What's the point of adding C to iron?

It helps to increase absorption!

In normal subjects, when results with Fero-Grad-500 were compared with those of a tablet containing controlled-release ferrous sulfate without ascorbic acid, the absorption of iron from Fero-Grad-500 was 87% greater (mean of six subjects).*


FERO-GRAD-500®

Once-a-day hematinic supplies
525 mg. of Ferrous Sulfate
in Controlled-Release form
plus
500 mg. of Ascorbic Acid
to help insure
optimal iron absorption

Simple safe economical

Biopack
the blood bag system of BIOTEST, a progress in blood transfusion

BIOTEST-Serum-Institut GmbH Frankfurt/M., W.-Germany
NOTE TO CONTRIBUTORS

Papers are accepted for publication on condition that they are contributed solely to this Journal. Manuscripts must be typewritten, in good English, double or triple spaced, on good quality bond paper with at least one inch margins, the original and one duplicate submitted (figures and tables should also be submitted in duplicate). Papers reporting human experimentation will be reviewed in accordance with the precepts established in the Helsinki Declaration. Copies of this declaration may be obtained by writing either to the American Medical Association, 535 North Dearborn Street, Chicago, Illinois, or to the Editor's office (Dr. William Dameshek, The Mount Sinai Hospital, 19 E. 98th St. New York, N.Y. 10029). Brief Reports of not more than 4-5 double spaced, typewritten pages, and especially of new or preliminary work, Letters to the Editor, Hypotheses and Brief Reviews may be submitted for prompt publication, subject to editorial review.

References to literature, both text and bibliography, should conform with this Journal's usage. Contributors are advised to examine issues of the Journal so that their manuscripts will conform to the Journal's style as to table and figure references, citations of literature in the text, preferred spellings, abbreviations, and so forth.

Reports of experiments on human subjects should conform in general with the "recommendations guiding doctors in clinical research" as stated in the Declaration of Helsinki of the World Medical Association (1964). This includes the principle of free and informed consent by the subject. The Editors of this Journal reserve the right to exclude papers otherwise acceptable when there is evidence of apparently improper experimentation on humans or inadequate information of consent by the subject, his guardians, or the school or hospital concerned.

Tables will be furnished without charge to the limit of one and one-half printed pages total, charts and illustrations in black and white to the limit of four. Excessive tables are charged for at approximately $20.00 per page, depending upon the type of material, and excessive illustrations are charged for at $10.00 each. The cost of colored illustrations in both articles and reprints must be borne by the contributors, and an estimate of such cost will be provided upon submission of the material.

Correspondence concerning business matters should be addressed to Henry M. Stratton, Inc., Medical Publishers, 381 Park Avenue South, New York, N.Y. 10016. All communications concerning editorial matters should be addressed to Dr. William Dameshek, Department of Hematology, Mt. Sinai Hospital, Fifth Avenue at 100th Street, New York, N.Y. 10029.

Subscription rates, $25.00 per year within the United States; foreign, $27.00 per year. Students, Fellows, Interns and Residents may receive a reduced subscription of $17.00 per year (a letter giving qualifying data must accompany such orders). Single copies $5.00. Supplementary issues sold at special prices obtainable on request. Subscriptions are accepted on a calendar year basis. BLOOD is published monthly, in two volumes per year.

Advertising accepted subject to editorial review. Rates, specifications and other information on request.


Changes of address notices, including both the subscriber's old and new address, should be sent at least one month in advance to the Publishers, Henry M. Stratton, Inc., as listed above.


Published monthly at 381 Park Ave., So., New York, N.Y. 10016. Second class postage paid at New York, N.Y. and at additional mailing offices.

Copyright 1969, Henry M. Stratton, Inc.
NEW PORTABLE EXTRACORPOREAL
BETA* THERAPY IRRADIATOR FOR

BLOOD & LYMPH

This flow-through extracorporeal irradiator has immediate application for
the treatment of various forms of leukemia and in immunosuppression
in organ transplants and grafts.

It is the most advanced radiation therapy device presently available. It is
self-contained and does not require a special shielded room . . . it is portable and
designed for bedside, outpatient or clinical use . . . . it is low cost and brings
radiation therapy to a greater number of patients . . . it offers a variable dose
rate and permits the therapist versatility in treatment . . . it is new and
described better in our comprehensive technical bulletin.

*Over 100x as effective per curie as gamma emitters.

Write for complete information today.

Radiation Machinery Corporation
1280 Route 46, Parsippany, New Jersey 07054 • (201) 887-4700
Protects life before it begins...
for the prevention of Rh hemolytic disease...

RhoGAM
Rh₀ (D) Immune Globulin (Human)

After appropriate laboratory procedures have been completed...

with the intramuscular injection of the mother within 72 hours postpartum
for the first successful maternal immunization

First in clinical use, studies with RhoGAM subjects with subsequent pregnancies—reduction of its statistically insignificant number

Virtually 100% effectiveness clinically proven throughout the world

Antibody quality of the highest standard—introduced

Stability of RhoGAM—an exclusive ORTHO product date, with no deterioration during storage

Safety with administration of RhoGAM—no side effects have been reported

Eight years of research and development
for the prevention of Rh hemolytic disease...

RhoGAM
Rh(D) Immune Globulin (Human)

DIRECTIONS FOR USE
Product Description:
RhoGAM Rh(D) Immune Globulin (Human) is a sterile concentrated solution of specific gamma globulin (IgG). The activity ingredient is the anti-Rh(D) antibody contained in 15% ± 1.5% serum globulin. Each vial also contains approximately 2.9 mg of sodium chloride and 15 mg of glycine as inactive ingredients and 1:10,000 concentration of thimerosal as preservative.

Action: The Rh(D) antibody produced by the Rh-negative mother after delivery of an Rh-positive infant is the cause of Rh hemolytic disease of the newborn in subsequent pregnancies. When RhoGAM is injected within 72 hours after delivery, it suppresses the development of this antibody in the mother.

Indications: Prevention of active immunization against the Rh(D) factor in the Rh(D) negative, D⁺ negative mother who has delivered an Rh(D) positive or D⁺ positive child, or following a miscarriage.

Precautions: Appropriate laboratory tests must be performed to determine that the mother meets all of the following criteria: (1) is Rh(D) negative, D⁺ negative; (2) is not already immunized to the Rh(D) factor; (3) has delivered a baby who is either Rh(D) positive or D⁺ positive. (In the case of a miscarriage it should be assumed that the fetus met these criteria unless the father is known to be Rh(D) negative and D⁺ negative.)

Side Effects: Reactions of Rh(D) negative women to RhoGAM are generally mild and infrequent and mostly confined to the site of the injection. An occasional patient may react more strongly both locally and generally. A slight elevation of temperature has been noted in a small number of cases. Systemic reactions are rare, and sensitization to repeated injection of immune serum globulin is unusual.

Contraindications: RhoGAM should not be administered to: (1) an Rh(D) positive or D⁺ positive mother; (2) one who has received an Rh(D) positive blood transfusion within 3 months; (3) one who has been previously immunized to Rh(D).

Administration: Detailed instructions contained in the package circular regarding necessary laboratory tests, control of records and mode of administration should be studied before using RhoGAM. Using a 2 ml syringe, the total contents of the vial are injected intramuscularly.

IMPORTANT NOTE: Injection should always be made within 72 hours following delivery. RhoGAM is to be given to the postpartum mother only. It must not be given to the infant.

Availability: The RhoGAM package consists of one single dose vial of RhoGAM, one droppered vial of a 1:1000 dilution of RhoGAM for crossmatch, direction circular, patient crossmatch status form, patient identification card. Store at 2-8°C. DO NOT FREEZE.
• SHAPES A BA
New

Fenwal® INTEGRAL PILOT TUBE
An improved system for collecting and processing donor pilot samples

Now you can collect a sterile pilot tube sample simply, efficiently, and with absolute confidence. The new FENWAL INTEGRAL PILOT TUBE BLOOD-PACK® Unit allows a truly representative sample of the donor's blood to be collected automatically in a completely closed system. Sterility is assured right up to the time of use. The new INTEGRAL PILOT TUBE BLOOD-PACK Unit also incorporates the Fenwal sealed and numbered SEGMENT system. This combination of identically numbered SEGMENTS and the INTEGRAL PILOT TUBE permits positive identification of the donor samples from the moment of collection through testing, processing, storage and shipping. The new INTEGRAL PILOT TUBE replaces conventional glass pilot tubes, is unbreakable, tamperproof, and compatible with existing procedures and laboratory equipment.

Ask your Fenwal Field Sales Specialist to demonstrate the advantages of this new concept in blood banking the next time he visits, or write.

FENWAL LABORATORIES
DIVISION OF TRAVELER'S LABORATORIES, INC.
Morton Grove, Illinois
Courtland Scientific Products Division of Abbott Laboratories introduces the "Blood Bank Pleasers"
welcomed. Write us, visit us, call us. But let us know your needs.

Finally... delivery.

Yours is a professional facility. You serve the community, often on an emergency basis. You can’t afford to be waiting for supplies.

At Courtland, all shipments will be made from Chicago, hub of the country. O’Hare Field is just minutes away. In any kind of an emergency situation, call us Collect. We’ll work to have that shipment in your hands within hours.

full-time technical counseling on any of your problems, ordinary or extra-ordinary.

An example might be a serum sample about which you have a question concerning procedure, or your findings. Send it in. We’ll advise you—or run a verification of your results.

Any question, as long as it’s within our sphere of experience or competence, will be

Blood bank reagents represent a major undertaking, not only for Courtland but for Abbott. Available now are Blood Grouping and Typing Serums, Anti-Human (Coombs) Serum and 22% and 30% Bovine Albumin.

We hope you won’t wait. We hope you’ll try us now. We’d like very much to have to make good on our promises.
The "Blood Bank Pleasers" from Courtland—available now.
The Fisher Hem-alyzer frees your people for other work

The Fisher Hem-alyzer® is the only completely automated instrument available in the field of hematology. Completely unattended, it quickly and efficiently makes WBC, RBC, and hemoglobin determinations. The totally modular Hem-alyzer samples each blood specimen, makes the necessary dilutions, performs the determinations and prints the three readings on tape—each adjacent to the code number of the sample. For more information write Fisher Scientific Company, 711 Fisher Building, Pittsburgh, Pa. 15219, or Forchstrasse 59, 8032 Zurich, Switzerland.
HEMATOLOGY
TRaineeship
ProgRoaM
A 2 year Traineeship Program in Hematology and Immunology under the auspices of the Departments of Medicine, Veterans Administration West Side Hospital and the University of Illinois Research and Educational Hospital, Chicago, Illinois, has recently been approved for 4 years. Program consists of training in all aspects of clinical hematology and select areas of clinical investigation. Well equipped research laboratories are in existence. Graduate courses at the University of Illinois in immunology, biochemistry, physiology and access to computers available. Applicants should have had a minimum of 2 years of clinical specialty training in internal medicine. U.S. citizenship required. Annual salary depending on experience, $10,203 to $12,174. Direct inquiries to Dr. Paul Heller, Chief, Medical Services, VA West Side Hospital, 820 S. Damen Ave., Chicago, Illinois 60612.

The
Haemolytic
Anaemias
congenital and acquired
second edition—in four parts

By J. V. Dacie, M.D.

Part I—The Congenital Anaemias
"No hematologist can afford to be without this volume; it has no equal." J.A.M.A. 339 pp. 118 illus. $7.00

Part II—The Auto-Immune Anaemias
"... a classic on this aspect of hematology." Ann. Int. Med. 371 pp. 61 illus. $7.75

Part III—Secondary or Symptomatic Haemolytic Anaemias
"... mandatory reading for the physician interested in haemolytic disease ... scholarly goals are achieved with an ease of presentation that makes the learning pleasurable." Mil. Med. 274 pp. 69 illus. $9.75

Part IV—Drug-Induced Haemolytic Anaemias, Paroxysmal
Nocturnal Haemoglobinuria, Haemolytic Disease of the Newborn
"... apparent to any reader that this has been a monumental task ... It is a task well accomplished ... belongs in every medical library and on the shelves of every practicing hematologist." Arch. Int. Med. 368 pp. 50 illus. $11.00

Grune & Stratton, Inc.
381 Park Avenue South
New York, N.Y. 10016

Reasonably priced!

Stamp by journal name, each holds—
Blood: 1 vol., 6 issues
Metabolism: 1 vol., 12 issues
Journal of Pediatric Surgery: 2 vols., 12 issues
Arthritis & Rheumatism: 1 vol., 6 issues & suppl.

NOW, your journals can become an attractive permanent part of your professional library. These famous Jesse Jones volume files, especially designed to keep your copies orderly, readily accessible for future reference—guard against soiling, tearing, wear or misplacement of copies. These durable files will support 150 lbs. Looks and feels like leather and is washable. The 23-carat gold lettering makes it a fit companion for the most costly binding. Only $3.50 ea.; 3 for $10.00; 6 for $19.00 P.P.D. Satisfaction unconditionally guaranteed or your money back. (U.S.A. orders only. Enclose check and avoid billing charges.)

JESSIE JONES BOX CORP. (Since 1843)
Department HS—Philadelphia, Penna. 19141
Introducing

BEHRING DIAGNOSTICS...
A name to remember... Behring... more than six decades of research and a world-wide reputation for the excellence of its laboratory systems used in the service of medicine.

Behring Diagnostics, Inc., formerly CBDS, now offers serologic and immunological products developed by the world-famous research laboratories of Behringwerke AG, founded 65 years ago by Emil von Behring, a Nobel prize winner for his work on serum therapy.

These Behringwerke products, recognized throughout the world for their excellence, include serologic reagents for the diagnosis of inflammatory and rheumatoid diseases. Behringwerke immunological products include antisera and other products used in immunoelectrophoresis and radial immunodiffusion, as well as Partigen™ Single Radial Immunodiffusion Plates which permit precise quantification of 17 plasma proteins.

Behring Diagnostics also offers a complete line of high quality blood banking products produced in its laboratories in Woodbury, N.Y.

For further information, write or telephone: Behring Diagnostics, Inc., 400 Crossways Park Drive, Woodbury, N.Y. 11797 (516) 921-7430
Autoimmunization and the Autoimmune Hemolytic Anemias

This comprehensive new volume by Bernard Pirofsky, M.D., summarizes the clinical, serologic, and theoretical implications of the autoimmune hemolytic anemias. The book is divided into two separate, but related, sections: the Clinical Aspects section describes the varying patterns of autoimmune hemolytic anemia and emphasizes its role as one manifestation of a multi-system, immunologically mediated disease. The Theoretical and Serologic Aspects section outlines the basic concepts of immunologic self-recognition and autoimmunization. 1969/550 pp./44 figs./$19.50

The Williams & Wilkins Company
428 E. Preston Street
Baltimore, Maryland 21202
The Dade Cell Washer.

Saves time. Eliminates errors. And frees valuable technologists from cell washing and decanting procedures. One push of a button gives three complete wash-decant cycles (or less, if you prefer). Precise, automatic operation provides reproducible, standardized reactions for compatibility testing. Saline is automatically pre-measured and injected into each tube. Supernatant is automatically decanted between washings, without tube removal. Factory precalibration and testing provide precise saline wash ratios, eliminate day-to-day, test-to-test human variables. Once cell suspension is prepared, only 15 additional seconds of the technologist's time is required for the manual addition of Coomb's serum.

Technologists are far too valuable to waste on mechanical procedures. Leave time-consuming cell washing chores to the Efficiency Expert — the new Dade Cell Washer.
Dade serums. The standard of consistent quality in modern laboratory procedures.

- Anti-Human Globulin (Coombs) Serum
- Reagent Red Blood Cells (Human) Coombs Control
- Search-Cyte (I & II) Reagent
- Red Cells (Human) Specific (Bovine) Albumin (30% + 22%)
- Anti-A Blood Grouping Serum (Human)
- Anti-B Blood Grouping Serum (Human)
- Anti-Rh₀ (Anti-D) Serum (Human)

Dade, Division of American Hospital Supply Corporation, Miami, Florida 33152
Dade products are available in the U.S. from Scientific Products® and from leading distributors throughout the world.
The great slide race

Hema-Tek™ Slide Stainer wins it every time.

Why settle for the slow pace and tedious labor of manual slide staining, when now you can get a slide a minute...minute after minute...automatically...with Hema-Tek Slide Stainer.

With Hema-Tek Slide Stainer there's no contaminated stain. No stain mess. No wasted time. No ruined slides. Slides advance through the 3 staining cycles automatically; are even dried automatically.

Hema-Tek Slide Stainer, releases pre-mixed, laboratory-standardized stain, buffer, and rinse onto each slide as the slides advance. Stain-Pak holds enough solutions for 1,000 slides. When solutions run low, you drop in a fresh Stain-Pak. You never have to handle the solutions, and the stain is triple-filtered to minimize precipitation. Moreover, Hema-Tek Slide Stainer frees the technician for other duties during the automatic process.

For complete information on Hema-Tek Slide Stainer and Stain-Pak, write to: Ames Company

Ekhart, Indiana 46514
"Sahara brand" hot plates are of a new and advanced design with built-in features which provide the maximum in accuracy, durability and convenience in this widely used appliance.

A FEW OUTSTANDING ADVANTAGES:
Robertshaw hydraulic thermostat offers the maximum in thermal accuracy and dependability.
Cast aluminum top is thick and well supported for even heat conductivity.
Embedded heating element is of the fully enclosed tubular type.
Smart, modern appearance. Heating plate is clear anodized aluminum. Base housing is a thick aluminum spinning anodized in jet black; a very attractive combination.
Model 263 - 8'' Dia. $49.50
Model 264 - 10'' Dia. $59.50

SPECIFICATIONS

OUTSIDE CHAMBER
Width 14'' Width 11 1/2''
Height 18'' Height 12 3/4''
Front to Back 24'' Front to Back 20''

ELECTRICAL
Wattage 2200
Heating Element (Type) Tubular
Heat Range - Room Temperature to 200° C.
Thermal Accuracy 2° C.
Thermostat Robertshaw
Timer 3 Hour with signal
NO. 210-N Lipshaw Dry Sterilizer, complete for operation on 115 Volt, A.C. $295.00

YOU CAN USE A DRY STERILIZER IN YOUR:
AUTOPSY ROOM to sterilize all knives, scissors and other instruments.
LABORATORY — Destruction of pathogenic organisms produced by test incubation, sterilizing specimen collection apparatus, etc.
SURGICAL SUITE for sterilizing delicate cutting instruments, sutures, etc.

Please request our complete catalog

Lipshaw MANUFACTURING CO.
7446 CENTRAL AVENUE
DETROIT, MICHIGAN 48210
Pathology of Leukemia
by George D. Amromin, M.D.
With 4 Contributing Authors

Here, at last, is a wealth of vital information on the histopathology of leukemia—brought together in one volume!

The book is based on first-hand studies of hundreds of autopsies of leukemic patients. There are numerous tissue and marrow biopsies, sections and smears from the author's own patients. You will find presented here the many tissues and physiopathologic manifestations of leukemia, with particular emphasis on the changes brought about by chemotherapy. Rather than emphasizing marrow and peripheral blood smears, information which can be gained from carefully prepared hematoxylin- and eosin-stained marrow sections is stressed.

One whole chapter describes the ultrastructural features of the formed blood elements, supplements their morphology as viewed by light microscopy, and contrasts the leukemic cell with the normal. Another presents cytogenetics as an important aid in diagnosis and as an approach to a deeper understanding of leukemogenesis. The application of enzymatic histochemical technics, a number of which are new, to normal and leukemic cells is discussed in detail.

By George D. Amromin, M.D., Chairman, Department of Pathology, City of Hope Medical Center, Duarte, California. With four contributors: Tsuioshi Kakefuda, M.D., Ph.D.; Perry J. Melnick, M.D., Ph.D.; Robert B. Rosen, M.D.; and Raymond L. Teplitz, M.D. 460 pp., 365 illus., $26.50

Also of Interest . . .

Treatment of Hemorrhagic Disorders
A new practical approach to bleeding disorders! Following a discussion of the basic hematologic defects general treatment of hereditary disease is given, as is care in surgery, orthopedics, and dentistry. Psychiatric aid and genetic counseling are included. Treatment for acquired disorders such as defibrination syndromes and fibrinolytic disorders, defibrination syndromes of pregnancy, disorders of blood platelets, and non-thrombocytopenic purpuras follow.

By 15 Authors. Edited by Oscar D. Ratnoff, M.D., Professor of Medicine, Case Western Reserve University School of Medicine. 256 pp., 2 illus., $8.50
A new twist for fast, easy blood sample collection...

Pliapak® Introduces...

The Inline Serology Needle with Tamperproof Seal

(Turn the page... and see how the new Inline Serology Needle can save time on every unit of blood you process)
New Pliapak® Inline Serology Needle

Expressly designed for rapid sample collection with evacuated pilot tubes

Just twist to break the tamperproof seal . . .
No need to cut donor tubing with scissors before collecting samples. No need to waste time with slow gravity technique for sample collection. After collecting full unit of blood, seal tubing with ferrule and apply hemostat, as shown. Then grip sturdy “wings” and twist to break Tamperproof Seal. Inline needle is fully enclosed inside donor tubing. (Tamperproof feature guards against inadvertent separation before use.)

Now separate the new inline serology needle from the donor tubing . . .
Simply twist and pull. Large “wing” surfaces provide a firm, sure grip for easy separation of needle, easy insertion through stoppers.

In only seconds, you’re ready to collect samples in any evacuated pilot tube . . .
Donor needle, Inline needle and interconnecting tubing provide a direct fluid pathway for sample collection. After use, just dispose. Seven numbered segments of donor tubing still remain on Pliapak for cross-matching samples.

The Pliapak Line

Ask your Abbott Representative for a demonstration
What does the “A” mean in...

SMA²⁷A

The greatest ADVANCE in automated hematology!

True one-by-one counting. Linear from zero to virtually full scale for both RBC and WBC. Precisely defined view volume allows greater cell concentration and eliminates high dilution. No electronic or diluent background errors.

For additional information write Department 57, Technicon Corporation, Tarrytown, New York 10591
JUST PUBLISHED

Practical Haematology

4th Edition Revised and Enlarged

By J. V. DACIE, M.D., F.R.C.P., F.C. Path., F.R.S.
Professor of Haematology, Royal Postgraduate Medical School, London

and S. M. LEWIS, B.Sc., M.D., D.C.P., M.C. Path.
Senior Lecturer in Haematology, Royal Postgraduate Medical School, London

The fourth edition of this outstanding volume reflects the remarkable increase in the knowledge of blood and its related diseases which have occurred in the past five years. New techniques have been introduced—some involving automation—and others have given way to more simplified and modified methods. These changes plus the latest advances in laboratory hematology are presented in this up-dated and timely volume.

From reviews of Volume III:

"... a presentation of 'the whole range of laboratory work... in the investigation of a person suffering from a blood disease.' It fulfills this purpose so admirably that it must be recommended without reservation to physicians and students of hematologic disorders as the best composed and most authoritative publication in this segment of laboratory investigation today." Ann. Int. Med.

"There is little that one can find that is not praiseworthy. I have read it all with great pleasure and recommend it enthusiastically to anyone who has responsibility for examination of a patient's blood and work-up of its abnormalities." J.A.M.A.

CONTENTS


576 Pages  104 Illus.  $8.75
Immediate delivery from the 16 Fisher branches throughout the U.S. and Canada (there's bound to be one handy to you) assures a ready reagent supply to keep vital AutoAnalyzer systems running on schedule.

As for the reagents, they're top quality, made by Fisher's own reagent specialists. There are reagents for ten important test series: electrolytes—carbonate, chloride and sodium/potassium; chemistries—albumin, total protein, B.U.N., cholesterol, creatinine, glucose and uric acid.

Unique Fisher packaging—PolyPac™ store-dispense containers and Gram-Pac™ envelopes—means extra convenience and protection.

REFERENCES*

Lists of references cited in medical text are often in error; yet, many readers judge an article largely by the accuracy with which such material was originally prepared in manuscript and checked in proof. BLOOD hopes that observance of the following notes to authors will result in more accurate bibliographic information, presented in a consistent style.

Type bibliographies double-spaced under the heading, REFERENCES. See examples below. Note use of the paragraph indentation. Do not underline or use all-caps.

References should be compiled numerically according to the order of citation in the text.

Use initials for the names of cited authors rather than full first names (although full first names of female authors may be used). The abbreviation, “et al.,” is permitted in text but not in lists of references.

Abbreviations for titles of medical periodicals should conform to those used in Index Medicus. (A “List of Journals Indexed in Index Medicus”—with abbreviations—is obtainable from the Superintendent of Documents, U. S. Government Printing Office, Washington, D. C. 20402, at 75 cents.) Note that BLOOD uses periods for such abbreviations.

Abbreviate book publishers’ names by elimination of their initials and such designations as “Company, Inc., Bros., Ltd.”

Foreign-language titles of cited books and articles should be given in the original language, followed by a precise English translation in parentheses. Pay particular attention to proper use of accents, capitalization of German nouns, and similar conventions. If the original language uses other than the Roman alphabet, simply give the title in English, followed by a parenthetical note—e.g., (in Russian).

Note that the bibliographic references should be complete, as exemplified below. Note the order of material, style of punctuation and the different use of capital letters for book and journal literature; also Ed. (editor) vs. ed. (edition), etc.

Before submitting the manuscript for publication, check bibliographic numbers and the spelling of authors’ names in the text against their form in the References.

EXAMPLES

BOOK (note also handling of “edition” and, only if necessary, of exact page citation):


JOURNAL ARTICLE (note handling of multiple authorship; also use of first page of article only, not inclusive pages):


CONTRIBUTION TO BOOK (note also handling of “Editors” and “Volume”):


*Reprints of this sheet are available without cost from the Editor in Chief or the publisher.
"I then saw, with great wonder, that in the said matter there were many very little living animalcules, very prettily a-moving..."

The writer was a Dutch dry-goods dealer named Anton van Leeuwenhoek. He was writing to England’s Royal Society, which had made him a Fellow upon learning of the tiny, perfect lenses he ground as a hobby. The year was 1683.

Leeuwenhoek had in fact made a microscope that was ahead of its time. Other less powerful microscopes in his day were called “flea glasses” because they were used mainly to look at insects. For 50 years Leeuwenhoek wrote to the Royal Society about his “little living animalcules,” describing how some “spun round like a top,” some “shot through the water like a pike,” and others “went ahead so nimbly, and hovered so together, that you might imagine them to be a big swarm of gnats or flies.”

The Dutchman took with him to his grave his secret method of grinding powerful lenses. Not until the 19th Century did science again see microbes clearly through a powerful microscope.

The medical world no longer has a leisurely century or two to wait for its sophisticated instruments. We try not to lose even a day.
To control hyperuricemia in the new **Zyloprim**\textsuperscript{\textregistered} brand Allopurinol Tablets

xanthine oxidase inhibitor

Reduces uric acid production in patients with certain neoplastic diseases.

The concomitant use of 'Zyloprim' (allopurinol) with cancer chemotherapy has been shown "...to prevent or abort the potentially fatal complications related to acute hyperuricemia resulting from effective antineoplastic therapy..."\textsuperscript{1}

'Zyloprim' (allopurinol), an analogue of hypoxanthine, acts on purine catabolism but does not disrupt the biosynthesis of vital purines. 'Zyloprim' (allopurinol) reduces both the serum and urine uric acid levels by inhibiting the production of uric acid.

Because of this unique mode of action, concomitant therapy with 'Zyloprim' (allopurinol) avoids the hazard of excessive urinary excretion of uric acid in patients with neoplastic disease who are particularly susceptible to hyperuricemia and uric acid stone formation during antineoplastic drug therapy.

**Contraindications:** Pending further investigation, allopurinol is presently contraindicated for use in children with the exception of those with hyperuricemia secondary to malignancy. The drug should not be employed in nursing mothers. Patients who have developed a severe reaction to this drug should not be restarted on the drug.

**Warnings:** A few cases of reversible clinical hepatotoxicity have been noted in patients taking 'Zyloprim' (allopurinol) and in some patients asymptomatic rises in serum alkaline phosphatase or serum transaminase have been observed. Accordingly, periodic liver function tests should be performed during the early stages of therapy, particularly in patients with pre-existing liver disease. Due to the occasional occurrence of drowsiness, patients should be alerted to the need for due precautions when engaging in activities where alertness is mandatory.

**Iron salts should not be given simultaneously with 'Zyloprim' (allopurinol)** because animal studies suggested an increase in hepatic iron concentration. This drug should not be administered to immediate relatives of patients with idiopathic hemochromatosis.

**Usage in pregnancy and women of childbearing age:** Since the effect of xanthine oxidase inhibition on the human fetus is still unknown, 'Zyloprim' (allopurinol) should be used in pregnant women or women of childbearing age only if the potential benefits to the patient are weighed against the possible risk to the fetus.

**Precautions:** A fluid intake sufficient to yield a daily urinary output of at least two liters and the maintenance of a neutral or, preferably, slightly alkaline urine are desirable to (1) avoid the theoretic possibility of formation of xanthine calculi under the influence of allopurinol therapy and (2) to help prevent renal precipitation of urates in patients receiving concomitant uricosuric agents.

Patients with impaired renal function should be carefully observed during the early stages of allopurinol administration and the drug withdrawn if increased abnormalities in renal function appear, since a few patients with pre-existing renal disease have shown a rise in BUN. Relationship of these observations to the drug have not been established.

Mild reticulocytosis has appeared in some patients, most of whom were receiving other therapeutic agents, so that the significance of this observation is not known.

As with all new agents, periodic determinations of liver and kidney function and complete blood counts should be performed.

In patients receiving 'Purinethol' (mercaptopurine), the concomitant administration of 300-600 mg. of 'Zyloprim' (allopurinol) per day will require a reduction in dose to approximately 1/4 to 1/2 of the usual dose of 'Purinethol'. Subsequent adjustment of doses of 'Purinethol' should be made on the basis of therapeutic response and any toxic effects.

When allopurinol is used in the treatment of gout, maintenance doses of colchicine generally should be given prophylactically since an increase in acute attacks of gout during the early stages of allopurinol administration have been reported. The use of therapeutic doses of colchicine or anti-inflammatory agents may be required to suppress attacks in some cases. It may require several months to deplete the uric acid pool sufficiently to achieve control of the acute episodes.

In the treatment of gout, concomitant administration of a uricosuric agent with 'Zyloprim' (allopurinol) may result in a decrease in urinary excretion of oxyurines as compared to their excretion with allopurinol alone.
treatment of neoplastic diseases...

- **Leukemias, lymphomas:**
  May be given prophylactically to prevent tissue urate deposition, acute urate nephropathy, or renal calculi in patients with leukemias, lymphomas or certain other malignancies\(^1,2,3\) who are receiving cancer chemotherapy or radiation therapy.

- **Polycythemia vera, myeloid metaplasia:**
  For the treatment of secondary hyperuricemia, with or without gout, which occurs in polycythemia vera, myeloid metaplasia, leukemia, or other blood dyscrasias.

- **Concomitant with 'Purinethol'\(^\circ\) brand Mercaptopurine:**
  May be employed to inhibit the oxidation of 'Purinethol'\(^4\) brand Mercaptopurine — permits use of smaller doses of 'Purinethol'\(^3\)

Note: This is not an innocuous drug and strict attention should be given to the indications for its use. Complete indications appear in the product packing circular.

However, such combined therapy is not contraindicated and, for many patients, may provide optimum control. Although clinical evidence to date has not demonstrated renal precipitation of oxypurines in patients either on allopurinol alone or in combination with uricosuric agents, the possibility should be kept in mind.

**Adverse reactions:** The most common adverse reaction is skin rash which is most frequently maculopapular in type; exfoliative, urticarial and purpuric lesions have also been reported. Occasionally, fever has accompanied the dermatitis. Nausea, vomiting, diarrhea and intermittent abdominal pain have been reported on occasion. Symptoms suggestive of drug idiosyncrasy characterized by fever, chills, leukopenia or leucocytosis, eosinophilia, arthralgias, skin rash, pruritus, nausea and vomiting have been reported in a few patients. There have been a few additional reports of asymptomatic leukopenia but relationship to 'Zyloprim' (allopurinol) has not been established. There have been single reports of alopecia accompanying dermatitis, peripheral neuritis and bone marrow depression, and a few reports of carditis. The relationship of 'Zyloprim' (allopurinol) to these events has not been established. Drowsiness has been reported in a few patients on allopurinol.

**Dosage:** The dose of 'Zyloprim' (allopurinol) to accomplish full control of gout and to lower serum uric acid to normal or near-normal levels varies with the severity of the disease. The average is 200 to 300 mg. per day divided into two or three doses for patients with mild gout and 400 to 600 mg. per day for those with moderately severe tophaceous gout. Similar considerations govern the regulation of dosage for maintenance purposes in secondary hyperuricemia. For the prevention of uric acid nephropathy during the vigorous therapy of neoplastic disease, treatment with 600 to 800 mg. daily for two or three days is advisable together with a high fluid intake. The minimal effective dose is 100 to 200 mg. daily and the maximal recommended dose is 800 mg. daily.

Divided daily doses are advisable because of the short half-life of the drug. Normal serum urate levels are achieved in 1 to 3 weeks.

Children 6 to 10 years of age, with secondary hyperuricemia associated with malignancies may be given 100 mg. of 'Zyloprim' (allopurinol) three times daily while those under 6 years are generally given 50 mg. three times daily. The response is evaluated after approximately 48 hours of therapy and a dosage adjustment is made if necessary.

In patients who are being treated with uricosuric agents, colchicine, and/or anti-inflammatory agents, it is wise to continue this therapy for several months while adjusting the dosage of 'Zyloprim' (allopurinol) until a normal serum uric acid and freedom from acute attacks have been maintained for several months. A fluid intake sufficient to yield a daily urinary output of at least two liters and the maintenance of a neutral or, preferably, slightly alkaline urine are desirable.

**Preparation:** 'Zyloprim' brand Allopurinol 100 mg. scored tablets, bottles of 100.

**References:**

Complete information available from your local 'B.W. & Co.' Representative or from Professional Services Department PML.

BURROUGHS WELLCOME & CO. (U.S.A.) INC., Tuckahoe, N. Y.
It's a fact! Reactivity of red cell reagents declines with age! So if you're the kind of technologist who believes in using the freshest possible blood sample, you'll want to do your screening and serum-grouping with the freshest possible reagents. With 'Fresh Cells Weekly', you can have ready-to-use reagent red cells with Pfizer's standard two week dating, delivered to you Fresh Each Week.

Reagents available fresh each week include HEMANTIGEN®, pooled cells in a single vial, a one-drop test for broad-range antibody detection; PANOSCREEN®, a single donor 2-vial reagent for antibody screening plus tentative identification; and REFERENCeLLS®, our panel of A, A, B and O cells for complete serum-grouping. Available Fresh Each Two Weeks are PANOCeLL®, 8 and 16 cell panels for precise antibody identification; COMBICeLLS®, for both antibody screening and identification; and CHECKcELL®, for individual quality control of every Coombs test.

'Fresh Cells Weekly' combat the problem of aging cells. They are another blood bank "first" from Pfizer Diagnostics.

PFIZER DIAGNOSTICS
300 West 43rd Street, New York, N.Y. 10036

Pfizer
THE SOLUTION: FRESH CELLS WEEKLY