DYNACIN- minocycline hydrochloride capsule
MEDICIS, The Dermatology Company

Dynacin® (MINOCYCLINE HCl CAPSULES, USP)

Rx Only

To reduce the development of drug-resistant bacteria and maintain the effectiveness of minocycline hydrochloride capsules and other antibacterial drugs, minocycline hydrochloride capsules should be used only to treat or prevent infections that are proven or strongly suspected to be caused by bacteria.

DESCRIPTION

Minocycline hydrochloride, a semisynthetic derivative of tetracycline, is 4,7-Bis(dimethylamino)-1,4,4a,5,5a,6,11,12a-octahydro-3,10,12,12a-tetrahydroxy-1,11-dioxo-2-naphthacenecarboxamide monohydrochloride. The structural formula is represented below:

$C_{23}H_{27}N_3O_7.HCl$ M. W. 493.94

Each minocycline hydrochloride capsule, for oral administration, contains the equivalent of 50 mg, 75 mg or 100 mg of minocycline. In addition each capsule contains the following inactive ingredients: magnesium stearate and starch (corn).

The 50 mg, 75 mg and 100 mg capsule shells contain: gelatin, silicon dioxide, sodium lauryl sulfate and titanium dioxide.

The 75 mg and 100 mg capsule shells also contain: black iron oxide.

CLINICAL PHARMACOLOGY

Following oral administration of minocycline hydrochloride capsules, absorption from the gastrointestinal tract is rapid. Maximum serum concentrations following a single dose of minocycline hydrochloride to normal fasting adult volunteers were attained in 1 to 4 hours. The serum half-life in normal volunteers ranges from approximately 11 hours to 22 hours.

When minocycline hydrochloride capsules were given concomitantly with a meal which included dairy products, the extent of absorption of minocycline hydrochloride capsules was not noticeably influenced. The peak plasma concentrations were slightly decreased and delayed by one hour when administered with food, compared to dosing under fasting conditions.

In previous studies with other minocycline dosage forms, the minocycline serum half-life ranged from 11 to 16 hours in 7 patients with hepatic dysfunction, and from 18 to 69 hours in 5 patients with renal dysfunction. The urinary and fecal recovery of minocycline when administered to 12 normal volunteers is one-half to one-third that of other tetracyclines.

Microbiology

The tetracyclines are primarily bacteriostatic and are thought to exert their antimicrobial effect by the inhibition of protein synthesis. The tetracyclines, including minocycline, have a similar antimicrobial spectrum of activity against a wide range of gram-positive and gram-negative organisms. Cross-resistance of these organisms to tetracyclines is common.

Minocycline has been shown to be active against most strains of the following microorganisms, both *in vitro* and in clinical infections as described in the **INDICATIONS AND USAGE** section:

AEROBIC GRAM-POSITIVE MICROORGANISMS

Because many strains of the following gram-positive microorganisms have been shown to be resistant to tetracyclines, culture and susceptibility testing are especially recommended. Tetracycline antibiotics should not be used for streptococcal diseases unless the organism has been demonstrated to be susceptible. Tetracyclines are not the drug of choice in the treatment of any type of staphylococcal infection.

Bacillus anthracis†
Listeria monocytogenes†
Staphylococcus aureus
Streptococcus pneumoniae

AEROBIC GRAM-NEGATIVE MICROORGANISMS

Bartonella bacilliformis
Brucella species
Calymmatobacterium granulomatis
Campylobacter fetus
Francisella tularensis
Haemophilus ducreyi
Vibrio cholerae
Yersinia pestis

Because many strains of the following groups of gram-negative microorganisms have been shown to be resistant to tetracyclines, culture and susceptibility tests are especially recommended:

Acinetobacter species
Enterobacter aerogenes
Escherichia coli
Haemophilus influenzae
Klebsiella species
Neisseria gonorrhoeae†
Neisseria meningitidis†
Shigella species

"OTHER" MICROORGANISMS

Actinomyces species†
Borrelia recurrentis
Chlamydia psittaci
Chlamydia trachomatis

Clostridium species†
Entamoeba species
Fusobacterium nucletum ssp. *fusiforme*†
Mycobacterium marinum
Mycoplasma pneumonia
Propionibacterium acnes
Rickettsiae
Treponema pallidum subspecies *pallidum*†
Treponema pallidum subspecies *pertenue*†
Ureaplasma urealyticum

†When penicillin is contraindicated, tetracyclines are alternative drugs in the treatment of infections caused by the cited microorganisms.

Susceptibility tests

Susceptibility testing should be performed with tetracycline since it predicts susceptibility to minocycline. However, certain organisms (e.g., some staphylococci, and *Acinetobacter* ssp.) may be more susceptible to minocycline and doxycycline than to tetracycline.

Dilution techniques

Quantitative methods are used to determine antimicrobial minimal inhibitory concentrations (MICs). These MICs provide estimates of the susceptibility of bacteria to antimicrobial compounds. The MICs should be determined using a standardized procedure. Standardized procedures are based on a dilution method[1,3] (broth or agar) or equivalent with standardized inoculum concentrations and standardized concentrations of tetracycline powder. The MIC values should be interpreted according to the following criteria:

For testing aerobic gram-negative microorganisms (Enterobacteriaceae), *Acinetobacter* ssp. and *Staphylococcus aureus*.

MIC (µg/mL)	Interpretation
≤ 4.0	Susceptible (S)
8.0	Intermediate (I)
≥16.0	Resistant (R)

For testing *Haemophilus influenzae*[a] and *Streptococcus pneumoniae*[b]:

MIC (µg/mL)	Interpretation
≤ 2.0	Susceptible (S)
4.0	Intermediate (I)
≥ 8.0	Resistant (R)

[a] These interpretative standards are applicable only to broth microdilution susceptibility testing with *Haemophilus influenzae* using Haemophilus Test Medium. [1]

[b] These interpretative standards are applicable only to broth microdilution susceptibility testing using cation-adjusted Muller-Hinton broth with 2 – 5% lysed horse blood. [1]

For testing *Neisseria gonorrhoeae*[c].

MIC (µg/mL)	Interpretation
≤ 0.25	Susceptible (S)
0.5–1.0	Intermediate (I)
≥ 2.0	Resistant (R)

[c] These interpretative standards are applicable only to agar dilution susceptibility testing using GC agar base and 1% defined growth supplements. [1]

A report of "Susceptible" indicates that the pathogen is likely to be inhibited if the antimicrobial compound in the blood reaches the concentrations usually achievable. A report of "Intermediate" indicates that the result should be considered equivocal, and, if the microorganism is not fully susceptible to alternative, clinically feasible drugs, the test should be repeated. This category implies possible clinical applicability in body sites where the drug is physiologically concentrated or in situations where high dosage of drug can be used. This category also provides a buffer zone which prevents small uncontrolled technical factors from causing major discrepancies in interpretation. A report of "Resistant" indicates that the pathogen is not likely to be inhibited if the antimicrobial compound in the blood reaches the concentrations usually achievable; other therapy should be selected.

Standardized susceptibility test procedures require the use of laboratory control microorganisms to control the technical aspects of the laboratory procedures. Standard tetracycline powder should provide the following MIC values:

Microorganism	MIC Range (µg/mL)
Escherichia coli ATCC 25922	0.5–2.0
Enterococcus faecalis ATCC 29212	8.0–32.0
Staphylococcus aureus ATCC 29213	0.25–1.0
Haemophilus influenzae ATCC 49247	4.0–32.0
Streptococcus pneumoniae ATCC 49619	0.12–0.5
Neisseria gonorrhoeae ATCC 49226	0.25–1.0

Diffusion techniques

Quantitative methods that require measurement of zone diameters also provide reproducible estimates of the susceptibility of bacteria to antimicrobial compounds. One such standardized procedure[2,3] requires the use of standardized inoculum concentrations. This procedure uses paper disks impregnated with 30µg tetracycline (class disk) *or* 30µg minocycline to test the susceptibility of microorganisms to minocycline. Reports from the laboratory providing results of the standard single-disk susceptibility test with a 30µg tetracycline or minocycline disk should be interpreted according to the following criteria:

For testing aerobic gram-negative microorganisms (Enterobacteriaceae) *Acinetobacter* ssp. and *Staphylococcus aureus*:

Zone Diameter (mm)	Interpretation
≥ 19	Susceptible (S)
15–18	Intermediate (I)
≤ 14	Resistant (R)

For testing *Haemophilus influenzae*[d]:

Zone Diameter (mm)	Interpretation

≥ 29	Susceptible (S)
26–28	Intermediate (I)
≤ 25	Resistant (R)

[d] These zone diameter standards are applicable only to susceptibility testing with *Haemophilus influenzae* using Haemophilus Test Medium and a 30µg tetracycline disk.[2]

For testing *Neisseria gonorrhoeae*[e]:

Zone Diameter (mm)	Interpretation
≥ 38	Susceptible (S)
31–37	Intermediate (I)
≤ 30	Resistant (R)

[e] These interpretative standards are applicable only to disk diffusion testing using GC agar and 1% growth supplements, and a 30µg tetracycline disk.[2]

For testing *Streptococcus pneumoniae*[f]:

Zone Diameter (mm)	Interpretation
≥ 23	Susceptible (S)
19–22	Intermediate (I)
≤ 18	Resistant (R)

[f] These interpretative standards are applicable only to disk diffusion testing using Muller-Hinton agar adjusted with 5% sheep blood and a 30µg tetracycline disk.[2]

For testing *Vibrio cholerae*[g]:

Zone Diameter (mm)	Interpretation
≥ 19	Susceptible (S)
15–18	Intermediate (I)
≤ 14	Resistant (R)

[g] These interpretative standards are applicable only to disk diffusion testing performed with a 30µg tetracycline disk.[2]

Interpretation should be as stated above for results using dilution techniques. Interpretation involves correlation of the diameter obtained in the disk test with the MIC for tetracycline.

As with standardized dilution techniques, diffusion methods require the use of laboratory control microorganisms that are used to control the technical aspects of the laboratory procedures. For the diffusion technique, the 30µg tetracycline or minocycline disk should provide the following zone diameters in these laboratory test quality control strains:

Microorganism	Zone Diameter Range (mm)	
	Tetracycline	Minocycline
Escherichia coli ATCC 25922	18–25	19–25
Staphylococcus aureus ATCC 25923	24–30	25–30
Haemophilus influenzae ATCC		

Haemophilus influenzae ATCC 49247	14–22
Neisseria gonorrhoeae ATCC 49226	30–42
Streptococcus pneumoniae ATCC 49619	27–31

INDICATIONS AND USAGE

Minocycline Hydrochloride Capsules are indicated in the treatment of the following infections due to susceptible strains of the designated microorganisms:

Rocky Mountain spotted fever, typhus fever and the typhus group, Q fever, rickettsialpox and tick fevers caused by *Rickettsiae*

Respiratory tract infections caused by *Mycoplasma pneumoniae*

Lymphogranuloma venereum caused by *Chlamydia trachomatis*

Psittacosis (Ornithosis) due to *Chlamydia psittaci*

Trachoma caused by *Chlamydia trachomatis*, although the infectious agent is not always eliminated, as judged by immunofluorescence

Inclusion conjunctivitis caused by *Chlamydia trachomatis*

Nongonococcal urethritis, endocervical, or rectal infections in adults caused by *Ureaplasma urealyticum* or *Chlamydia trachomatis*

Relapsing fever due to *Borrelia recurrentis*

Chancroid caused by *Haemophilus ducreyi*

Plague due to *Yersinia pestis*

Tularemia due to *Francisella tularensis*

Cholera caused by *Vibrio cholerae*

Campylobacter fetus infections caused by *Campylobacter fetus*

Brucellosis due to *Brucella* species (in conjunction with streptomycin)

Brucellosis due to *Bartonella bacilliformis*

Granuloma inguinale caused by *Calymmatobacterium granulomatis*

Minocycline is indicated for treatment of infections caused by the following gram-negative microorganisms, when bacteriologic testing indicates appropriate susceptibility to the drug:

Escherichia coli

Enterobacter aerogenes

Shigella species

Acinetobacter species

Respiratory tract infections caused by *Haemophilus influenzae*

Respiratory tract and urinary tract infections caused by *Klebsiella* species

Minocycline hydrochloride capsules are indicated for the treatment of infections caused by the following gram-positive microorganisms when bacteriologic testing indicates appropriate susceptibility to the drug:

Upper respiratory tract infections caused by *Streptococcus pneumoniae*

Skin and skin structure infections caused by *Straphylococcus aureus*.
(Note: Minocycline is not the drug of choice in the treatment of any type of staphylococcal infection.)

When penicillin is contraindicated, minocycline is an alternative drug in the treatment of the following infections:

Uncomplicated urethritis in men due to *Neisseria gonorrhoeae* and for the treatment of other gonococcal infections when penicillin is contraindicated.
Infections in women caused by *Neisseria gonorrhoeae*
Syphilis caused by *Treponema pallidum* subspecies *pallidum*
Yaws caused by *Treponema pallidum* subspecies *pertenue*
Listeriosis due to *Listeria monocytogenes*
Anthrax due to *Bacillus anthracis*
Vincent's infection caused by *Fusobacteruim fusiforme*
Actinomycosis caused by *Actinomyces israelii*
Infections caused by *Clostridium* species

In *acute intestinal amebiasis*, minocycline may be a useful adjunct to amebicides.

In severe *acne*, minocycline may be useful adjunctive therapy.

Oral minocycline is indicated in the treatment of asymptomatic carriers of *Neisseria meningitidis* to eliminate meningococci from the nasopharynx. In order to preserve the usefulness of minocycline in the treatment of asymptomatic meningococcal carriers, diagnostic laboratory procedures, including serotyping and susceptibility testing, should be performed to establish the carrier state and the correct treatment. It is recommended that the prophylactic use of minocycline be reserved for situations in which the risk of meningococcal meningitis is high.

Oral minocycline is not indicated for the treatment of meningococcal infection.

Although no controlled clinical efficacy studies have been conducted, limited clinical data show that oral minocycline hydrochloride has been used successfully in the treatment of infections caused by *Mycobacterium marinum*.

To reduce the development of drug-resistant bacteria and maintain the effectiveness of minocycline hydrochloride capsules and other antibacterial drugs, minocycline hydrochloride capsules should be used only to treat or prevent infections that are proven or strongly suspected to be caused by susceptible bacteria. When culture and susceptibility information are available, they should be considered in selecting or modifying antibacterial therapy. In the absence of such data, local epidemiology and susceptibility patterns may contribute to the empiric selection of therapy.

CONTRAINDICATIONS

This drug is contraindicated in persons who have shown hypersensitivity to any of the tetracyclines.

WARNINGS

MINOCYCLINE, LIKE OTHER TETRACYCLINE-CLASS ANTIBIOTICS, CAN CAUSE FETAL HARM WHEN ADMINISTERED TO A PREGNANT WOMAN. IF ANY TETRACYCLINE IS USED DURING PREGNANCY OR IF THE PATIENT BECOMES PREGNANT WHILE TAKING THESE DRUGS, THE PATIENT SHOULD BE APPRISED OF THE POTENTIAL HAZARD TO THE FETUS. THE USE OF DRUGS OF THE TETRACYCLINE CLASS DURING TOOTH DEVELOPMENT (LAST HALF OF PREGNANCY, INFANCY, AND CHILDHOOD TO THE AGE OF 8 YEARS) MAY CAUSE PERMANENT DISCOLORATION OF THE TEETH (YELLOW-GRAY-BROWN).

This adverse reaction is more common during long-term use of the drug but has been observed

following repeated short-term courses. Enamel hypoplasia has also been reported. TETRACYCLINE DRUGS, THEREFORE, SHOULD NOT BE USED DURING TOOTH DEVELOPMENT UNLESS OTHER DRUGS ARE NOT LIKELY TO BE EFFECTIVE OR ARE CONTRAINDICATED.

All tetracyclines form a stable calcium complex in any bone-forming tissue. A decrease in fibula growth rate has been observed in premature human infants given oral tetracycline in doses of 25 mg/kg every six hours. This reaction was shown to be reversible when the drug was discontinued.

Results of animal studies indicate that tetracyclines cross the placenta, are found in fetal tissues, and can have toxic effects on the developing fetus (often related to retardation of skeletal development). Evidence of embryotoxicity has been noted in animals treated early in pregnancy.

The anti-anabolic action of the tetracyclines may cause an increase in BUN. While this is not a problem in those with normal renal function, in patients with significantly impaired function, higher serum levels of tetracycline may lead to azotemia, hyperphosphatemia, and acidosis. If renal impairment exists, even usual oral or parenteral doses may lead to excessive systemic accumulations of the drug and possible liver toxicity. Under such conditions, lower than usual total doses are indicated, and if therapy is prolonged, serum level determinations of the drug may be advisable.

Photosensitivity manifested by an exaggerated sunburn reaction has been observed in some individuals taking tetracyclines. This has been reported rarely with minocycline.

Central nervous system side effects including lightheadedness, dizziness, or vertigo have been reported with minocycline therapy. Patients who experience these symptoms should be cautioned about driving vehicles or using hazardous machinery while on minocycline therapy. These symptoms may disappear during therapy and usually disappear rapidly when the drug is discontinued.

PRECAUTIONS

General

As with other antibiotic preparations, use of this drug may result in overgrowth of nonsusceptible organisms, including fungi. If superinfection occurs, the antibiotic should be discontinued and appropriate therapy instituted.

Pseudotumor cerebri (benign intracranial hypertension) in adults has been associated with the use of tetracyclines. The usual clinical manifestations are headache and blurred vision. Bulging fontanels have been associated with the use of tetracyclines in infants. While both of these conditions and related symptoms usually resolve after discontinuation of tetracycline, the possibility for permanent sequelae exists.

Incision and drainage or other surgical procedures should be performed in conjunction with antibiotic therapy when indicated.

Prescribing minocycline hydrochloride capsules in the absence of a proven or strongly suspected bacterial infection or a prophylactic indication is unlikely to provide benefit to the patient and increases the risk of the development of drug-resistant bacteria.

INFORMATION FOR PATIENTS

Photosensitivity manifested by an exaggerated sunburn reaction has been observed in some individuals taking tetracyclines. Patients apt to be exposed to direct sunlight or ultraviolet light should be advised that this reaction can occur with tetracycline drugs, and treatment should be discontinued at the first evidence of skin erythema. This reaction has been reported rarely with use of minocycline.

Patients who experience central nervous system symptoms (see **WARNINGS**) should be cautioned about driving vehicles or using hazardous machinery while on minocycline therapy.

Concurrent use of tetracycline may render oral contraceptives less effective (see **Drug Interactions**).

Patients should be counseled that antibacterial drugs including minocycline hydrochloride capsules should only be used to treat bacterial infections. They do not treat viral infections (e.g., the common cold). When minocycline hydrochloride capsules are prescribed to treat a bacterial infection, patients should be told that although it is common to feel better early in the course of therapy, the medication should be taken exactly as directed. Skipping doses or not completing the full course of therapy may (1) decrease the effectiveness of the immediate treatment and (2) increase the likelihood that bacteria will develop resistance and will not be treatable by minocycline hydrochloride capsules or other antibacterial drugs in the future.

Laboratory Tests

In long-term therapy, periodic laboratory evaluations of organ systems, including hematopoietic, renal, and hepatic studies should be performed.

All patients with gonorrhea should have a serologic test for syphilis at the time of diagnosis. Patients treated with minocycline should have a follow-up serologic test for syphilis after 3 months.

Drug Interactions

Because tetracyclines have been shown to depress plasma prothrombin activity, patients who are on anticoagulant therapy may require downward adjustment of their anticoagulant dosage.

Since bacteriostatic drugs may interfere with the bactericidal action of penicillin, it is advisable to avoid giving tetracycline-class drugs in conjunction with penicillin.

Absorption of tetracyclines is impaired by antacids containing aluminum, calcium or magnesium, and iron-containing preparations.

The concurrent use of tetracycline and methoxyflurane has been reported to result in fatal renal toxicity.

Concurrent use of tetracyclines with oral contraceptives may render oral contraceptives less effective.

Drug/Laboratory Test Interactions

False elevations of urinary catecholamine levels may occur due to interference with the fluorescence test.

Carcinogenesis, Mutagenesis, Impairment of Fertility

Dietary administration of minocycline in long-term tumorigenicity studies in rats resulted in evidence of thyroid tumor production. Minocycline has also been found to produce thyroid hyperplasia in rats and dogs. In addition, there has been evidence of oncogenic activity in rats in studies with a related antibiotic, oxytetracycline (i.e., adrenal and pituitary tumors). Likewise, although mutagenicity studies of minocycline have not been conducted, positive results in *in vitro* mammalian cell assays (i.e., mouse lymphoma and Chinese hamster lung cells) have been reported for related antibiotics (tetracycline hydrochloride and oxytetracycline). Segment I (fertility and general reproduction) studies have provided evidence that minocycline impairs fertility in male rats.

Pregnancy

Teratogenic Effects

Pregnancy Category D

(See **WARNINGS**)

Nonteratogenic Effects

(See **WARNINGS**)

Labor and Delivery

The effect of tetracyclines on labor and delivery is unknown.

Nursing Mothers

Tetracyclines are excreted in human milk. Because of the potential for serious adverse reactions in nursing infants from the tetracyclines, a decision should be made whether to discontinue nursing or discontinue the drug, taking into account the importance of the drug to the mother (see **WARNINGS**).

Pediatric Use

(See **WARNINGS**.)

ADVERSE REACTIONS

Due to oral minocycline's virtually complete absorption, side effects to the lower bowel, particularly diarrhea, have been infrequent. The following adverse reactions have been observed in patients receiving tetracyclines.

Gastrointestinal

Anorexia, nausea, vomiting, diarrhea, glossitis, dysphagia, enterocolitis, pancreatitus, inflammatory lesions (with monilial overgrowth) in the anogenital region, and increases in liver enzymes have been reported. Rarely, hepatitis and liver failure have been reported. These reactions have been caused by both the oral and the parenteral administration of tetracyclines. Rare instances of esophagitis and esophageal ulcerations have been reported in patients taking the tetracycline-class antibiotics in capsule and tablet form. Most of these patients took the medication immediately before going to bed (see **DOSAGE AND ADMINISTRATION**).

Skin

Maculopapular and erythematous rashes. Exfoliative dermatitis has been reported but is uncommon. Fixed drug eruptions have been rarely reported. Lesions occurring on the glans penis have caused balanitis. Erythema multiforme and rarely Stevens-Johnson syndrome have been reported. Photosensitivity is discussed above (see **WARNINGS**). Pigmentation of the skin and mucous membranes has been reported.

Renal toxicity

Elevations in BUN have been reported and are apparently dose related (see **WARNINGS**). Acute renal failure has been rarely reported and, in most cases, has been reversible.

Hypersensitivity reactions

Urticaria, angioneurotic edema, polyarthralgia, anaphylaxis, anaphylactoid purpura, pericarditis, exacerbation of systemic lupus erythematosus and rarely pulmonary infiltrates with eosinophilia have been reported. A lupus-like syndrome and serum sickness-like reactions also have been reported.

Blood

Hemolytic anemia, thrombocytopenia, neutropenia, and eosinophilia have been reported.

Central Nervous System

Bulging fontanels in infants and benign intracranial hypertension (pseudotumor cerebri) in adults (see **PRECAUTIONS-General**) have been reported. Headache has also been reported.

Other

When given over prolonged periods, tetracyclines have been reported to produce brown-black microscopic discoloration of the thyroid glands. Very rare cases of abnormal thyroid function have been reported.

Tooth discoloration in pediatric patients less than 8 years of age (see **WARNINGS**) and also, rarely, in adults has been reported.

Tinnitus and decreased hearing have been rarely reported in patients on minocycline hydrochloride.

OVERDOSAGE

In case of overdosage, discontinue medication, treat symptomatically and institute supportive measures. Minocycline is not removed in significant quantities by hemodialysis or peritoneal dialysis.

DOSAGE AND ADMINISTRATION

THE USUAL DOSAGE AND FREQUENCY OF ADMINISTRATION OF MINOCYCLINE DIFFERS FROM THAT OF THE OTHER TETRACYCLINES. EXCEEDING THE RECOMMENDED DOSAGE MAY RESULT IN AN INCREASED INCIDENCE OF SIDE EFFECTS.

Minocycline hydrochloride capsules may be taken with or without food. (see **CLINICAL PHARMACOLOGY**.)

For Pediatric Patients Above 8 Years of Age

The usual dosage of minocycline hydrochloride capsules is 4 mg/kg initially followed by 2 mg/kg every 12 hours.

Adults

The usual dosage of minocycline hydrochloride is 200 mg initially followed by 100 mg every 12 hours. Alternatively, if more frequent doses are preferred, two or four 50 mg capsules may be given initially followed by one 50 mg capsule four times daily.

Uncomplicated gonococcal infections other than urethritis and anorectal infections in men: 200 mg initially, followed by 100 mg every 12 hours for a minimum of four days, with post-therapy cultures within 2 to 3 days.

In the treatment of uncomplicated gonococcal urethritis in men, 100 mg every 12 hours for five days is recommended.

For the treatment of syphilis, the usual dosage of minocycline hydrochloride capsules should be administered over a period of 10 to 15 days. Close follow-up, including laboratory tests, is recommended.

In the treatment of meningococcal carrier state, the recommended dosage is 100 mg every 12 hours for five days.

Mycobacterium marinum infections: Although optimal doses have not been established, 100 mg every 12 hours for 6 to 8 weeks have been used successfully in a limited number of cases.

Uncomplicated urethral, endocervical, or rectal infections in adults caused by *Chlamydia trachomatis* or *Ureaplasma urealyticum*: 100 mg orally, every 12 hours for at least seven days.

Ingestion of adequate amounts of fluids along with capsule and tablet forms of drugs in the tetracycline-class is recommended to reduce the risk of esophageal irritation and ulceration.

In patients with renal impairment (see **WARNINGS**), the total dosage should be decreased by either reducing the recommended individual doses and/or by extending the time intervals between doses.

HOW SUPPLIED

DYNACIN® (MINOCYCLINE HCl CAPSULES, USP) equivalent to 50 mg minocycline are opaque white capsules imprinted "0487" and "DYNACIN® 50 mg" and are supplied as follows:

NDC 99207-487-10	Bottles of 100
NDC 99207-487-11	Bottle of 1000.

DYNACIN® (MINOCYCLINE HCl CAPSULES, USP) equivalent to 75 mg minocycline are light gray opaque capsules imprinted "0489" and "DYNACIN® 75 mg" and are supplied as follows:

NDC 99207-489-10	Bottles of 100
NDC 99207-489-11	Bottle of 1000.

DYNACIN® (MINOCYCLINE HCl CAPSULES, USP) equivalent to 100 mg minocycline are opaque dark gray and opaque white capsules imprinted "0488" and "DYNACIN® 100 mg" and are supplied as follows:

NDC 99207-488-05	Bottles of 50
NDC 99207-488-11	Bottle of 1000.

Dispense in tight, light-resistant container with child-resistant closure.

Store at 20º–25ºC (68º–77ºF). [See USP Controlled Room Temperature].

Protect from light, moisture and excessive heat.

ANIMAL PHARMACOLOGY AND TOXICOLOGY

Minocycline hydrochloride has been observed to cause a dark discoloration of the thyroid in experimental animals (rats, minipigs, dogs and monkeys). In the rat, chronic treatment with minocycline hydrochloride has resulted in goiter accompanied by elevated radioactive iodine uptake, and evidence of thyroid tumor production. Minocycline hydrochloride has also been found to produce thyroid hyperplasia in rats and dogs.

REFERENCES

1. National Committee for Clinical Laboratory Standards, Methods for Dilution Antimicrobial Susceptibility Tests for Bacteria that Grow Aerobically – Fourth Edition; Approved Standard. NCCLS Document M7-A4, Vol. 17, No. 2, NCCLS, 940 West Valley Road, Suite 1400, Wayne, PA. January 1997.
2. National Committee for Clinical Laboratory Standards, Performance Standards for Antimicrobial Disks Susceptibility Tests – Sixth Edition; Approved Standard. NCCLS Document M2-A5, Vol. 17, No. 1, NCCLS, 940 West Valley Road, Suite 1400, Wayne, PA. January 1997.
3. National Committee for Clinical Laboratory Standards, Performance Standards for Antimicrobial Disk Susceptibility Tests – Eighth Edition; Approved Standard. NCCLS Document M100-S8, Vol. 18, No. 1, NCCLS, 940 West Valley Road, Suite 1400, Wayne, PA. January 1998

Manufactured for:
MEDICIS, The Dermatology Company®
Scottsdale, AZ 85258

IN-5178/S
Prescribing Information as of February 2004

DYNACIN

minocycline hydrochloride capsule

Product Information			
Product Type	HUMAN PRESCRIPTION DRUG	**Item Code (Source)**	NDC:99207-487
Route of Administration	ORAL		

Active Ingredient/Active Moiety		
Ingredient Name	**Basis of Strength**	**Strength**
minocycline hydrochloride (UNII: 0020414E5U) (minocycline - UNII:FYY3R43WGO)		50 mg

Inactive Ingredients	
Ingredient Name	**Strength**
magnesium stearate (UNII: 70097M6I30)	
starch (corn) ()	
gelatin (UNII: 2G86QN327L)	
silicon dioxide (UNII: ETJ7Z6XBU4)	
sodium lauryl sulfate (UNII: 368GB5141J)	
titanium dioxide (UNII: 15FIX9V2JP)	

Product Characteristics			
Color	WHITE (Opaque white)	**Score**	no score
Shape	CAPSULE	**Size**	16mm
Flavor		**Imprint Code**	0487;DYNACIN;50;mg
Contains			
Coating	false	**Symbol**	true

Packaging				
#	**Item Code**	**Package Description**	**Marketing Start Date**	**Marketing End Date**
1	NDC:99207-487-10	100 in 1 BOTTLE		
2	NDC:99207-487-11	1000 in 1 BOTTLE		

DYNACIN

minocycline hydrochloride capsule

Product Information			
Product Type	HUMAN PRESCRIPTION DRUG	**Item Code (Source)**	NDC:99207-489
Route of Administration	ORAL		

Active Ingredient/Active Moiety

Ingredient Name	Basis of Strength	Strength
minocycline hydrochloride (UNII: 0020414E5U) (minocycline - UNII:FYY3R43WGO)		75 mg

Inactive Ingredients	
Ingredient Name	**Strength**
magnesium stearate (UNII: 70097M6I30)	
starch (corn) ()	

Product Characteristics			
Color	GRAY (light, opaque gray)	**Score**	no score
Shape	CAPSULE	**Size**	16mm
Flavor		**Imprint Code**	0489;DYNACIN;75;mg
Contains			
Coating	false	**Symbol**	false

Packaging				
#	**Item Code**	**Package Description**	**Marketing Start Date**	**Marketing End Date**
1	NDC:99207-489-10	100 in 1 BOTTLE		
2	NDC:99207-489-11	1000 in 1 BOTTLE		

DYNACIN

minocycline hydrochloride capsule

Product Information			
Product Type	HUMAN PRESCRIPTION DRUG	**Item Code (Source)**	NDC:99207-488
Route of Administration	ORAL		

Active Ingredient/Active Moiety		
Ingredient Name	**Basis of Strength**	**Strength**
minocycline hydrochloride (UNII: 0020414E5U) (minocycline - UNII:FYY3R43WGO)		100 mg

Inactive Ingredients	
Ingredient Name	**Strength**
magnesium stearate (UNII: 70097M6I30)	
starch (corn) ()	

Product Characteristics			
Color	GRAY (dark, opaque gray) , WHITE (WHITE)	**Score**	no score
Shape	CAPSULE	**Size**	18mm

Flavor		**Imprint Code**	0488;DYNACIN;100;mg
Contains			
Coating	false	**Symbol**	false

Packaging

#	Item Code	Package Description	Marketing Start Date	Marketing End Date
1	NDC:99207-488-05	50 in 1 BOTTLE		
2	NDC:99207-488-11	1000 in 1 BOTTLE		

Labeler - MEDICIS, The Dermatology Company

Revised: 11/2006 MEDICIS, The Dermatology Company