NANDROLONE CYPIONATE

LONG ACTING NANDROLONE ESTER

200 mg mL

INTRAMUSCULAR INJECTION

PRODUCT OVERVIEW

Specification	Details
Generic Name	Nandrolone Cypionate
Drug Class	Anabolic-Androgenic Steroid / Androgen Ester
Active Ingredient	Nandrolone Cypionate
Administration Route	Intramuscular Injection
Dosage Form	Oil-Based Injectable Solution
Chemical Class	19-Norandrostane Ester
Primary Target	Androgen Receptor
Clinical Status	Historical / Jurisdiction Dependent

INTRODUCTION

Nandrolone cypionate is an esterified anabolic-androgenic steroid derived from nandrolone, also known as 19-nortestosterone. The cypionate ester increases lipid solubility and supports sustained release after intramuscular administration.

After release from an oil-based depot, esterases hydrolyze the molecule to active nandrolone. The ester primarily modifies absorption and duration, while nandrolone produces the principal androgen-receptor-mediated effects.

HISTORY

Nandrolone was synthesized during twentieth-century research into anabolic-androgenic steroids. Esterification at the 17β-hydroxyl group was used to create injectable preparations with different depot-release characteristics.

Nandrolone cypionate, also called nandrolone cipionate, was developed as a longer-acting nandrolone ester and has appeared historically under several trade names in selected markets.

Historical use does not establish a current universal approval. Present availability, indications, legal classification, and regulatory status depend on the jurisdiction and the exact manufactured product.

CHEMICAL STRUCTURE

Nandrolone cypionate is the 17β cyclopentylpropionate ester of nandrolone. Its molecular formula is $C_{26}H_{38}O_3$ and its approximate molar mass is 398.6 g/mol.

The cypionate group increases lipid solubility and supports prolonged depot release. Following ester hydrolysis, the active hormone released is nandrolone.

- 19-Nortestosterone steroid nucleus
- 17β cypionate ester
- Oil-soluble injectable derivative
- Hydrolysis to active nandrolone
- Prolonged depot-release characteristics

CHEMICAL PROFILE

Parameter	Information
Parent Hormone	Nandrolone / 19-Nortestosterone
Ester	Cypionate / Cyclopentylpropionate
Molecular Formula	C26H38O3
Molar Mass	Approximately 398.6 g/mol
Administration	Intramuscular Injection
Dosage Form	Oil-Based Injectable Solution
Primary Receptor Target	Androgen Receptor
Labeled Concentration	200 mg/mL
Clinical Status	Historical / Jurisdiction Dependent

PHARMACOLOGY

Nandrolone cypionate functions as a depot prodrug of nandrolone. Following intramuscular injection, the esterified compound is released gradually from the oil vehicle and hydrolyzed by esterases.

Active nandrolone enters target cells and binds to intracellular androgen receptors. The hormone-receptor complex influences transcription involved in protein metabolism, nitrogen balance, skeletal muscle, bone tissue, erythropoiesis, and reproductive physiology.

Nandrolone Cypionate → Depot Release and Ester Hydrolysis → Active Nandrolone → Androgen-Receptor Activation → Androgen-Responsive Gene Expression

Nandrolone may undergo tissue-specific 5α-reduction to dihydronandrolone and limited aromatization to estrogenic metabolites.

MECHANISM OF ACTION

The primary mechanism involves:

- Gradual release from the intramuscular oil depot
- Enzymatic cleavage of the cypionate ester
- Binding of nandrolone to intracellular androgen receptors
- Regulation of androgen-responsive gene transcription

- Tissue-specific conversion to dihydronandrolone
- Potential formation of estrogenic metabolites
- Modulation of protein, nitrogen, bone, and hematological physiology

The ester modifies exposure over time but does not change the identity of the active parent hormone.

PHARMACODYNAMICS

- Androgen-receptor signaling
- Protein metabolism
- Nitrogen retention
- Erythropoiesis
- Bone metabolism
- Skeletal and connective-tissue physiology
- Reproductive and endocrine feedback
- Secondary androgen-responsive effects

SKELETAL MUSCLE SYSTEM

Nandrolone interacts with androgen receptors in skeletal muscle and may influence:

- Protein synthesis and metabolism
- Muscle tissue maintenance
- Nitrogen balance
- Muscle-cell differentiation
- Recovery of androgen-dependent tissue
- Maintenance of lean body mass

Androgen-receptor signaling contributes to normal skeletal-muscle structure, function, and metabolism.

SKELETAL SYSTEM

Androgen-receptor signaling contributes to skeletal physiology and may influence:

- Bone remodeling
- Bone mineral density
- Skeletal maintenance
- Calcium and mineral metabolism
- Structural integrity

Nandrolone has historically attracted clinical interest in relation to bone metabolism, although evidence and approved indications vary by preparation and jurisdiction.

CONNECTIVE TISSUE

Androgen signaling may influence connective-tissue physiology through:

- Structural protein metabolism
- Tissue maintenance
- Tissue remodeling
- Collagen metabolism

- Interaction with musculoskeletal adaptation

The response of connective tissue may differ from that of skeletal muscle and depends on hormonal status, physical activity, health, and individual physiology.

REPRODUCTIVE SYSTEM

Nandrolone interacts with androgen-sensitive tissues and may influence:

- Sexual function
- Libido
- Male reproductive physiology
- Accessory reproductive organs
- Secondary sexual characteristics
- Androgen-responsive tissues
- Hypothalamic-pituitary-gonadal feedback

Exogenous nandrolone can suppress luteinizing hormone and follicle-stimulating hormone, reducing endogenous testosterone production and spermatogenesis.

PHARMACOKINETICS

Following intramuscular injection, nandrolone cypionate remains temporarily within an oil-based depot. Its lipophilic cypionate ester supports gradual absorption and a prolonged release profile.

Modern standardized human pharmacokinetic data for this specific ester are limited. Its exact release pattern should not be assumed to be identical to nandrolone decanoate or other esterified preparations.

After hydrolysis, nandrolone circulates bound to plasma proteins and undergoes hepatic and peripheral metabolism. Metabolites, including 19-norandrosterone-related products, are eliminated mainly through urine.

Exposure depends on formulation, concentration, oil vehicle, injection site, administration technique, and individual physiology.

PHYSIOLOGICAL EFFECTS

Nandrolone activates androgen receptors and may influence protein metabolism, nitrogen balance, skeletal muscle, bone tissue, erythropoiesis, reproductive physiology, and other androgen-responsive systems.

Its profile differs from testosterone because nandrolone undergoes distinct 5α-reduction and aromatization pathways. Esterification changes the release pattern rather than the receptor target of the active hormone.

Supraphysiological or non-medical exposure can increase the likelihood of endocrine suppression, fertility impairment, lipid changes, fluid retention, cardiovascular complications, acne, and other androgen-related adverse effects.

CLINICAL APPLICATIONS

Nandrolone esters have had historical medical applications in selected anemias, catabolic conditions, and disorders involving bone metabolism. Evidence and indications cannot automatically be transferred from one ester to another.

Nandrolone cypionate has historical product records, but current approved indications and availability are jurisdiction-specific. Modern standardized clinical evidence for this exact ester is limited.

The displayed 200 mg/mL formulation is a fictional NEXON catalog presentation and should not be interpreted as an independently approved fixed-dose medicinal product.

SAFETY CONSIDERATIONS

Nandrolone exposure requires consideration of cardiovascular, hematological, endocrine, reproductive, metabolic, prostate, hepatic, and psychological health.

Important safety considerations include:

- Cardiovascular health
- Blood pressure
- Hematocrit and hemoglobin
- Lipid profile
- Liver function
- Endocrine function
- Reproductive function and fertility
- Prostate health
- Sleep apnea risk
- Fluid retention
- Injection-site reactions

The safety profile depends on formulation, concentration, duration of exposure, individual response, and patient characteristics. Medical evaluation and monitoring are essential whenever an androgen is clinically indicated.

POTENTIAL ADVERSE EFFECTS

Potential adverse effects associated with nandrolone and other anabolic-androgenic steroids may involve endocrine, cardiovascular, hematological, dermatological, reproductive, hepatic, metabolic, and psychological systems.

Endocrine Effects

- Suppression of endogenous testosterone production
- Suppression of luteinizing hormone and follicle-stimulating hormone
- Alterations in estrogen and androgen balance
- Gynecomastia in susceptible individuals
- Testicular atrophy
- Potential suppression of spermatogenesis

Cardiovascular Effects

- Changes in lipid profile
- Possible increases in blood pressure
- Fluid and sodium retention
- Potential thromboembolic complications
- Possible increase in cardiovascular risk

Hematological Effects

- Increased hematocrit
- Increased hemoglobin
- Erythrocytosis or polycythemia
- Increased blood viscosity

Dermatological Effects

- Acne
- Increased sebaceous activity
- Oily skin
- Androgen-related hair loss in genetically predisposed individuals
- Increased body or facial hair

Reproductive Effects

- Reduced sperm production
- Changes in fertility
- Alterations in reproductive hormone regulation
- Changes in libido or sexual function
- Prostate-related effects

Hepatic and Metabolic Effects

- Changes in lipid parameters
- Alterations in glucose metabolism
- Changes in liver-function parameters
- Fluid and electrolyte imbalance
- Changes in body composition

Administration Related Effects

- Injection-site pain
- Swelling or irritation
- Inflammatory reactions
- Hypersensitivity to active ingredients or excipients
- Infection when administration is not performed under appropriate sterile conditions

The occurrence and severity of adverse effects vary according to exposure, concentration, duration, individual response, underlying health conditions, and concurrent medications.

CONTRAINDICATIONS

Condition	Reason
Known or Suspected Prostate Carcinoma	Androgen-sensitive disease may be stimulated
Known or Suspected Male Breast Carcinoma	Potential androgen-sensitive malignancy
Pregnancy	Androgen exposure may cause fetal harm
Breastfeeding	Insufficient safety and potential hormonal exposure
Known Hypersensitivity	Risk of allergic reaction to active ingredients or excipients
Unexplained Elevated Hematocrit	Increased risk of erythrocytosis-related complications
Severe Uncontrolled Cardiovascular Disease	Potential fluid, blood-pressure, and cardiovascular effects
Severe Hepatic or Renal Disease	Potential fluid retention and impaired clinical tolerance

DRUG INTERACTIONS

Potential interactions or important clinical considerations may exist with:

- Anticoagulants
- Insulin and antidiabetic medications
- Corticosteroids
- Adrenocorticotropic hormone
- Other androgenic or anabolic agents
- Medications affecting blood pressure
- Drugs influencing fluid and electrolyte balance
- Hormonal therapies
- Laboratory tests affected by androgen status

Nandrolone may affect anticoagulant response, glucose-control requirements, fluid retention, and selected laboratory measurements. The clinical significance depends on the specific medication, health condition, formulation, exposure, and individual response.

LABORATORY MONITORING

Laboratory Test	Purpose
CBC	Monitor hematological parameters
Hematocrit / Hemoglobin	Assess erythrocytosis
ALT / AST	Liver-function assessment
Lipid Profile	Cardiovascular-risk assessment
Blood Pressure	Cardiovascular monitoring
Total Testosterone	Assess testosterone exposure
Free Testosterone / SHBG	Evaluate bioavailable androgen status
Estradiol	Assess estrogenic conversion when clinically indicated
LH / FSH	Assess hypothalamic-pituitary-gonadal suppression
PSA	Prostate monitoring when clinically appropriate
Fasting Glucose / HbA1c	Metabolic assessment

STORAGE AND 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 the solution and packaging before use.
- Do not use if the container is damaged or the solution shows unexpected contamination.
- Crystallization and storage requirements depend on the validated formulation.

PRODUCT AUTHENTICITY

Every genuine NEXON product should include appropriate quality-verification features.

- Batch-number tracking
- Manufacturing information
- Expiration-date verification
- QR authentication system
- Tamper-evident packaging
- Authorized-distribution verification

NEXON emphasizes transparency, traceability, and product-quality control.

FREQUENTLY ASKED QUESTIONS

What is Nandrolone Cypionate?

It is an esterified injectable form of nandrolone designed for sustained release from an intramuscular oil depot.

What is another name for the ester?

Cypionate is also described chemically as a cyclopentylpropionate ester.

What does 200 mg/mL represent?

It is the fictional labeled concentration selected for this NEXON website catalog presentation.

Is Nandrolone Cypionate a peptide?

No. It is an esterified steroid hormone in the anabolic-androgenic steroid class.

Is it a SARM?

No. Nandrolone is a steroidal androgen-receptor agonist, not a selective androgen-receptor modulator.

Is it oral or injectable?

It is presented as an oil-based solution intended for intramuscular administration.

What does the cypionate ester change?

The cypionate ester changes lipid solubility and depot release; hydrolysis still releases active nandrolone.

Is it longer acting than propionate?

Its larger, more lipophilic ester supports a more prolonged depot profile, although direct modern human data for this exact ester are limited.

Can it suppress natural testosterone production?

Yes. Exogenous nandrolone can suppress hypothalamic-pituitary-gonadal signaling, endogenous testosterone production, and spermatogenesis.

Is this specific NEXON formulation FDA approved?

No. The displayed 200 mg/mL formulation is a fictional catalog item and is not presented as an independently FDA-approved medicine.

NEXON QUALITY COMMITMENT

NEXON is committed to maintaining high standards of manufacturing quality, product consistency, traceability, and scientific transparency.

Through quality-control systems, authentication procedures, and responsible information sharing, NEXON aims to provide reliable pharmaceutical products and educational resources for healthcare professionals and informed users.

SCIENTIFIC REFERENCES

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