Client and Family**
- Nonhormonal Ovarian Stimulants
 - Instruct the client to take the drug exactly as prescribed for 5 days
 - Instruct client to report bloating, stomach or pelvis pain, jaundice, blurred vision, hot flashes, breast discomfort, headache, nausea, or vomiting
 - Tell client that if therapy is not successful after three courses the drug is discontinued

Nursing Process—Client Receiving a Gonadotropin

#11

❖ Evaluation

- Was the therapeutic effect achieved?
- Were adverse reactions: identified, reported, and managed?
 - Client is free of pain
 - Anxiety is managed successfully
- Did client express confidence and demonstrate understanding of drug regimen?

Growth Hormone—Actions, Uses, and Adverse Reactions

- Actions: secreted by the anterior pituitary; regulates growth of individual
- Synthetic product somatropin is used before closure of the child's bone epiphyses to children who have not grown due to a deficiency of pituitary GH
- Adverse reactions:
 - Antibodies to somatropin and lack of response to therapy, hypothyroidism, insulin resistance, swelling, joint pain, muscle pain



Pharmacology in Practice Exercise #2

- ❖ Which of the hormones is responsible for growth of the body during childhood, especially the growth of muscles and bones?
 - a) Vasopressin
 - b) Somatotropin
 - c) Gonadotropin
 - d) ACTH



Growth Hormone—Contraindications and Precautions

- Somatotropin is contraindicated in clients with:
 - Known hypersensitivity to somatotropin
 - Sensitivity to benzyl alcohol
 - A closed epiphyseal plate
 - Underlying cranial lesions
- Somatotropin is used cautiously in clients with:
 - Thyroid disease
 - Diabetes
 - Pregnancy (pregnancy category C)
 - Lactation



Growth Hormone–Interactions

Interacting Drug	Common Use	Effect of Interaction
Large amounts of glucocorticoids	Anti-inflammatory and other various uses	Decrease the response to somatotropin

Nursing Process—Client Receiving Growth Hormone #1

- ❖ **Preadministration Assessment**
- ❖ Thorough physical examination, lab, and diagnostic tests performed before a child is accepted into a GH program
- **Objective Data**
 - General client appearance, emphasis on area involved
 - Height and weight
- **Subjective Data**
 - Medical and family history



Nursing Process—Client Receiving Growth Hormone #2

❖ Ongoing Assessment

- Each time the child visits the primary healthcare provider's office or clinic (every 3 to 6 months):
 - Measure and document the child's height and weight
- Periodically measure bone age for growth
 - Once epiphyseal plate closes, therapy must stop



Nursing Process—Client Receiving Growth Hormone

#3

❖ Nursing Diagnosis

- Disturbed Body Image related to changes in appearance, physical size, or failure to grow

Nursing Process—Client Receiving Growth Hormone

#4

❖ Planning

- Expected client outcomes may include:
 - Optimal response to therapy
 - Support of client needs related to the management of adverse drug reactions
 - Confidence in an understanding of the prescribed medication regimen

Nursing Process—Client Receiving Growth Hormone

#5

❖ Implementation

- Promoting Optimal Response to Therapy
 - Swirl to mix solution in vial; do not shake
 - Do not give the solution if it is cloudy
 - Administer subcutaneously three to seven doses throughout the week at bedtime
 - Periodically test GH levels, glucose tolerance, and thyroid function



Nursing Process—Client Receiving Growth Hormone #6

❖ Implementation

- Monitoring and Managing Client Needs
 - Disturbed Body Image:
 - Monitor how child and family are responding to the effects of the drug
 - Provide child and family opportunity to share fears, concerns, or anger
 - Discuss any misconceptions the child or family may have about treatment



Nursing Process—Client Receiving Growth Hormone #7

❖ Implementation—Educating the Client and Family

- Instruct the parents on the proper injection technique
- Explain the importance of keeping all clinic appointments or office visits
- Explain that the child may experience sudden growth and increased appetite
- Instruct parents to report to provider lack of growth, symptoms of diabetes, or symptoms of hypothyroidism



Nursing Process—Client Receiving Growth Hormone

#8

❖ Evaluation

- Was the therapeutic effect achieved and did the child grow in height?
- Were adverse reactions: identified, reported, and managed?
 - Positive body image is maintained
- Did client and family express confidence and demonstrate understanding of drug regimen?

Adrenocortical Hormones, Corticotropin, and Glucocorticoids

- Adrenocortical hormones (ACTH): anterior pituitary hormone that stimulates the adrenal cortex to produce adrenocortical hormones, primarily glucocorticoids
- Corticotropin is used for diagnostic testing of adrenocortical function
- Glucocorticoids and mineralocorticoids:
 - Essential to life and influence many organs and structures of the body
 - Collectively called corticosteroids

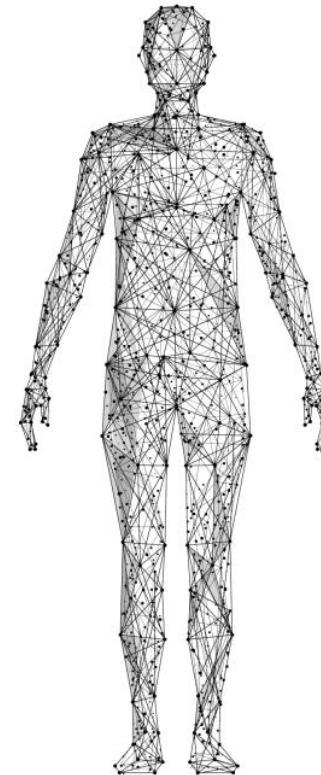
Glucocorticoids—Actions and Uses

- Action: enter target cells and bind to receptors, initiating complex reactions in the body (immune response, glucose, fat and protein metabolism, anti-inflammatory)
- Used to treat:
 - Adrenocortical insufficiency
 - Allergic reactions
 - Collagen diseases
 - Dermatologic condition
 - Rheumatic disorders
 - Shock
 - Multiple other conditions

Glucocorticoids—Adverse Reactions #1

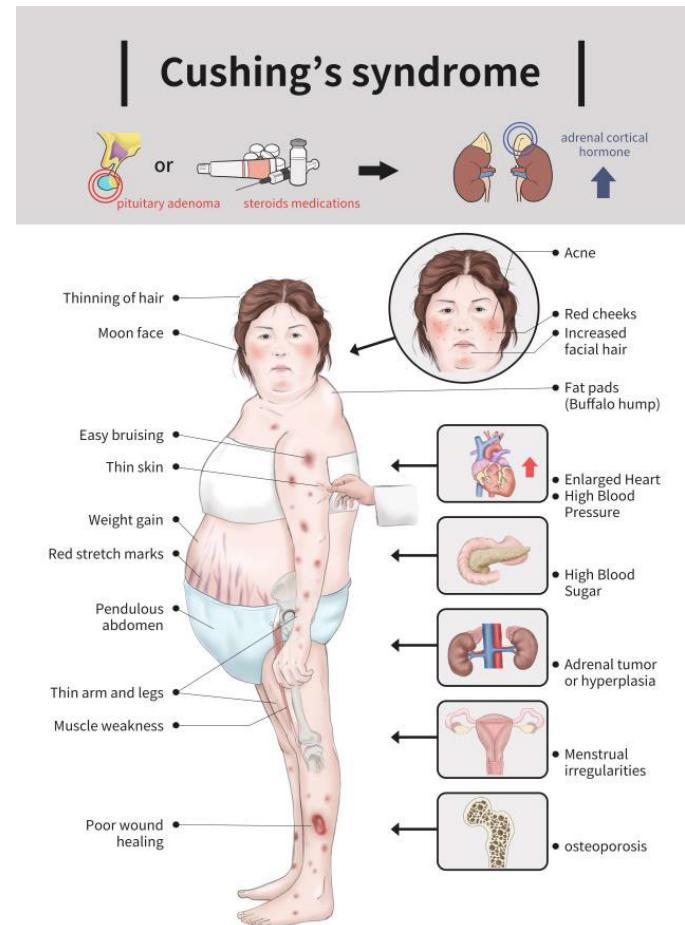
- Adverse Reactions in the following systems:

- Fluid and electrolyte disturbances
- Musculoskeletal
- Cardiovascular
- Gastrointestinal
- Dermatologic
- Neurologic
- Endocrine
- Ophthalmic
- Metabolic



Glucocorticoids—Adverse Reactions #2

- Adverse Reactions in long- or short-term high-dose therapy:
 - Cushingoid signs and symptoms
 - Buffalo hump
 - Moon face
 - Oily skin, acne
 - Osteoporosis
 - Purple striae on abdomen and hips
 - Altered skin pigmentation
 - Weight gain



Glucocorticoids—Contraindications and Precautions

- Contraindicated in clients:
 - With serious infections like tuberculosis, fungal and antibiotic-resistant infections
- Use cautiously in clients with:
 - renal or hepatic disease, hypothyroidism, ulcerative colitis, diverticulitis, peptic ulcer disease, inflammatory bowel disease, hypertension, osteoporosis, convulsive disorders, and diabetes
 - Pregnancy (pregnancy category C)
 - Lactation



Glucocorticoids—Interactions

Interacting Drug	Common Use	Effect of Interaction
Vaccines with live virus	Prevention of disease	Increase adverse reactions to the vaccine, decrease in antibody response to the vaccine
Oral contraceptives	Birth control	Effect of corticosteroids may be decreased
Potassium-depleting diuretics	Heart failure	Hypokalemia can occur
Multiple drug interactions exist with glucocorticoids		

Mineralocorticoids—Actions and Uses

- Action: play an important role in conserving sodium and decreasing potassium excretion; help maintain salt and water balance in the body
- Used to treat:
 - Primary and secondary adrenocorticosteroid deficiency



Mineralocorticoids—Adverse Reactions

- Adverse Reactions with fludrocortisone:
 - Edema, hypertension, HF, enlargement of the heart
 - Increased sweating, allergic skin rash
 - Hypokalemia, muscular weakness, headache, hypersensitivity reactions



Mineralocorticoids—Contraindications and Precautions

- Fludrocortisone is contraindicated in clients with:
 - Hypersensitivity to fludrocortisone
 - Systemic fungal infections
- Fludrocortisone is used cautiously in clients with:
 - Addison disease
 - Infection
 - Pregnancy (pregnancy category C)
 - Lactation



Mineralocorticoids—Interactions

Interacting Drug	Common Use	Effect of Interaction
Salicylates	Pain, anti-inflammatory, antipyretic	Decrease in serum level of salicylates when administered with fludrocortisone
Hydantoins	Anticonvulsant	Decrease in the effects of hydantoin
Rifampin	Antitubercular	Decrease in the effects of rifampin

Nursing Process—Client Receiving a Glucocorticoid or Mineralocorticoid #1

- ❖ Preadministration Assessment
- ❖ Depend on the client's condition and diagnosis
- Objective Data
 - General client appearance, emphasis on area involved
 - Vital signs
 - Weight
 - Lab tests: serum electrolytes and complete blood count
 - Urinalysis
 - X-rays (chest or upper GI)



Nursing Process—Client Receiving a Glucocorticoid or Mineralocorticoid #2

- ❖ **Preadministration Assessment (continued)**
- **Subjective Data**
 - Symptoms experienced by client
 - Family history of other health conditions

Nursing Process—Client Receiving a Glucocorticoid or Mineralocorticoid #3

- ❖ **Ongoing Assessment**
- ❖ The assessment and frequency of assessment will vary depending on the disease being treated.
 - Continuous monitoring of vital signs or every 4 to 8 hours
 - Weight daily to weekly
 - Monitor for signs of adverse effects, signs of infection, and changes in mental status
 - The client without diabetes should get weekly blood glucose testing; with diabetes monitored more frequently

Nursing Process—Client Receiving a Glucocorticoid or Mineralocorticoid #4

❖ Nursing Diagnosis

- Infection Risk related to immune suppression or impaired wound healing
- Acute Confusion related to adverse drug reactions
- Injury Risk related to muscle atrophy, osteoporosis, or spontaneous fractures
- Acute Pain related to epigastric distress of gastric ulcer formation
- Fluid Overload related to adverse reactions (sodium and water retention)
- Disturbed Body Image related to adverse reactions (cushingoid appearance)

Nursing Process—Client Receiving a Glucocorticoid or Mineralocorticoid #5

❖ Planning

- Expected client outcomes may include:
 - Optimal response to therapy
 - Support of client needs related to the management of adverse drug reactions
 - Confidence in an understanding of the prescribed medication regimen

Nursing Process—Client Receiving a Glucocorticoid or Mineralocorticoid #6

❖ Implementation

- Promoting Optimal Response to Therapy
 - The drug dosage is individualized and based on the severity or the condition and the client's response
 - Never omit a dose of a glucocorticoid; contact the provider if the client cannot take the drug due to nausea and vomiting
 - Daily doses should be given before 9 am to minimize adrenal suppression and coincide with normal adrenal function
 - Monitor older adults for exacerbations of existing conditions

Nursing Process—Client Receiving a Glucocorticoid or Mineralocorticoid #7

❖ Implementation

- Promoting Optimal Response to Therapy (continued)
 - Alternate-day therapy: used in treating diseases and disorders requiring long-term therapy; purpose is to provide the client with beneficial effects of the drug while minimizing adverse reactions
 - Diabetic client: monitor blood glucose levels several times daily or as prescribed by the primary healthcare provider



Nursing Process—Client Receiving a Glucocorticoid or Mineralocorticoid #8

❖ Implementation

- Promoting Optimal Response to Therapy (continued)
 - Adrenal insufficiency: critical deficiency of mineralocorticoids and glucocorticoids can occur with the administration of glucocorticoids; glucocorticoid therapy should never be discontinued suddenly and should be tapered over several days



Nursing Process—Client Receiving a Glucocorticoid or Mineralocorticoid #9

❖ Implementation

- Monitoring and Managing Client Needs
 - **Infection Risk:** report slight rise in temperature, sore throat, other signs of infection; anyone with an infection or recent exposure to infection should avoid contact with client
 - **Acute Confusion:** report any evidence of behavior change; provide a quiet nonthreatening environment

Nursing Process—Client Receiving a Glucocorticoid or Mineralocorticoid #10

❖ Implementation

- Monitoring and Managing Client Needs
 - **Injury Risk:** monitor for signs of compression fractures of the vertebrae and pathologic fractures of the long bones; fall prevention protocols; handle edematous extremities with care
 - **Fluid Overload:** monitor for edema; elevate edematous extremities; change client's position frequently; notify provider of signs of electrolyte imbalance; dietary adjustments and referral

Nursing Process—Client Receiving a Glucocorticoid or Mineralocorticoid #11

❖ Implementation

- Monitoring and Managing Client Needs
 - **Disturbed Body Image:** assess the client's emotional state and help the client express feelings of concern; offer positive reinforcement; explain the reason for cushingoid appearance and how to clean and cover acne



Pharmacology in Practice Exercise #3

A client with acute shortness of breath is prescribed dexamethasone. Which of the following adverse reactions should the nurse monitor for in the client? Select all that apply.

- a) Nasal congestion
- b) Acneiform eruptions
- c) Increased sweating
- d) Perineal itch
- e) Abdominal cramps



Nursing Process—Client Receiving a Glucocorticoid or Mineralocorticoid #12

❖ Implementation—Educating the Client and Family

- Explain to the client:
 - Drugs may cause GI upset; take the oral drugs with meals or snacks
 - Take antacids between meals to help prevent peptic ulcer
 - Carry or wear medical identification
 - Keep all follow-up appointments



Nursing Process—Client Receiving a Glucocorticoid or Mineralocorticoid #13

❖ Implementation—Educating the Client and Family

- Explain the importance of taking the drug as directed.
- Teach the client the correct administration, effects of the drug, adverse effects, and when to call the provider for the specific drug the client is taking or was administered to them:
 - Short-term glucocorticoid therapy
 - Alternate-day oral glucocorticoid therapy
 - Long-term or high-dose glucocorticoid therapy
 - Intra-articular or intralesional administration; mineralocorticoid (fludrocortisone) therapy

Nursing Process—Client Receiving a Glucocorticoid or Mineralocorticoid #14

❖ Evaluation

- Was the therapeutic effect achieved?
- Were adverse reactions: identified, reported, and managed?
 - No evidence of infection is seen
 - Orientation and mentation remain intact
 - No evidence of injury is seen
 - Client is free of pain
 - Fluid volume balance is maintained
 - Positive body image is maintained
- Did client express confidence and demonstrate understanding of drug regimen?

Turn and Talk—Case Study #1

A client concerned they may have type 1 diabetes, presents to the physician's office with complaints of frequent urination and increased thirst. After a thorough examination and MRI scan, the physician diagnoses the client with diabetes insipidus.

1. The physician prescribes intranasal desmopressin (DDAVP) to the client. How should the nurse instruct the client to use the intranasal spray?
2. What adverse effects should the nurse discuss with the client?



Turn and Talk—Case Study #2

A client concerned they may have type 1 diabetes, presents to the physician's office with complaints of frequent urination and increased thirst. After a thorough examination and MRI scan, the physician diagnoses the client with diabetes insipidus.

3. Excessive doses of desmopressin can lead to water intoxication. What are the symptoms of water intoxication, and what should the client do if these symptoms occur?

