NANDROLONE DECANOATE

PRODUCT OVERVIEW

Specification	Details
Generic Name	Nandrolone Decanoate
Drug Class	Anabolic Androgenic Steroid (AAS)
Active Ingredient	Nandrolone Decanoate
Chemical Formula	$C_{28}H_{44}O_3$
Molecular Weight	428.65 g/mol
CAS Number	360-70-3
Administration Route	Intramuscular Injection
Ester Type	Long-Acting Nandrolone Ester
Approximate Half-Life	Approximately 6–12 Days
Release Profile	Slow and Extended Release
Bioavailability	High After Intramuscular Administration
Primary Medical Use	Treatment of selected anemia disorders, osteoporosis, and conditions associated with protein catabolism under medical supervision

INTRODUCTION

Nandrolone Decanoate is a long-acting esterified form of nandrolone developed to provide prolonged release following intramuscular administration.Nandrolone is a synthetic anabolic androgenic steroid structurally related to testosterone but characterized by the absence of a carbon atom at the 19th position, resulting in the designation 19-nortestosterone.The decanoate ester increases the lipophilicity of nandrolone, producing slower absorption from the injection site and sustained hormone availability over an extended period.Compared with shorter nandrolone esters, Nandrolone Decanoate provides prolonged pharmacokinetic activity with gradual release into systemic circulation.Its unique anabolic-to-androgenic profile has made Nandrolone Decanoate one of the most extensively studied anabolic steroid compounds in clinical medicine and pharmaceutical research.

HISTORY

The discovery of nandrolone represented an important advancement in anabolic steroid research during the mid-twentieth century.

Scientists developed nandrolone by modifying the testosterone molecule through removal of the carbon atom at the 19th position, creating a compound with distinct anabolic and androgenic characteristics.

Subsequent esterification with decanoic acid produced Nandrolone Decanoate, allowing prolonged therapeutic activity following intramuscular administration.

Nandrolone Decanoate has been investigated for multiple medical applications involving protein metabolism, bone physiology, and red blood cell production.

Scientific investigation of nandrolone contributed significantly to advances in:

* Anabolic steroid pharmacology
* Protein metabolism
* Bone physiology
* Clinical endocrinology

CHEMICAL STRUCTURE

Nandrolone Decanoate consists of the nandrolone molecule esterified with decanoic acid at the 17-beta hydroxyl position.

The esterification process modifies pharmacokinetic behavior without altering the biological activity of nandrolone after enzymatic hydrolysis.

The decanoate ester primarily influences:
* Absorption rate
* Release duration
* Plasma availability
* Pharmacokinetic characteristics

Following enzymatic cleavage of the ester bond, free nandrolone becomes biologically active and interacts with androgen receptors in multiple tissues.

CHEMICAL PROFILE

Parameter	Information
Chemical Name	Nandrolone Decanoate
Molecular Formula	$C_{28}H_{44}O_3$
Molecular Weight	428.65 g/mol
CAS Number	360-70-3
Hormone Classification	Androgen
Ester Group	Decanoate
Active Hormone	Nandrolone

PHARMACOLOGY

Following intramuscular administration, Nandrolone Decanoate forms a long-lasting depot within muscle tissue.

The decanoate ester undergoes gradual enzymatic hydrolysis, releasing free nandrolone into systemic circulation over an extended period.

Once released, nandrolone interacts with androgen receptors located throughout numerous tissues including:

* Skeletal muscle
* Bone
* Bone marrow
* Connective tissue
* Skin
* Liver
* Reproductive tissues

Nandrolone also undergoes metabolic conversion into biologically active metabolites.

Conversion Pathway	Enzyme	Product
Nandrolone → DHN	5-alpha reductase	Dihydronandrolone
Nandrolone → Estradiol	Aromatase	Estradiol (Low Rate)

MECHANISM OF ACTION

Nandrolone produces its biological effects primarily through activation of intracellular androgen receptors.

The biological process includes:
* Nandrolone enters target cells.
* Nandrolone binds to androgen receptors.
* The receptor-hormone complex becomes activated.
* The activated complex translocates into the cell nucleus.
* Interaction with androgen response elements occurs on DNA.
* Gene transcription is regulated.
* Cellular protein synthesis and tissue-specific physiological responses are influenced.

Activation of androgen receptors contributes to:
* Protein synthesis
* Nitrogen retention
* Muscle tissue maintenance
* Bone remodeling
* Red blood cell production
* Connective tissue physiology
* Endocrine regulation

PHARMACODYNAMICS

Nandrolone Decanoate affects multiple physiological systems through androgen receptor signaling.

SKELETAL MUSCLE SYSTEM

Nandrolone contributes to normal muscle physiology through:

* Regulation of protein synthesis
* Support of muscle tissue maintenance
* Influence on nitrogen retention
* Regulation of muscle cell function

Androgen receptor activation plays an important role in maintaining skeletal muscle structure and physiological function.

SKELETAL SYSTEM

Nandrolone contributes to skeletal health by influencing:

* Bone mineral density
* Bone remodeling processes
* Osteoblast activity
* Skeletal maintenance

Nandrolone has been extensively investigated for its effects on bone metabolism and connective tissue physiology.

HEMATOLOGICAL SYSTEM

Nandrolone influences erythropoiesis, the physiological process responsible for red blood cell production.

Physiological effects include:

* Regulation of erythropoietin activity
* Support of red blood cell formation
* Influence on oxygen transport capacity

CONNECTIVE TISSUE

Nandrolone contributes to connective tissue physiology by influencing:

* Collagen synthesis
* Connective tissue maintenance
* Structural protein metabolism
* Tissue remodeling

REPRODUCTIVE SYSTEM

Nandrolone interacts with androgen-sensitive tissues and contributes to:

* Hormonal regulation
* Maintenance of androgen-responsive tissues
* Endocrine signaling
* Reproductive physiology

PHARMACOKINETICS

Following intramuscular administration, Nandrolone Decanoate forms a long-lasting depot within muscle tissue.

The decanoate ester undergoes gradual enzymatic hydrolysis, releasing free nandrolone into systemic circulation over an extended period.

Compared with shorter nandrolone esters, Nandrolone Decanoate provides prolonged hormone availability and sustained pharmacokinetic activity.

PHARMACOKINETIC PROFILE

Parameter	Description
Ester Type	**Long-Acting Nandrolone Ester**
Absorption	**Slow release from intramuscular depot**
Release Pattern	**Extended and controlled release**
Half-Life	**Approximately 6–12 Days**
Duration of Activity	**Long-Acting**
Plasma Stability	**Sustained nandrolone availability**
Protein Binding	**High**
Metabolism	**Primarily hepatic**
Active Hormone	**Nandrolone**
Elimination	**Urinary excretion of metabolites**

PHYSIOLOGICAL EFFECTS

Normal nandrolone activity contributes to:

Muscle Function
* Protein synthesis
* Nitrogen retention
* Maintenance of lean body tissue
* Muscle physiology

Bone Health
* Bone remodeling
* Mineral density maintenance
* Skeletal integrity

Connective Tissue
* Collagen synthesis
* Connective tissue maintenance
* Structural support

Hematological Function
* Red blood cell production
* Oxygen transport support
* Normal erythropoiesis

General Physiology
* Protein metabolism
* Hormonal regulation
* Endocrine function

CLINICAL APPLICATIONS

Nandrolone Decanoate may be used under medical supervision for selected medical conditions when clinically indicated.

Clinical evaluation may include:
* Medical history
* Physical examination
* Laboratory assessment
* Individual therapeutic evaluation

Potential medical applications include:
* Selected anemia disorders
* Osteoporosis
* Conditions associated with protein catabolism
* Selected chronic disease management

SAFETY CONSIDERATIONS

Nandrolone therapy requires individualized medical evaluation and regular monitoring.

Important considerations include:

* Cardiovascular health
* Blood parameters
* Endocrine function
* Liver and kidney function
* Lipid profile
* Individual therapeutic response

POTENTIAL ADVERSE EFFECTS

Possible adverse effects may include:

Endocrine Effects
* Suppression of endogenous testosterone production
* Hormonal imbalance
* Alterations in endocrine function

Dermatological Effects
* Acne
* Increased skin oil production
* Hair loss in genetically predisposed individuals

Cardiovascular Effects
* Changes in lipid profile
* Increased hematocrit
* Fluid retention

Reproductive Effects
* Reduced fertility
* Suppression of spermatogenesis
* Hormonal suppression

CONTRAINDICATIONS

Condition	Reason
Prostate Cancer	**Potential androgen sensitivity**
Male Breast Cancer	**Hormone-sensitive condition**
Pregnancy	**Risk of fetal virilization**
Severe Untreated Medical Conditions	**Requires medical evaluation**
Known Hypersensitivity	**Risk of allergic reaction**

DRUG INTERACTIONS

Potential interactions may occur with:

Anticoagulants
Nandrolone may influence anticoagulant response and require monitoring.

Antidiabetic Medications
Changes in glucose metabolism may alter therapeutic requirements.

Corticosteroids
Combined administration may increase fluid retention.

Other Hormonal Therapies
Combined hormonal therapy requires professional medical supervision.

LABORATORY MONITORING

Laboratory Test	Purpose
CBC	Assess blood parameters
Hematocrit	Monitor red blood cell concentration
Hemoglobin	Evaluate erythropoiesis
Liver Function Tests	Assess hepatic health
Kidney Function Tests	Evaluate renal function
Lipid Profile	Monitor cardiovascular risk markers
Total Testosterone	Evaluate endocrine status
Estradiol (E2)	Assess estrogen balance
PSA (When Appropriate)	Monitor prostate health

STORAGE & STABILITY

* Store according to official product labeling.
* Protect from excessive heat and direct sunlight.
* Do not freeze.
* Maintain original packaging integrity.
* Keep away from children.
* Inspect packaging before use.

PRODUCT AUTHENTICITY

Every genuine NEXON product should include appropriate quality verification features.

Authentication may include:

* Batch number tracking
* Manufacturing information
* Expiration date verification
* QR authentication system
* Authorized distribution verification

NEXON emphasizes transparency, traceability, and product quality control.

FREQUENTLY ASKED QUESTIONS

What is Nandrolone Decanoate?
Nandrolone Decanoate is a long-acting esterified form of nandrolone designed to provide sustained hormone release following intramuscular administration.

How is Nandrolone Decanoate different from Nandrolone Phenylpropionate?
Nandrolone Decanoate provides a slower release profile and longer duration of activity, whereas Nandrolone Phenylpropionate produces a faster onset with a shorter duration.

What is the active hormone released after ester hydrolysis?
After enzymatic cleavage, the active hormone released is nandrolone (19-nortestosterone).

Why are nandrolone esters used?
Esterification modifies the pharmacokinetic profile of nandrolone by controlling hormone release and extending biological activity.

Is Nandrolone Decanoate identical to testosterone?
No. Nandrolone is a structurally modified androgen derived from testosterone by removal of the carbon atom at the 19th position, resulting in distinct pharmacological properties.

NEXON QUALITY COMMITMENT

NEXON is committed to maintaining the highest standards of manufacturing quality, product consistency, traceability, and scientific integrity.

Through advanced quality control systems, authentication technologies, and evidence-based pharmaceutical development, NEXON strives to provide reliable products supported by scientific transparency and regulatory standards.

SCIENTIFIC REFERENCES

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