

## FOUR-HOUR LIVE WEBINAR

Tuition: \$69

(REGISTRATION FORM)

# DRUG THERAPY IN OLDER PATIENTS – AGE-RELATED ISSUES –

Please Check One Option Below:

### LIVE WEBINAR:

Fri., June 10, 2022, 12:00 PM – 4:15 PM, (Eastern Time)  
or 11:00 AM – 3:15 PM, (Central Time)  
or 9:00 AM – 1:15 PM, (Pacific Time)

Tue., July 12, 2022, 12:00 PM – 4:15 PM, (Eastern Time)  
or 11:00 AM – 3:15 PM, (Central Time)  
or 9:00 AM – 1:15 PM, (Pacific Time)

\$69 – Pre-Registration Rate: Live Webinar with 4 hours of CE credit.

Registrants will need a computer with a good Internet connection and audio speakers (or headphones) to participate in the live Webinar.

Please note special discounts for homestudy purchase are available for students who are registered for webinars. Please email INR at [info@biocorp.com](mailto:info@biocorp.com) for more information.

Name (please print) \_\_\_\_\_  
Home Address \_\_\_\_\_  
City/State \_\_\_\_\_ Zip \_\_\_\_\_  
Work Phone \_\_\_\_\_ Home Phone \_\_\_\_\_  
Fax \_\_\_\_\_  
Email \_\_\_\_\_  
Profession \_\_\_\_\_ License No. \_\_\_\_\_  
Pharmacists only: NABP # \_\_\_\_\_ Date of Birth mm / dd / yy

### Payment by (please check one):

Check for \$ \_\_\_\_\_ (Please make check payable to INR)

Charge the amount of \$ \_\_\_\_\_  
to my  Visa  MasterCard  American Express®  Discover®  
Card # \_\_\_\_\_ Exp Date \_\_\_\_\_ CVV \_\_\_\_\_  
(Card Security Code)

Signature \_\_\_\_\_

### There are four ways to register:

- 1) **Internet:** [www.INRseminars.com](http://www.INRseminars.com)
- 2) **Mail:** INR, P.O. Box 5757, Concord, CA 94524-0757  
(Make check payable to INR.)
- 3) **Fax:** (925) 687-0860
- 4) **Phone:** 1-800-937-6878

Inquiries for Customer Service: 1-877-246-6336 or (925) 609-2820

Purchase orders are accepted. Tax Identification No. 94-2948967

## ACCREDITATION

To obtain the 4 contact hours associated with this course, the health care professional will need to sign in, attend the course, and complete program evaluation forms. At the end of the program, the health care professional successfully completing the course will receive a statement of credit. This is an intermediate-level course.

### NURSES (RNs, NPs, & LPNs)

Institute for Natural Resources (INR) is accredited as a provider of nursing continuing professional development by the American Nurses Credentialing Center's Commission on Accreditation.

This program provides 4 contact hours for nurses, including 4 Rx contact hours of pharmacology CE. INR has been accredited as a continuing education provider by the Florida Board of Nursing (#50-3026-1) and the Iowa Board of Nursing (#288) for 4 contact hours, and the California Board of Registered Nursing (CEP #06136) and the Kansas Board of Nursing (#LT0140-0927) for 4.8 contact hours.

### DENTAL PROFESSIONALS

INR is an ADA CERP Recognized Provider. ADA CERP is a service of the American Dental Association to assist dental professionals in identifying quality providers of continuing dental education. ADA CERP does not approve or endorse individual courses or instructors, nor does it imply acceptance of credit hours by boards of dentistry. INR designates this activity for 4 hours of continuing education credits.

### PHARMACISTS

Institute for Natural Resources is accredited by the Accreditation Council for Pharmacy Education (ACPE) as a provider of continuing pharmacy education. The ACPE universal activity number (UAN) for this course is 0751-0000-22-006-L01-P. This is a knowledge-based CPE activity.



### REGISTERED DIETITIANS & DTRS

INR, under Provider Number IN001, is a Continuing Professional Education (CPE) Accredited Provider with the Commission on Dietetic Registration (CDR). Registered dietitians (RDs) and dietetic technicians, registered (DTRs) will receive 4 hours worth of continuing professional education units (CPEUs) for completion of this program/materials. Continuing Professional Education Provider Accreditation does not constitute endorsement by CDR of a provider, program, or materials. CDR is the credentialing agency for the Academy of Nutrition and Dietetics. This course has Activity Number 167724 and Performance Indicators: 8.2.1, 8.2.2, 10.4.4, and 10.4.7. CPE Level: I.

### PSYCHOLOGISTS

Under CE Broker # 50-3026, INR is an approved provider by the Florida Board of Psychology. The Institute for Natural Resources (INR) is approved by the CPA OPD to sponsor continuing professional education for psychologists. INR maintains responsibility for this program and its content. Psychologists must attend the seminar in its entirety and complete the course evaluation in order to receive credit. Under License #PSY000214, the Pennsylvania Board of Psychology has approved INR as a sponsor/provider of CE programs. Under Sponsor #268.000096, the Illinois Dept of Prof Regulation for Psychologist Licensing and Disciplinary Board has approved INR as a CE sponsor. Institute for Natural Resources (INR) is recognized by the NY SED State Board for Psychology as an approved provider of continuing education for licensed psychologists #PSY-0042.

### MENTAL HEALTH COUNSELORS & ADDICTION COUNSELORS

Under Sponsor # 00088989 and Approval # 60007952109, CRCC has approved this course for four contact hours. Institute for Natural Resources (INR) is recognized by the NY SED State Board for Mental Health Practitioners as an approved provider of continuing education for licensed mental health counselors, #MHC-0089. Under Sponsor #197-000240, the Illinois Dept of Prof Regulation has approved INR as a CE sponsor for professional/clinical counselors. INR is approved by the NAADAC Approved Education Provider Program, Provider #182846.

### SOCIAL WORKERS & MARRIAGE & FAMILY THERAPISTS

Institute for Natural Resources, #1356, is approved to offer social work continuing education by the Association of Social Work Boards (ASWB) Approved Continuing Education (ACE) program. Organizations, not individual courses, are approved as ACE providers. State and provincial regulatory boards have the final authority to determine whether an individual course may be accepted for continuing education credit. Institute for Natural Resources maintains responsibility for this course. ACE provider approval period: 02/28/2022–02/28/2025. Social workers completing this course receive 4 clinical continuing education credits. This course "Drug Therapy in Older Patients," Approval #221101-1206 provided by INR, is approved for continuing education by the New Jersey Social Work Continuing Education Approval Collaborative, which is administered by NASW-NJ. CE Approval Collaborative Approval Period: 09/01/20 through 08/31/22. New Jersey social workers will receive four (4) Clinical CE credits for participating in this course. Institute for Natural Resources (INR), SW CPE is recognized by the NY SED State Board for Social Work as an approved provider of continuing education for licensed social workers #0195. The California Board of Behavioral Sciences will accept courses approved by ASWB. Under Sponsor #159-000260, the Illinois Dept of Prof Regulation has approved INR as a sponsor of continuing social work education. Institute for Natural Resources (INR) is recognized by the NY SED State Board for Mental Health Practitioners as an approved provider of continuing education for licensed marriage and family therapists. #MFT-0055. Under Sponsor #168.000243, the Illinois Dept of Prof Regulation has approved INR as a CE sponsor for marriage and family therapists. Under CE approval #NVCEP2021, the Nevada Board of Examiners for MFT and CPC has approved INR as a sponsor.

### OCCUPATIONAL THERAPISTS & OTAs

INR is an AOTA Approved Provider of continuing education. Provider #5347. INR has assigned 0.4 AOTA CEUs for this course. The category of this course is Foundational Knowledge. The assignment of AOTA CEUs does not imply endorsement of specific course content, products, or clinical procedures by AOTA.

## ACCREDITATION (cont.'d)

### PHYSICAL THERAPISTS & PTAs

The Florida Physical Therapy Association has approved this course for 4 contact hours (Approval #CE 22-891263). Accreditation of this course does not necessarily imply the FPTA supports the views of the presenter or the sponsors. INR is recognized as an approval agency to approve providers offering continuing competency courses by the Physical Therapy Board of California. This course has been approved by the Institute for Natural Resources (INR) for 4 continuing competency units. Under Sponsor #216-000264, the Illinois Dept of Prof Regulation has approved INR as a sponsor for continuing physical therapy education.

### CASE MANAGERS

This program has been pre-approved by The Commission for Case Manager Certification to provide continuing education credit to Certified Case Managers (CCMs).

### OTHER HEALTH PROFESSIONALS

Participants successfully completing this course will receive course completion certificates. For rules governing continuing education credit, participants should contact their respective regulatory boards.

## DRUG THERAPY IN OLDER PATIENTS

– AGE-RELATED ISSUES –

(A NEW 4-HOUR INTERACTIVE LIVE WEBINAR)

## SCHEDULE

Please see the Registration Form for the seminar schedule.

Please register early. Space is limited. Registrations are subject to cancellation after the scheduled start time. A transfer can be made from one Webinar to another if space is available. Registrants cancelling up to 72 hours before a Webinar will receive a tuition refund less a \$25.00 administrative fee or, if requested, a full-value voucher, good for one year, for a future Webinar. Cancellation or voucher requests must be made in writing. If a Webinar cannot be held for reasons beyond the control of the sponsor (e.g., acts of God), the registrant will receive free admission to a rescheduled Webinar or a full-value voucher, good for one year, for a future Webinar. A \$25.00 service charge applies to each returned check. Nonpayment of full tuition may, at the sponsor's option, result in cancellation of CE credits issued. The syllabus is not available for separate purchase. A \$15.00 fee will be charged for the issuance of a duplicate certificate. Fees subject to change without notice.

## SPONSOR

INR (Institute for Natural Resources) is a non-profit scientific organization dedicated to research and education in the fields of science and medicine. INR is the nation's largest provider of live continuing education programs, offering over 600 live seminars yearly.

INR has no ties to any commercial organizations and sells no products of any kind, except educational materials. Neither INR nor any instructor has a material or other financial relationship with any health care-related business that may be mentioned in an educational program. If INR were ever to use an instructor who had a material or other financial relationship with an entity mentioned in an educational program, that relationship would be disclosed at the beginning of the program. INR takes all steps to ensure that all relevant program decisions are made free of the control of a commercial interest as defined in applicable regulatory policies, standard, and guidelines. INR does not solicit or receive gifts or grants from any source, has no connection with any religious or political entities, and is totally supported by its course tuition.

INR's address and other contact information follows:

P.O. Box 5757, Concord, CA 94524-0757  
Customer service: 1-877-246-6336 or (925) 609-2820  
Fax: (925) 687-0860  
E-Mail: [info@inrseminars.com](mailto:info@inrseminars.com); website, [www.INRseminars.com](http://www.INRseminars.com)  
Tax Identification Number 94-2948967.

Education expenses (including enrollment fees, books, tapes, travel costs) may be deductible if they improve or maintain professional skills. Treas. Reg. Sec. 1.162-5. Recording of the seminar, or any portion, by any means is strictly prohibited. INR's liability to any registrant for any reason shall not exceed the amount of tuition paid by such registrant.

For American Disability Act (ADA) accommodations or for addressing a grievance, please send the request by email to [info@inrseminars.com](mailto:info@inrseminars.com) or by fax to (925) 363-7798. For ADA matters (including sign-language interpreters), INR would appreciate advance notice so as to ensure our ability to provide the appropriate accommodation.

# DRUG THERAPY IN OLDER PATIENTS

– AGE-RELATED ISSUES –

## Frequently Asked Questions

### Q: What do I have to do to complete the live Webinar successfully?

To obtain the 4 contact hours associated with this course, the health professional will need to sign-in (by typing in the chat-box), attend the course online, and complete the program evaluation form and post-test electronically. At the end of the program, after all the evaluation and post-tests are accounted for, the health professional successfully completing the program will receive a statement of credit. This will take approximately 3 to 5 business days. This is an intermediate-level course.

### Q: How will I know that my profession qualifies for continuing education credit?

Please see the section marked Accreditation. All professions for which INR (Institute for Natural Resources) has approval are listed in the Accreditation section.

### Q: What happens if I have technical difficulties watching or hearing a Webinar?

You can transfer the tuition paid to another Webinar within two years or request a recording within 3 to 5 days to complete the webinar ASAP for live credit.

### Q: My profession is not listed on the brochure. Is it possible to obtain continuing-education credit?

Possibly. Please contact INR's customer-service office at 1-877 246-6336 or by email at info@biocorp.com. The customer-service office can tell you if INR has approval for your profession.

## COURSE SUMMARY

As human beings approach the sixth decade of life, they begin to suffer from increased illness, a functional decline, and the psychological and existential issues surrounding the end of life. Medical professionals must have a basic understanding of both the normal aging process and aberrant aging issues to diagnose and treat elderly patients correctly with all drug therapies. In Part One of this new webinar, Dr. Bornstein describes basic aging physiologic changes, including declines in stamina, strength, and metabolic Rate. These changes include decreased cardiopulmonary function and distinct gastrointestinal and genitourinary function changes. Compounding these issues are reduced muscle mass and strength, reduced bone density, increased body fat, decreased endocrine systems, and lower immunity. Finally, neurologic changes leading to forgetfulness and falls, declines in neurotransmitters, and alterations in balance and gait. In Part Two of this webinar, Dr. Bornstein explains the altered drug interactions in geriatric patients resulting from the (above) described physiologic and neurologic changes of age.

### Pharmacology and drug changes to be discussed include:

1. Drug absorption, distribution, metabolism, and excretion.
2. Common drug-drug interactions in older patients: Anxiolytics, Antihistamines, Opioids, Sedatives, & Anti-Arrhythmic Drugs.
3. Preventable causes of drug-related problems.
4. Diagnosing and guarding against polypharmacy.
5. Principles of prescribing for older patients.
6. Principles of pain management in older adults.
7. Inappropriate medication use in older adults.

As these issues are increasingly in today's society with the aging of the population, this webinar is a necessary continuing education for all health professionals.

**Disclaimer:** These live interactive INR presentations provide continuing education for health care and mental health professionals with the understanding that each participant is responsible to utilize the information gained in an appropriate manner congruent with his/her/their scope of licenses.

## PROGRAM/LECTURE

### PART 1 (120 Minutes): Geriatric Physiology

- **Physiologic Changes of Aging:** Recognizing Constitutional Differences in the Elderly, Declines in Stamina, Strength, and Metabolic Rate.
- **Recognizing Changes in Cardio-pulmonary Function:** Reduced Cardiac Output & Cardio-Pulmonary Reserve. Diminished Pulmonary Excursion and Cough Reflex.
- **Understanding GI (Gastrointestinal) and GU (Genitourinary) Function in Older Patients.** Declining Absorption of Nutrients (B12) and Drugs. Reduced Hepatic Blood Flow, Diminished Renal Function, and Drug Clearance.
- **Frail and Fragile:** Musculoskeletal Changes in Geriatric Patients. Reduced Muscle Mass and Strength, Decreased Bone Density, and Increased Body Fat.
- **Forgetfulness and Falls:** Neurologic Function in Old Age. Declines in Neurotransmitters and Cortical Atrophy. Changes in Balance and Gait.
- **Weak and Fatigued:** How the Endocrine System Changes with Age. Lower Levels of Growth Hormone. Estrogen and Testosterone. Thyroid Disorders. Insulin Resistance.
- **Old Age, Immune Function and Blood Counts:** Delayed Responses to Infection and Blood Loss.

### BREAK: 15 Minutes

### PART 2 (120 Minutes): Drug Interactions in Geriatric Patients

- **Pharmacokinetics and Pharmacodynamics in the Geriatric Patient:** How the Physiologic Changes of Aging Affect Drug Absorption, Volume of Distribution, Metabolism, and Drug Excretion.
- **Common Drug-Drug Interactions in Older Patients:** Anxiolytics, Antihistamines, Opioids, Sedatives, & Anti-Arrhythmic Drugs. Understanding the Enhanced Psychiatric Effects of Drugs.
- **Common Drug-Food Interactions in Older Patients:** Alcohol, Caffeine, Grapefruit/juice.
- **Preventable Causes of Drug-Related Problems:** Selecting the Wrong Drug. Mistaking Adverse Drug Effects for New Symptoms. Inadequate Monitoring. Excessive Dosing.
- **Guarding Against Polypharmacy:** Not as Easy as it Sounds.
- **Start Low and Go Slow:** Principles of Prescribing for Older Patients.
- **Principles of Pain Management in Older Adults:** Obtaining an Accurate History. Safe and Effective Drug Combinations. Protecting Sleep and Promoting Activity.
- **Inappropriate Medication Use in Older Adults:** The Beers Criteria and Avoiding Common Culprits (Antihistamines, NSAIDs, Sedatives).

### Questions & Answers, Post-test, & Evaluation

## LEARNING OBJECTIVES

Participants completing this course will be able to:

- 1) describe the major physiologic changes of aging.
- 2) list some of the most common & serious adverse drug effects seen in geriatric patients.
- 3) identify common and potentially dangerous drug-drug interactions in older patients.
- 4) describe the main strategies for avoiding or reducing the risk for drug-related problems in the elderly.
- 5) list the main medication categories to avoid in older adults.
- 6) discuss how the information from this course can be utilized by nurses, mental health professionals, dentists, pharmacists, physical therapists, occupational therapists, dietitians, and other health professionals to improve patient care outcomes.

## INSTRUCTOR

**Dr. Eric Bornstein (Chief Medical Officer, DMD)** is the former Chief Medical Officer of Nomir Medical Technologies, and is a biochemist, dentist, and photo-biologist. He has successfully taken three medical device through to FDA 510k approval. Dr. Bornstein has managed five human clinical trials and has patented multiple medical technologies in the areas of lasers, photo-biology, circadian rhythm, adipose tissue modification, and biofilm eradication. Dr. Bornstein is widely published in peer-reviewed journals such as "Current Trends in Microbiology" and "Compendium." For the past five years, he has delivered continuing education seminars and webinars to over 100,000 health care professionals. His lectures encompass the subjects of pharmacology, marijuana, vaping, opioids, hallucinogens, drug abuse, periodontal disease and medical devices. Dr. Bornstein has lectured all over the United States, Canada, Mexico, the UK, Germany, and Israel.

INR reserves the right to change instructors without prior notice. Every instructor is either a compensated employee or independent contractor of INR.