

CENTER FOR DRUG EVALUATION AND RESEARCH

Approval Package for:

Application Number: 021019

**Trade Name: COMPAZINE SPANSULE CAPSULE(s) 10
mg AND 15 mg**

Generic Name: PROCHLORPERAZINE MALEATE

**Sponsor: SMITHKLINE BEECHAM
PHARMACEUTICALS**

Approval Date: 10/6/99

**INDICATION(s): FOR CONTROL OF SEVERE NAUSEA
and VOMITING**

CENTER FOR DRUG EVALUATION AND RESEARCH

APPLICATION: 021019

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CENTER FOR DRUG EVALUATION AND RESEARCH

Application Number: 021019

APPROVAL LETTER



DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service

Puckey

NDA 21-019

Food and Drug Administration
Rockville MD 20857

Smithkline Beecham Pharmaceuticals
Attention: Dale E. Stockbower
1250 South Collegeville Road
Collegeville, PA 19426

OCT - 6 1999

Dear Ms. Stockbower:

Please refer to your new drug application (NDA) dated September 29, 1997, received October 1, 1997, submitted pursuant to section 505(b) of the Federal Food, Drug, and Cosmetic Act for Compazine® (prochlorperazine maleate) Spansule® Capsules, 10 mg and 15 mg.

We acknowledge receipt of your submissions dated April 27, 1999, July 30, 1999 and August 24, 1999. Your submission of April 27, 1999 constituted a complete response to our March 9, 1999 action letter.

We also refer to:

1. a fax dated September 21, 1999, that provides revised text for the description in labeling of the effect of food on absorption of prochlorperazine, i.e., "Food slows absorption of prochlorperazine and decreases C_{max} by 23% and AUC by 13%."
2. a fax dated September 28, 1999, that provides for the adoption of the following methodology and specification described below for the Compazine 10 mg and 15 mg Spansule® capsules:

Apparatus: USP Apparatus I (basket) rotated at [redacted]
Medium: 900 mL of 0.1 N Hydrochloric Acid
Sampling Times: [redacted]
Specification: [redacted]

This new drug application provides the reformulation of the current 10 mg and 15 mg Compazine® Spansule® Capsules (NDA 11-000) to respective new products which involve a new drug release controlling mechanism [redacted] and a change in the drug product manufacturing site from the SB Spring Garden Street facility, Philadelphia, PA, to International Processing Center (IPC), Winchester, KY, with packaging to be performed at [redacted]

We have completed the review of this application, as amended, and have concluded that

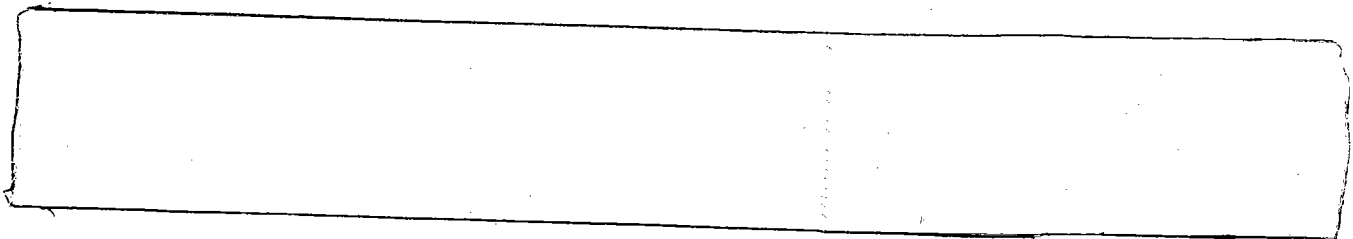
adequate information has been presented to demonstrate that the drug product is safe and effective for use as recommended in the agreed upon enclosed labeling text. Accordingly, the application is approved effective on the date of this letter.

In regard to your agreement on the methodology and specification for Compazine 10 mg and 15 mg Spansule® Capsules, provide copies of all relevant documentation (including but not limited to, specifications, and stability forms) which indicate that the [redacted] dissolution specification has been changed to [redacted] as soon as possible post-approval.

The final printed labeling (FPL) must be identical to the enclosed labeling (text for the package insert) and submitted draft labeling (immediate container and carton labels submitted April 27, 1999). Marketing the product with FPL that is not identical to the approved labeling text may render the product misbranded and an unapproved new drug.

Please submit 20 copies of the FPL as soon as it is available, in no case more than 30 days after it is printed. Please individually mount ten of the copies on heavy-weight paper or similar material. For administrative purposes, this submission should be designated "FPL for approved NDA 21-019." Approval of this submission by FDA is not required before the labeling is used.

We remind you of your Phase 4 commitment specified in your submission dated November 24, 1998. This commitment, along with any completion dates agreed upon, are listed below:



Validation of the regulatory methods has not been completed. At the present time, it is the policy of the Center not to withhold approval because the methods are being validated. Nevertheless, we expect your continued cooperation to resolve any problems that may be identified.

Please submit one market package of the drug product when it is available.

We remind you that you must comply with the requirements for an approved NDA set forth under 21 CFR 314.80 and 314.81.

If you have any questions, contact Merrill Mille, R.Ph., Regulatory Management Officer, at (301) 594-2850.

Sincerely,

/S/

Russell G. Katz, M.D.
Acting Director
Division of Neuropharmacological Drug Products
Office of Drug Evaluation I
Center for Drug Evaluation and Research

Enclosure

APPEARS THIS WAY
ON ORIGINAL

CENTER FOR DRUG EVALUATION AND RESEARCH

APPLICATION NUMBER : 021019

APPROVABLE LETTER



DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service

M.16

Food and Drug Administration
Rockville MD 20857

NDA 21-019

Smithkline Beecham Pharmaceuticals
Attention: Dale E. Stockbower
1250 South Collegeville Road
P.O. Box 5089
Collegeville, PA 19426

MAR - 9 1999

Dear Ms. Stockbower:

Please refer to your new drug application dated September 29, 1997, received October 1, 1997, submitted under section 505(b) of the Federal Food, Drug, and Cosmetic Act for Compazine® (prochlorperazine maleate) Spansule® Capsules, 10 mg and 15 mg.

We acknowledge receipt of your amendments dated November 24 and December 23, 1998, January 12, 1999, and February 22, 1999.

We also refer to the December 21, 1998, and January 11, 1999, teleconferences during which computer simulation data using single dose data to project steady state was requested.

This NDA provides for reformulation of the current 10 mg and 15 mg Compazine® Spansule® capsules to respective new products which involve a new drug release controlling mechanism ([redacted]) and for a change in the drug product manufacturing site from the SB Spring Garden Street facility, Philadelphia, PA, to International Processing Center (IPC), Winchester, KY, with packaging to be performed at [redacted]

We have completed the review of this application as submitted with draft labeling, and it is approvable. Before the application may be approved, however, it will be necessary for you to :

1. include in labeling, the effect of food on the new SR capsule, viz., Food decreases C_{max} by 25 % and AUC by 12 %;
2. delete from your draft labeling, the storage statement, "Store Compazine® Spansule® Capsules at controlled room temperature between 20° and 25° C (68° and 77° F) [see USP]." and reinstate the 15° and 30° C storage statement pending issuance of the final CDER guidance document on stability.

3. adopt the following methodology and specification described below for the 10 mg and 15 mg new Spansule® capsules:

Apparatus: USP Apparatus I (basket) rotated at [redacted]
Medium: 900 mL of 0.1 N Hydrochloric Acid [redacted]
Sampling Time [redacted]
Specification: [redacted]

In addition, it will be necessary for you to submit final printed labeling (FPL). Except for the changes requested in points 1 and 2 above, the labeling should be identical in content to the draft labeling submitted on September 29, 1997.

Please submit 20 copies of the FPL, ten of which are individually mounted on heavy-weight paper or similar material.


We note your Phase IV commitment to complete work on the identification of impurities C and E by the second quarter of this year. The results should be submitted in the next annual report following completion.

If additional information relating to the safety or effectiveness of this drug becomes available, revision of the labeling may be required.

This drug product (new formulation) may not be legally marketed until you have been notified in writing that the application is approved.

If you have any questions, contact Anna Marie Homonnay-Weikel, R.Ph., Project Manager, at (301) 594-5535.

Sincerely yours,

 3/8/99

Russell Katz, M.D.
Acting Director
Division of Neuropharmacological
Drug Products
Office of Drug Evaluation I
Center for Drug Evaluation and Research

CENTER FOR DRUG EVALUATION AND RESEARCH

APPLICATION NUMBER: 021019

PRINTED LABELING

PRESCRIBING INFORMATION

COMPАЗINE®

**brand of
prochlorperazine
antiemetic • tranquilizer**

DESCRIPTION

Compazine (prochlorperazine) is a phenothiazine derivative, present in Compazine tablets and Spansule sustained release capsules as the maleate. Its chemical name is 2-chloro-10-[3-(4-methyl-1-piperazinyl)propyl]-10H-phenothiazine (Z)-2-butenedioate (1:2).

(Chemical structure to be inserted here;
as it appears on page 000014 of SB's April 27, 1999 submission)

prochlorperazine maleate

Compazine vials and syrup contain prochlorperazine as the edisylate salt and Compazine suppositories contain prochlorperazine base. Empirical formulas (and molecular weights) are: prochlorperazine maleate-- $C_{20}H_{24}ClN_3S \cdot 2C_4H_4O_4$ (606.10); prochlorperazine edisylate-- $C_{20}H_{24}ClN_3S \cdot C_2H_6O_6S_2$ (564.14); and prochlorperazine base-- $C_{20}H_{24}ClN_3S$ (373.95).

Tablets—Each round, yellow-green, coated tablet contains prochlorperazine maleate equivalent to prochlorperazine as follows: 5 mg imprinted SKF and C66; 10 mg imprinted SKF and C67.

5 mg and 10 mg Tablets—Inactive ingredients consist of cellulose, lactose, magnesium stearate, polyethylene glycol, sodium croscarmellose, titanium dioxide, D&C Yellow No. 10, FD&C Blue No. 2, FD&C Yellow No. 6, FD&C Red No. 40, iron oxide, starch, stearic acid and trace amounts of other inactive ingredients, including aluminum lake dyes.

Spansule® sustained release capsules—Each *Compazine® Spansule* capsule is so prepared that an initial dose is released promptly and the remaining medication is released gradually over a prolonged period. Food slows absorption of prochlorperazine and decreases C_{max} by 23% and AUC by 13 %.

Each capsule, with black cap and natural body, contains prochlorperazine maleate equivalent to prochlorperazine. The 10 mg capsule is imprinted 10 mg and 3344 on the black cap and is imprinted 10 mg and SB on the natural body. The 15 mg capsule is imprinted 15 mg and 3346 on the black cap and is imprinted 15 mg and SB on the natural body. Inactive ingredients consist of ammonio methacrylate co-polymer, D&C Green No. 5, D&C Yellow No. 10, FD&C Blue No. 1, FD&C Blue No. 1 aluminum lake, FD&C Red No. 40, FD&C Yellow No. 6, gelatin, hydroxypropyl methylcellulose, propylene glycol, silicon dioxide, simethicone emulsion, sodium

lauryl sulfate, sorbic acid, sugar spheres, talc, triethyl citrate, and trace amounts of other inactive ingredients.

Vials, 2 mL (5 mg/mL) and 10 mL (5 mg/mL)—Each mL contains, in aqueous solution, 5 mg prochlorperazine as the edisylate, 5 mg sodium biphosphate, 12 mg sodium tartrate, 0.9 mg sodium saccharin and 0.75% benzyl alcohol as preservative.

Suppositories—Each suppository contains 21/2 mg, 5 mg or 25 mg of prochlorperazine; with glycerin, glyceryl monopalmitate, glyceryl monostearate, hydrogenated coconut oil fatty acids and hydrogenated palm kernel oil fatty acids.

Syrup—Each 5 mL (1 teaspoonful) of clear, yellow-orange, fruit-flavored liquid contains 5 mg of prochlorperazine as the edisylate. Inactive ingredients consist of FD&C Yellow No. 6, flavors, polyoxyethylene polyoxypropylene glycol, sodium benzoate, sodium citrate, sucrose and water.

INDICATIONS

For control of severe nausea and vomiting.

For management of the manifestations of psychotic disorders.

Compazine (prochlorperazine) is effective for the short-term treatment of generalized non-psychotic anxiety. However, Compazine is not the first drug to be used in therapy for most patients with non-psychotic anxiety, because certain risks associated with its use are not shared by common alternative treatments (e.g., benzodiazepines).

When used in the treatment of non-psychotic anxiety, Compazine should not be administered at doses of more than 20 mg per day or for longer than 12 weeks, because the use of Compazine at higher doses or for longer intervals may cause persistent tardive dyskinesia that may prove irreversible (see WARNINGS).

The effectiveness of Compazine as treatment for non-psychotic anxiety was established in 4-week clinical studies of outpatients with generalized anxiety disorder. This evidence does not predict that Compazine will be useful in patients with other non-psychotic conditions in which anxiety, or signs that mimic anxiety, are found (e.g., physical illness, organic mental conditions, agitated depression, character pathologies, etc.).

Compazine has not been shown effective in the management of behavioral complications in patients with mental retardation.

CONTRAINDICATIONS

Do not use in patients with known hypersensitivity to phenothiazines.

Do not use in comatose states or in the presence of large amounts of central nervous system depressants (alcohol, barbiturates, narcotics, etc.).

Do not use in pediatric surgery.

Do not use in pediatric patients under 2 years of age or under 20 lbs. Do not use in children for conditions for which dosage has not been established.

WARNINGS

The extrapyramidal symptoms which can occur secondary to Compazine (prochlorperazine) may be confused with the central nervous system signs of an undiagnosed primary disease responsible for the vomiting, e.g., Reye's syndrome or other encephalopathy. The use of Compazine (prochlorperazine) and other potential hepatotoxins should be avoided in children and adolescents whose signs and symptoms suggest Reye's syndrome.

Tardive Dyskinesia: Tardive dyskinesia, a syndrome consisting of potentially irreversible, involuntary, dyskinetic movements, may develop in patients treated with neuroleptic (antipsychotic) drugs. Although the prevalence of the syndrome appears to be highest among the elderly, especially elderly women, it is impossible to rely upon prevalence estimates to predict, at the inception of neuroleptic treatment, which patients are likely to develop the syndrome. Whether neuroleptic drug products differ in their potential to cause tardive dyskinesia is unknown.

Both the risk of developing the syndrome and the likelihood that it will become irreversible are believed to increase as the duration of treatment and the total cumulative dose of neuroleptic drugs administered to the patient increase. However, the syndrome can develop, although much less commonly, after relatively brief treatment periods at low doses.

There is no known treatment for established cases of tardive dyskinesia, although the syndrome may remit, partially or completely, if neuroleptic treatment is withdrawn. Neuroleptic treatment itself, however, may suppress (or partially suppress) the signs and symptoms of the syndrome and thereby may possibly mask the underlying disease process.

The effect that symptomatic suppression has upon the long-term course of the syndrome is unknown.

Given these considerations, neuroleptics should be prescribed in a manner that is most likely to minimize the occurrence of tardive dyskinesia. Chronic neuroleptic treatment should generally be reserved for patients who suffer from a chronic illness that, 1) is known to respond to neuroleptic drugs, and 2) for whom alternative, equally effective, but potentially less harmful treatments are not available or appropriate. In patients who do require chronic treatment, the smallest dose and the shortest duration of treatment producing a satisfactory clinical response should be sought. The need for continued treatment should be reassessed periodically.

If signs and symptoms of tardive dyskinesia appear in a patient on neuroleptics, drug discontinuation should be considered. However, some patients may require treatment despite the presence of the syndrome.

For further information about the description of tardive dyskinesia and its clinical detection, please refer to the sections on PRECAUTIONS and ADVERSE REACTIONS.

Neuroleptic Malignant Syndrome (NMS): A potentially fatal symptom complex sometimes referred to as Neuroleptic Malignant Syndrome (NMS) has been reported in association with antipsychotic drugs. Clinical manifestations of NMS are hyperpyrexia, muscle rigidity, altered mental status and evidence of autonomic instability (irregular pulse or blood pressure, tachycardia, diaphoresis and cardiac dysrhythmias).

The diagnostic evaluation of patients with this syndrome is complicated. In arriving at a diagnosis, it is important to identify cases where the clinical presentation includes both serious medical illness (e.g., pneumonia, systemic infection, etc.) and untreated or inadequately treated extrapyramidal signs and symptoms (EPS). Other important considerations in the differential diagnosis include central anticholinergic toxicity, heat stroke, drug fever and primary central nervous system (CNS) pathology.

The management of NMS should include 1) immediate discontinuation of antipsychotic drugs and other drugs not essential to concurrent therapy, 2) intensive symptomatic treatment and medical monitoring, and 3) treatment of any concomitant serious medical problems for which specific treatments are available. There is no general agreement about specific pharmacological treatment regimens for uncomplicated NMS.

If a patient requires antipsychotic drug treatment after recovery from NMS, the potential reintroduction of drug therapy should be carefully considered. The patient should be carefully monitored, since recurrences of NMS have been reported.

An encephalopathic syndrome (characterized by weakness, lethargy, fever, tremulousness and confusion, extrapyramidal symptoms, leukocytosis, elevated serum enzymes, BUN and FBS) has occurred in a few patients treated with lithium plus a neuroleptic. In some instances, the syndrome was followed by irreversible brain damage. Because of a possible causal relationship between these events and the concomitant administration of lithium and neuroleptics, patients receiving such combined therapy should be monitored closely for early evidence of neurologic toxicity and treatment discontinued promptly if such signs appear. This encephalopathic syndrome may be similar to or the same as neuroleptic malignant syndrome (NMS).

Patients with bone marrow depression or who have previously demonstrated a hypersensitivity reaction (e.g., blood dyscrasias, jaundice) with a phenothiazine should not receive any phenothiazine, including Compazine, unless in the judgment of the physician the potential benefits of treatment outweigh the possible hazards.

Compazine (prochlorperazine) may impair mental and/or physical abilities, especially during the first few days of therapy. Therefore, caution patients about activities requiring alertness (e.g., operating vehicles or machinery).

Phenothiazines may intensify or prolong the action of central nervous system depressants (e.g., alcohol, anesthetics, narcotics).

Usage in Pregnancy: Safety for the use of Compazine during pregnancy has not been established. Therefore, Compazine is not recommended for use in pregnant patients except in cases of severe nausea and vomiting that are so serious and intractable that, in the judgment of the physician, drug intervention is required and potential benefits outweigh possible hazards.

There have been reported instances of prolonged jaundice, extrapyramidal signs, hyperreflexia or hyporeflexia in newborn infants whose mothers received phenothiazines.

Nursing Mothers: There is evidence that phenothiazines are excreted in the breast milk of nursing mothers. Caution should be exercised when Compazine is administered to a nursing woman.

PRECAUTIONS

The antiemetic action of Compazine (prochlorperazine) may mask the signs and symptoms of overdosage of other drugs and may obscure the diagnosis and treatment of other conditions such as intestinal obstruction, brain tumor and Reye's syndrome (see WARNINGS).

When Compazine is used with cancer chemotherapeutic drugs, vomiting as a sign of the toxicity of these agents may be obscured by the antiemetic effect of Compazine.

Because hypotension may occur, large doses and parenteral administration should be used cautiously in patients with impaired cardiovascular systems. To minimize the occurrence of hypotension after injection, keep patient lying down and observe for at least 1/2 hour. If hypotension occurs after parenteral or oral dosing, place patient in head-low position with legs raised. If a vasoconstrictor is required, Levophed®* and Neo-Synephrine®† are suitable. Other pressor agents, including epinephrine, should not be used because they may cause a paradoxical further lowering of blood pressure.

Aspiration of vomitus has occurred in a few post-surgical patients who have received Compazine (prochlorperazine) as an antiemetic. Although no causal relationship has been established, this possibility should be borne in mind during surgical aftercare.

Deep sleep, from which patients can be aroused, and coma have been reported, usually with overdosage.

Neuroleptic drugs elevate prolactin levels; the elevation persists during chronic administration. Tissue culture experiments indicate that approximately one third of human breast cancers are prolactin-dependent in vitro, a factor of potential importance if the prescribing of these drugs is contemplated in a patient with a previously detected breast cancer. Although disturbances such as galactorrhea, amenorrhea, gynecomastia and impotence have been reported, the clinical significance of elevated serum prolactin levels is unknown for most patients. An increase in mammary neoplasms has been found in rodents after chronic administration of neuroleptic drugs. Neither clinical nor epidemiologic studies conducted to date, however, have shown an association between chronic administration of these drugs and mammary tumorigenesis; the available evidence is considered too limited to be conclusive at this time.

Chromosomal aberrations in spermatocytes and abnormal sperm have been demonstrated in rodents treated with certain neuroleptics.

As with all drugs which exert an anticholinergic effect, and/or cause mydriasis, prochlorperazine should be used with caution in patients with glaucoma.

Because phenothiazines may interfere with thermoregulatory mechanisms, use with caution in persons who will be exposed to extreme heat.

Phenothiazines can diminish the effect of oral anticoagulants.

Phenothiazines can produce alpha-adrenergic blockade.

Thiazide diuretics may accentuate the orthostatic hypotension that may occur with phenothiazines.

Antihypertensive effects of guanethidine and related compounds may be counteracted when phenothiazines are used concomitantly.

Concomitant administration of propranolol with phenothiazines results in increased plasma levels of both drugs.

Phenothiazines may lower the convulsive threshold; dosage adjustments of anticonvulsants may be necessary. Potentiation of anticonvulsant effects does not occur. However, it has been reported that phenothiazines may interfere with the metabolism of Dilantin® and thus precipitate Dilantin toxicity.

The presence of phenothiazines may produce false-positive phenylketonuria (PKU) test results.

Long-Term Therapy: Given the likelihood that some patients exposed chronically to neuroleptics will develop tardive dyskinesia, it is advised that all patients in whom chronic use is contemplated be given, if possible, full information about this risk. The decision to inform patients and/or their guardians must obviously take into account the clinical circumstances and the competency of the patient to understand the information provided.

To lessen the likelihood of adverse reactions related to cumulative drug effect, patients with a history of long-term therapy with Compazine (prochlorperazine) and/or other neuroleptics should be evaluated periodically to decide whether the maintenance dosage could be lowered or drug therapy discontinued.

Children with acute illnesses (e.g., chickenpox, CNS infections, measles, gastroenteritis) or dehydration seem to be much more susceptible to neuromuscular reactions, particularly dystonias, than are adults. In such patients, the drug should be used only under close supervision.

Drugs which lower the seizure threshold, including phenothiazine derivatives, should not be used with Amipaque®. As with other phenothiazine derivatives, Compazine (prochlorperazine) should

be discontinued at least 48 hours before myelography, should not be resumed for at least 24 hours postprocedure, and should not be used for the control of nausea and vomiting occurring either prior to myelography with Amipaque, or postprocedure.

ADVERSE REACTIONS

Drowsiness, dizziness, amenorrhea, blurred vision, skin reactions and hypotension may occur. Neuroleptic Malignant Syndrome (NMS) has been reported in association with antipsychotic drugs (see WARNINGS).

Cholestatic jaundice has occurred. If fever with gripe-like symptoms occurs, appropriate liver studies should be conducted. If tests indicate an abnormality, stop treatment. There have been a few observations of fatty changes in the livers of patients who have died while receiving the drug. No causal relationship has been established.

Leukopenia and agranulocytosis have occurred. Warn patients to report the sudden appearance of sore throat or other signs of infection. If white blood cell and differential counts indicate leukocyte depression, stop treatment and start antibiotic and other suitable therapy.

Neuromuscular (Extrapyramidal) Reactions

These symptoms are seen in a significant number of hospitalized mental patients. They may be characterized by motor restlessness, be of the dystonic type, or they may resemble parkinsonism. Depending on the severity of symptoms, dosage should be reduced or discontinued. If therapy is reinstated, it should be at a lower dosage. Should these symptoms occur in children or pregnant patients, the drug should be stopped and not reinstated. In most cases barbiturates by suitable route of administration will suffice. (Or, injectable Benadryl®II may be useful.) In more severe cases, the administration of an anti-parkinsonism agent, except levodopa (see PDR), usually produces rapid reversal of symptoms. Suitable supportive measures such as maintaining a clear airway and adequate hydration should be employed.

Motor Restlessness: Symptoms may include agitation or jitteriness and sometimes insomnia. These symptoms often disappear spontaneously. At times these symptoms may be similar to the original neurotic or psychotic symptoms. Dosage should not be increased until these side effects have subsided.

If these symptoms become too troublesome, they can usually be controlled by a reduction of dosage or change of drug. Treatment with anti-parkinsonian agents, benzodiazepines or propranolol may be helpful.

Dystonias: Symptoms may include: spasm of the neck muscles, sometimes progressing to torticollis; extensor rigidity of back muscles, sometimes progressing to opisthotonos; carpopedal spasm, trismus, swallowing difficulty, oculogyric crisis and protrusion of the tongue.

These usually subside within a few hours, and almost always within 24 to 48 hours, after the drug has been discontinued.

In mild cases, reassurance or a barbiturate is often sufficient. In moderate cases, barbiturates will usually bring rapid relief. In more severe adult cases, the administration of an anti-parkinsonism agent, except levodopa (see PDR), usually produces rapid reversal of symptoms. In children, reassurance and barbiturates will usually control symptoms. (Or, injectable Benadryl may be useful. Note: See Benadryl prescribing information for appropriate children's dosage.) If appropriate treatment with anti-parkinsonism agents or Benadryl fails to reverse the signs and symptoms, the diagnosis should be reevaluated.

Pseudo-parkinsonism: Symptoms may include: mask-like facies; drooling; tremors; pillrolling motion; cogwheel rigidity; and shuffling gait. Reassurance and sedation are important. In most cases these symptoms are readily controlled when an anti-parkinsonism agent is administered concomitantly. Anti-parkinsonism agents should be used only when required. Generally, therapy of a few weeks to 2 or 3 months will suffice. After this time patients should be evaluated to determine their need for continued treatment. (Note: Levodopa has not been found effective in pseudo-parkinsonism.) Occasionally it is necessary to lower the dosage of Compazine (prochlorperazine) or to discontinue the drug.

Tardive Dyskinesia: As with all antipsychotic agents, tardive dyskinesia may appear in some patients on long-term therapy or may appear after drug therapy has been discontinued. The syndrome can also develop, although much less frequently, after relatively brief treatment periods at low doses. This syndrome appears in all age groups. Although its prevalence appears to be highest among elderly patients, especially elderly women, it is impossible to rely upon prevalence estimates to predict at the inception of neuroleptic treatment which patients are likely to develop the syndrome. The symptoms are persistent and in some patients appear to be irreversible. The syndrome is characterized by rhythmical involuntary movements of the tongue, face, mouth or jaw (e.g., protrusion of tongue, puffing of cheeks, puckering of mouth, chewing movements). Sometimes these may be accompanied by involuntary movements of extremities. In rare instances, these involuntary movements of the extremities are the only manifestations of tardive dyskinesia. A variant of tardive dyskinesia, tardive dystonia, has also been described.

There is no known effective treatment for tardive dyskinesia; anti-parkinsonism agents do not alleviate the symptoms of this syndrome. It is suggested that all antipsychotic agents be discontinued if these symptoms appear.

Should it be necessary to reinstitute treatment, or increase the dosage of the agent, or switch to a different antipsychotic agent, the syndrome may be masked.

It has been reported that fine vermicular movements of the tongue may be an early sign of the syndrome and if the medication is stopped at that time the syndrome may not develop.

Contact Dermatitis: Avoid getting the Injection solution on hands or clothing because of the possibility of contact dermatitis.

Adverse Reactions Reported with Compazine (prochlorperazine) or Other Phenothiazine Derivatives: Adverse reactions with different phenothiazines vary in type, frequency and mechanism of occurrence, i.e., some are dose-related, while others involve individual patient

sensitivity. Some adverse reactions may be more likely to occur, or occur with greater intensity, in patients with special medical problems, e.g., patients with mitral insufficiency or pheochromocytoma have experienced severe hypotension following recommended doses of certain phenothiazines.

Not all of the following adverse reactions have been observed with every phenothiazine derivative, but they have been reported with 1 or more and should be borne in mind when drugs of this class are administered: extrapyramidal symptoms (opisthotonos, oculogyric crisis, hyperreflexia, dystonia, akathisia, dyskinesia, parkinsonism) some of which have lasted months and even years—particularly in elderly patients with previous brain damage; grand mal and petit mal convulsions, particularly in patients with EEG abnormalities or history of such disorders; altered cerebrospinal fluid proteins; cerebral edema; intensification and prolongation of the action of central nervous system depressants (opiates, analgesics, antihistamines, barbiturates, alcohol), atropine, heat, organophosphorus insecticides; autonomic reactions (dryness of mouth, nasal congestion, headache, nausea, constipation, obstipation, adynamic ileus, ejaculatory disorders/impotence, priapism, atonic colon, urinary retention, miosis and mydriasis); reactivation of psychotic processes, catatonic-like states; hypotension (sometimes fatal); cardiac arrest; blood dyscrasias (pancytopenia, thrombocytopenic purpura, leukopenia, agranulocytosis, eosinophilia, hemolytic anemia, aplastic anemia); liver damage (jaundice, biliary stasis); endocrine disturbances (hyperglycemia, hypoglycemia, glycosuria, lactation, galactorrhea, gynecomastia, menstrual irregularities, false-positive pregnancy tests); skin disorders (photosensitivity, itching, erythema, urticaria, eczema up to exfoliative dermatitis); other allergic reactions (asthma, laryngeal edema, angioneurotic edema, anaphylactoid reactions); peripheral edema; reversed epinephrine effect; hyperpyrexia; mild fever after large I.M. doses; increased appetite; increased weight; a systemic lupus erythematosus-like syndrome; pigmentary retinopathy; with prolonged administration of substantial doses, skin pigmentation, epithelial keratopathy, and lenticular and corneal deposits.

EKG changes—particularly nonspecific, usually reversible Q and T wave distortions—have been observed in some patients receiving phenothiazine tranquilizers.

Although phenothiazines cause neither psychic nor physical dependence, sudden discontinuance in long-term psychiatric patients may cause temporary symptoms, e.g., nausea and vomiting, dizziness, tremulousness.

Note: There have been occasional reports of sudden death in patients receiving phenothiazines. In some cases, the cause appeared to be cardiac arrest or asphyxia due to failure of the cough reflex.

DOSAGE AND ADMINISTRATION

Notes on Injection: Stability—This solution should be protected from light. This is a clear, colorless to pale yellow solution; a slight yellowish discoloration will not alter potency. If markedly discolored, solution should be discarded.

Compatibility—It is recommended that Compazine (prochlorperazine) Injection not be mixed with other agents in the syringe.

DOSAGE AND ADMINISTRATION—ADULTS

(For children's dosage and administration, see below.) Dosage should be increased more gradually in debilitated or emaciated patients.

Elderly Patients: In general, dosages in the lower range are sufficient for most elderly patients. Since they appear to be more susceptible to hypotension and neuromuscular reactions, such patients should be observed closely. Dosage should be tailored to the individual, response carefully monitored and dosage adjusted accordingly. Dosage should be increased more gradually in elderly patients.

1. To Control Severe Nausea and Vomiting: Adjust dosage to the response of the individual. Begin with the lowest recommended dosage.

Oral Dosage—Tablets: Usually one 5 mg or 10 mg tablet 3 or 4 times daily. Daily dosages above 40 mg should be used only in resistant cases.

Spansule capsules: Initially, usually one 15 mg capsule on arising or one 10 mg capsule q12h. Daily doses above 40 mg should be used only in resistant cases.

Rectal Dosage: 25 mg twice daily.

I.M. Dosage: Initially 5 to 10 mg (1 to 2 mL) injected deeply into the upper outer quadrant of the buttock. If necessary, repeat every 3 or 4 hours. Total I.M. dosage should not exceed 40 mg per day.

I.V. Dosage: 2½ to 10 mg (½ to 2 mL) by slow I.V. injection or infusion at a rate not to exceed 5 mg per minute. Compazine Injection may be administered either undiluted or diluted in isotonic solution. A single dose of the drug should not exceed 10 mg; total I.V. dosage should not exceed 40 mg per day. When administered I.V., do not use bolus injection. Hypotension is a possibility if the drug is given by I.V. injection or infusion.

Subcutaneous administration is not advisable because of local irritation.

2. Adult Surgery (for severe nausea and vomiting): Total parenteral dosage should not exceed 40 mg per day. Hypotension is a possibility if the drug is given by I.V. injection or infusion.

I.M. Dosage: 5 to 10 mg (1 to 2 mL) 1 to 2 hours before induction of anesthesia (repeat once in 30 minutes, if necessary), or to control acute symptoms during and after surgery (repeat once if necessary).

I.V. Dosage: 5 to 10 mg (1 to 2 mL) as a slow I.V. injection or infusion 15 to 30 minutes before induction of anesthesia, or to control acute symptoms during or after surgery. Repeat once if necessary. Compazine (prochlorperazine) may be administered either undiluted or diluted in isotonic solution, but a single dose of the drug should not exceed 10 mg. The rate of administration should not exceed 5 mg per minute. When administered I.V., do not use bolus injection.

3. In Adult Psychiatric Disorders: Adjust dosage to the response of the individual and according to the severity of the condition. Begin with the lowest recommended dose. Although response ordinarily is seen within a day or 2, longer treatment is usually required before maximal improvement is seen.

Oral Dosage: Non-Psychotic Anxiety—Usual dosage is 5 mg 3 or 4 times daily; by Spansule capsule, usually one 15 mg capsule on arising or one 10 mg capsule q12h. Do not administer in doses of more than 20 mg per day or for longer than 12 weeks.

Psychotic Disorders—In relatively mild conditions, as seen in private psychiatric practice or in outpatient clinics, dosage is 5 or 10 mg 3 or 4 times daily.

In moderate to severe conditions, for hospitalized or adequately supervised patients, usual starting dosage is 10 mg 3 or 4 times daily. Increase dosage gradually until symptoms are controlled or side effects become bothersome. When dosage is increased by small increments every 2 or 3 days, side effects either do not occur or are easily controlled. Some patients respond satisfactorily on 50 to 75 mg daily.

In more severe disturbances, optimum dosage is usually 100 to 150 mg daily.

I.M. Dosage: For immediate control of severely disturbed adults, inject an initial dose of 10 to 20 mg (2 to 4 mL) deeply into the upper outer quadrant of the buttock. Many patients respond shortly after the first injection. If necessary, however, repeat the initial dose every 2 to 4 hours (or, in resistant cases, every hour) to gain control of the patient. More than three or four doses are seldom necessary. After control is achieved, switch patient to an oral form of the drug at the same dosage level or higher. If, in rare cases, parenteral therapy is needed for a prolonged period, give 10 to 20 mg (2 to 4 mL) every 4 to 6 hours. Pain and irritation at the site of injection have seldom occurred.

Subcutaneous administration is not advisable because of local irritation.

DOSAGE AND ADMINISTRATION—CHILDREN

Do not use in pediatric surgery.

Children seem more prone to develop extrapyramidal reactions, even on moderate doses. Therefore, use lowest effective dosage. Tell parents not to exceed prescribed dosage, since the possibility of adverse reactions increases as dosage rises.

Occasionally the patient may react to the drug with signs of restlessness and excitement; if this occurs, do not administer additional doses. Take particular precaution in administering the drug to children with acute illnesses or dehydration (see under Dystonias).

When writing a prescription for the 21/2 mg size suppository, write “21/2,” not “2.5”; this will help avoid confusion with the 25 mg adult size.

1. Severe Nausea and Vomiting in Children: Compazine (prochlorperazine) should not be used in pediatric patients under 20 pounds in weight or 2 years of age. It should not be used in conditions for which children's dosages have not been established. Dosage and frequency of administration should be adjusted according to the severity of the symptoms and the response of the patient. The duration of activity following intramuscular administration may last up to 12 hours. Subsequent doses may be given by the same route if necessary.

Oral or Rectal Dosage: More than 1 day's therapy is seldom necessary.

Weight	Usual Dosage	Not to Exceed
under 20 lbs	not recommended	
20 to 29 lbs	2 1/2 mg 1 or 2 times a day	7.5 mg per day
30 to 39 lbs	2 1/2 mg 2 or 3 times a day	10 mg per day
40 to 85 lbs	2 1/2 mg 3 times a day or 5 mg 2 times a day	15 mg per day

I.M. Dosage: Calculate each dose on the basis of 0.06 mg of the drug per lb of body weight; give by deep I.M. injection. Control is usually obtained with one dose.

2. In Psychotic Children:

Oral or Rectal Dosage: For children 2 to 12 years, starting dosage is 2 1/2 mg 2 or 3 times daily. Do not give more than 10 mg the first day. Then increase dosage according to patient's response.

FOR AGES 2 to 5, total daily dosage usually does not exceed 20 mg.

FOR AGES 6 to 12, total daily dosage usually does not exceed 25 mg.

I.M. Dosage: For ages under 12, calculate each dose on the basis of 0.06 mg of Compazine (prochlorperazine) per lb of body weight; give by deep I.M. injection. Control is usually obtained with one dose. After control is achieved, switch the patient to an oral form of the drug at the same dosage level or higher.

OVERDOSAGE

(See also ADVERSE REACTIONS.)

SYMPTOMS—Primarily involvement of the extrapyramidal mechanism producing some of the dystonic reactions described above.

Symptoms of central nervous system depression to the point of somnolence or coma. Agitation and restlessness may also occur. Other possible manifestations include convulsions, EKG changes and cardiac arrhythmias, fever and autonomic reactions such as hypotension, dry mouth and ileus.

TREATMENT—It is important to determine other medications taken by the patient since multiple-dose therapy is common in overdose situations. Treatment is essentially symptomatic and supportive. Early gastric lavage is helpful. Keep patient under observation and maintain an open airway, since involvement of the extrapyramidal mechanism may produce dysphagia and

respiratory difficulty in severe overdose. **Do not attempt to induce emesis because a dystonic reaction of the head or neck may develop that could result in aspiration of vomitus.**

Extrapyramidal symptoms may be treated with anti-parkinsonism drugs, barbiturates or Benadryl. See prescribing information for these products. Care should be taken to avoid increasing respiratory depression.

If administration of a stimulant is desirable, amphetamine, dextroamphetamine or caffeine with sodium benzoate is recommended.

Stimulants that may cause convulsions (e.g., picrotoxin or pentylenetetrazol) should be avoided.

If hypotension occurs, the standard measures for managing circulatory shock should be initiated. If it is desirable to administer a vasoconstrictor, Levophed and Neo-Synephrine are most suitable. Other pressor agents, including epinephrine, are not recommended because phenothiazine derivatives may reverse the usual elevating action of these agents and cause a further lowering of blood pressure.

Limited experience indicates that phenothiazines are not dialyzable.

Special note on Spansule capsules—Since much of the Spansule capsule medication is coated for gradual release, therapy directed at reversing the effects of the ingested drug and at supporting the patient should be continued for as long as overdose symptoms remain. Saline cathartics are useful for hastening evacuation of pellets that have not already released medication.

HOW SUPPLIED

Tablets—5 and 10 mg, in bottles of 100; in Single Unit Packages of 100 (intended for institutional use only).

5 mg 100's: NDC 0007-3366-20

5 mg SUP 100's: NDC 0007-3366-21

10 mg 100's: NDC 0007-3367-20

10 mg SUP 100's: NDC 0007-3367-21

Spansule capsules—10 and 15 mg, in bottles of 50.

10 mg 50's: NDC 0007-3344-15

15 mg 50's: NDC 0007-3346-15

Vials—2 mL (5 mg/mL), in boxes of 25 and

10 mL (5 mg/mL), in boxes of 1.

2 mL (5 mg/mL), in boxes of 25: NDC 0007-3352-16

10 mL (5 mg/mL), in boxes of 1: NDC 0007-3343-01

Suppositories—2 1/2 mg (for young children),

5 mg (for older children) and 25 mg (for adults), in boxes of 12.

2 1/2 mg, in boxes of 12: NDC 0007-3360-03

5 mg, in boxes of 12: NDC 0007-3361-03
25 mg, in boxes of 12: NDC 0007-3362-03

Syrup—5 mg/5 mL (1 teaspoonful) in 4 fl oz bottles.

5 mg/5 mL, 4 fl oz: NDC 0007-3363-44

Store Compazine (prochlorperazine) vials below 30°C (86°F). Do not freeze. Other dosage forms can be stored between 15° and 30°C (59° and 86°F). Protect from light.

*norepinephrine bitartrate, Sanofi Winthrop Pharmaceuticals.
†phenylephrine hydrochloride, Sanofi Winthrop Pharmaceuticals.
‡phenytoin, Parke-Davis.
§metrizamide, Sanofi Winthrop Pharmaceuticals.
Ildiphenhydramine hydrochloride, Parke-Davis.

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