NANDROLONE PHENYLPROPIONATE

PRODUCT OVERVIEW

Specification	Details
Generic Name	**Nandrolone Phenylpropionate (NPP)**
Drug Class	**Anabolic Androgenic Steroid (AAS)**
Active Ingredient	**Nandrolone Phenylpropionate (NPP)**
Chemical Formula	$C_{27}H_{34}O_3$
Molecular Weight	**406.57 g/mol**
CAS Number	**62-90-8**
Administration Route	**Intramuscular Injection**
Ester Type	**Short-Acting Nandrolone Ester**
Approximate Half-Life	**Approximately 2–4 Days**
Release Profile	**Rapid and Controlled 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 Phenylpropionate (NPP) is a short-acting esterified form of nandrolone developed to provide rapid hormone availability 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 phenylpropionate ester provides faster absorption from the injection site compared with longer nandrolone esters, allowing earlier release of active nandrolone into systemic circulation.Compared with Nandrolone Decanoate, Nandrolone Phenylpropionate provides a shorter pharmacokinetic profile with more rapid hormone availability.Its balanced anabolic profile and shorter duration of action have made NPP an important compound in anabolic steroid pharmacology and clinical 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 phenylpropionic acid produced Nandrolone Phenylpropionate, providing faster absorption and shorter biological activity than longer nandrolone esters.

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

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

The phenylpropionate 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 Phenylpropionate**
Molecular Formula	$C_{27}H_{34}O_3$
Molecular Weight	**406.57 g/mol**
CAS Number	**62-90-8**
Hormone Classification	**Androgen**
Ester Group	**Phenylpropionate**
Active Hormone	**Nandrolone**

PHARMACOLOGY

Following intramuscular administration, Nandrolone Phenylpropionate forms a short-duration depot within muscle tissue.

The phenylpropionate ester undergoes relatively rapid enzymatic hydrolysis, releasing free nandrolone into systemic circulation.

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 Phenylpropionate (NPP) 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 Phenylpropionate forms a short-duration depot within muscle tissue.

The phenylpropionate ester undergoes relatively rapid enzymatic hydrolysis, releasing free nandrolone into systemic circulation.

Compared with Nandrolone Decanoate, Nandrolone Phenylpropionate provides faster hormone availability and a shorter duration of pharmacokinetic activity.

PHARMACOKINETIC PROFILE

Parameter	Description
Ester Type	Short-Acting Nandrolone Ester
Absorption	Rapid release from intramuscular depot
Release Pattern	Rapid and controlled release
Half-Life	Approximately 2–4 Days
Duration of Activity	Short-Acting
Plasma Stability	Moderate
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 Phenylpropionate 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 Phenylpropionate (NPP)?
Nandrolone Phenylpropionate (NPP) is a short-acting esterified form of nandrolone designed to provide rapid hormone availability following intramuscular administration.

How is Nandrolone Phenylpropionate different from Nandrolone Decanoate?
Nandrolone Phenylpropionate provides faster absorption and a shorter duration of activity, whereas Nandrolone Decanoate provides slower release and prolonged hormone availability.

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 influencing the duration of biological activity.

Is Nandrolone Phenylpropionate 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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