The American Association of
Naturopathic Physicians

Naturopathic Medical Education Comparative Curricula

Comparing Curricula of Naturopathic Medical Schools and Conventional Medical Schools

National College of Naturopathic Medicine	Bastyr University-Naturopathic Medicine	Yale University	Johns Hopkins	Medical College of Wisconsin
Federally and Regionally Accredited Naturopathic Medical School	Federally and Regionally Accredited Naturopathic Medical School	Federally and Regionally Accredited Conventional Medical School	Federally and Regionally Accredited Conventional Medical School	Federally and Regionally Accredited Conventional Medical School
Basic and Clinical Sciences: Anatomy, Cell biology, Physiology, Histology, Pathology, Biochemistry, Pharmacology, Lab diagnosis, Neurosciences, Clinical physical diagnosis, Genetics, Pharmacognosy, Bio-statistics, Epidemiology, Public Health, History and philosophy, Ethics, and other coursework.				
1548	1639	1420	1771	1363
Clerkships and Allopathic Therapeutics: including lecture and clinical instruction in Dermatology, Family Medicine, Psychiatry, Medicine, Radiology, Pediatrics, Obstetrics, Gynecology, Neurology, Surgery, Ophthalmology, and clinical electives.				
2244	1925	2891 (+thesis)	3391	2311
Naturopathic Therapeutics: Including Botanical medicine, Homeopathy, Oriental medicine, Hydrotherapy, Naturopathic manipulative therapy, Ayurvedic medicine, Naturopathic Case Analysis/Management, Naturopathic Philosophy, Advanced Naturopathic Therapeutics.				
588	633	0	0	0
Therapeutic Nutrition				
144	132	0	0	0
Counseling				
144	143	Included in psychiatry (see above)	Included in psychiatry (see above)	Included in psychiatry (see above)
TOTAL HOURS OF TRAINING				
4668	**4472**	**4311 (+thesis)**	**5162**	**3674**

Sources:
Curriculum Directory of the Association of American Medical Colleges

NATUROPATHIC MEDICAL PROGRAMS IN THE UNITED STATES

Naturopathic medicine is a distinct branch of medicine that emphasizes prevention, patient-centered care, and treating the underlying cause of disease. Naturopathic doctors prioritize a therapeutic order that begins with minimal intervention, promotes the body's inherent self-healing process, and proceeds to higher intervention only as needed. The practice of naturopathic medicine combines the wisdom of nature and centuries-old medicine with the rigors of modern science and evidence-based research.

Naturopathic medical training programs are **four-year**, **in-residence**, **graduate-level** medical school programs at **accredited naturopathic medicine schools**. Five naturopathic medicine schools in the United States (one with two campuses) and two naturopathic medicine schools in Canada are members of the Association of Accredited Naturopathic Medicine Colleges (AANMC), and have been accredited by one of the regional accrediting agencies approved by the U.S. Department of Education. The naturopathic medical programs of AANMC member schools have also been accredited by the Council on Naturopathic Medical Education (CNME), the recognized accreditor for naturopathic medical programs in North America.

When considering naturopathic medical programs, the question of how Naturopathic Doctor (ND) programs compare to MD programs is common. Medicine is analogous to a tree: there are many different branches, and each branch possesses its own tools and methodologies. NDs and MDs represent two distinct branches of the medical tree, each sharing the same foundation, or "trunk." While there are similarities between MD programs and naturopathic medical programs, each field is unique and offers distinct benefits to patients and the medical field as a whole.

Prerequisites

Like conventional medical schools, naturopathic medicine programs require that applicants meet specified prerequisites. Though the requirements differ slightly from school to school, they all require an **undergraduate degree**; have **minimum GPA requirements**; and have **academic prerequisites**, often encompassing biology, chemistry, physics, algebra, psychology, social sciences, and humanities.

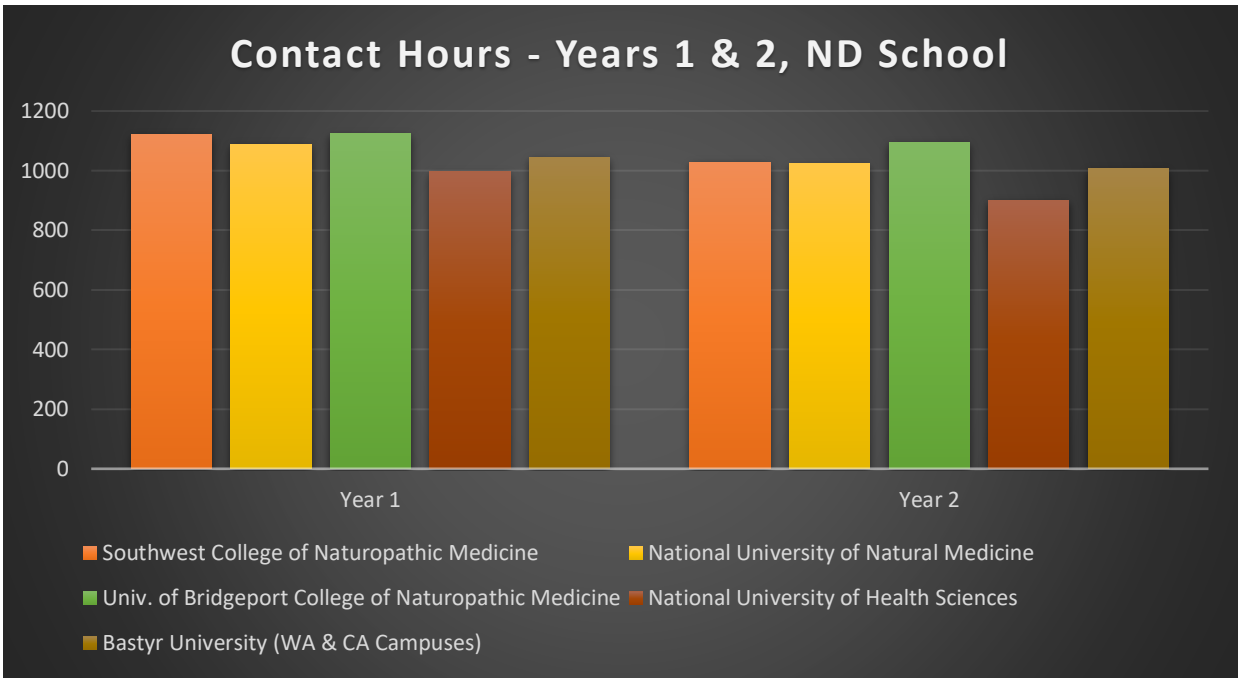
The Curriculum

Licensed Naturopathic Doctors are educated in all the same biomedical sciences as MDs. Further, they study holistic and nontoxic approaches to therapy with a strong emphasis on disease prevention and optimizing wellness. Naturopathic medicine students learn to treat all aspects of family health and wellness, from pediatrics to geriatrics. Clinical exposure to patients is essential to the education of Naturopathic Doctors – so much so that clinical and hands-on training is introduced during the first and second years of education at several AANMC-member schools.

Years 1-2
In both MD and ND schools, the first two years focus on biomedical science, clinical sciences, and diagnostics, including:

• Anatomy	• Immunology
• Biochemistry	• Embryology
• Human physiology	• Microbiology
• Histology	• Neuroscience
• Human pathology	• Pharmacology

During the first two years of naturopathic medicine school in the United States, ND students' contact hours are as follows:[1]



The early years of naturopathic medical school also include introduction to naturopathic modalities, such as nutrition, homeopathy, and botanical medicine. ND students emerge from the first two years of training with a strong foundation in physiology, pathology, and diagnosis. They use the Western medical sciences as a foundation on which to build a thorough knowledge of holistic, non-toxic therapies, and to develop skills in diagnosis, disease prevention, and wellness optimization.

[1] *Sources: AANMC Member Survey 2017;* http://admissions.nunm.edu/files/2013/10/2016-17-ND-Curriculum.pdf; http://www.bridgeport.edu/academics/graduate/naturopathic-medicine-nd/curriculum-and-program-requirements/; http://www.scnm.edu/media/3591/4-year-pos-correct.pdf.

Years 3-4:
The third and fourth years of training distinguish naturopathic medical programs from traditional medical schools in several ways. Much of the ND curriculum is devoted to non-pharmaceutical/non-surgical approaches to managing patient conditions, and students spend significant time studying lifestyle counseling, nutrition, and health promotion. In addition to the biomedical and clinical sciences, ND students are trained in:

• Botanical medicine	• Laboratory & clinical diagnosis
• Clinical nutrition	• Minor surgery
• Counseling, including behavioral change	• Naturopathic physical medicine
• Homeopathy	• Nutritional science

Notably, ND students in U.S. naturopathic medical schools average approximately 1,330 hours of clinical training.[2] NDs are the most extensively trained provider type in drug-drug, drug-herb, and drug-nutrient interactions - which is significant at a time when increasing numbers of patients are trying to self-medicate with herbs and over the counter products. Naturopathic medical programs include extensive patient interaction, far beyond the level of observation. Third and fourth year ND students have increasing opportunities for hands-on clinical training and practice, often at their schools' teaching clinics and off-site clinics, which offer diverse patient populations. As a result, ND students graduate prepared to begin practice and to diagnose and treat patients.

All ND students attending AANMC member schools receive over 4,100 contact hours of instruction over four or more years, including a minimum of 1,200 hours of clinical training.[3]

National Exam Required
ND school graduates are required to pass a national exam, the NPLEX, administered by the North American Board of Naturopathic Examiners (NABNE), in order to practice medicine in all of the jurisdictions that currently regulate Naturopathic Doctors. The NPLEX is broken into two parts, much like the exam for MD graduates: Part I for biomedical sciences and Part II for clinical sciences and proficiency.

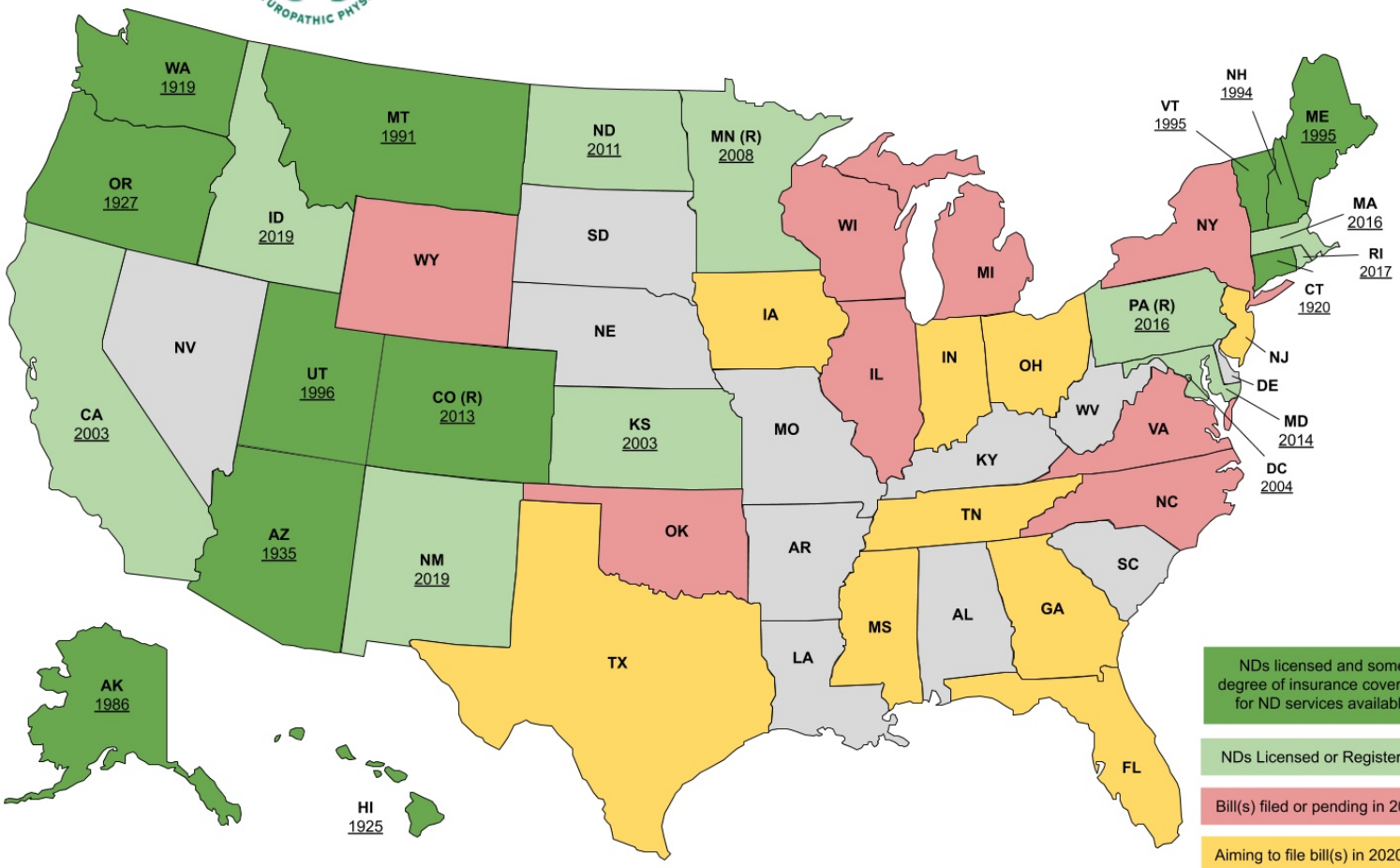
Where NDs Excel

The education of Naturopathic Doctors teaches them to focus on **root cause**; their philosophy embraces **prevention**, a **wide range of therapies**, the **interconnectedness of bodily systems**, and the human body's **inherent ability to self-heal**. This emphasis and philosophy makes naturopathic care an essential part of a comprehensive health care system.

[2] Source: AANMC Member Survey, 2017.
[3] *See* page 46, Standard VI Sec C.5 of the CNME Handbook of Accreditation for Naturopathic Medicine Programs.

Regulation of Naturopathic Doctors in the United States

(Updated: 2.21.2020)



(R) = registered state.
Year = year ND regulation passed.
Regulated territories (not pictured): Puerto Rico (2004) and the US Virgin Islands (2001).

Naturopathic Prescriptive Rights by State

	Non-Prescription Drugs	Prescription Authority	Controlled Substances
Alaska	X		
Arizona	X	X	X
California	X	X	X
Colorado	X	X	
Connecticut	X		
D.C.	X	X	
Hawaii	X	X	X
Idaho	X	X	X
Kansas	X	X	
Massachusetts	X		
Maryland	X		
Maine	X	X	
Minnesota	X		
Montana	X	X	X
New Hampshire	X	X	X
New Mexico	X	X	X
North Dakota	X		
Oregon	X	X	X
Pennsylvania	X		
Rhode Island	X		
Utah	X	X	X
Vermont	X	X	X
Washington	X	X	X

MNDA

MARYLAND NATUROPATHIC DOCTORS ASSOCIATION

Amino Acids
All Amino Acids and Amino Acid Combinations

Antimicrobials
a. Erythomycin
b. Penicillins - Amoxicillin, Ampicillin, Penicillin G, Penicillin VK
c. Cephalosporins
d. Tetracycline
e. Nystatin

Botanical Extracts and their derivatives
All Botanical Medicines as exemplified in the American Herbal Pharmacopoeia

Enzyme Preparations
All Enzymes and Enzyme Preparations

Homeopathic Preparations
All Homeopathic Medicines as exemplified in the Homeopathic Pharmacopeia

Hormones
a. Adrenal: adrenal extract, DHEA, pregnenolone, hydrocortisone
b. Gonadal:
    1. Bio-identical Estrogens: estradiol, ethinyl estradiol, estriol, estrone
    2. Bio-identical Progesterone
    3. Bio-identical Testosterone
c. Thyroid: Armour thyroid, Naturthroid, or other compounded thyroid preparation as defined in the USP
d. Melatonin

Minerals
All Minerals and Mineral Preparations

Miscellaneous
a. Digestive aids: betaine and glutamic hydrochloric acid
b. Biological agents: urea
c. Bile Salts and Acids
d. DMSO, Hyaluronidase, Grain Alcohol
e. EpiPen® and EpiPen Jr® Auto-Injectors
f. Glutathione, Reduced Glutathione
g. Oxygen
h. Essential Fatty Acids

Topical Medicines
a. Azelaic acid
b. Capsaicin
c. DMSO
d. Hydrocortisone 1%
e. Selenium Sulfide 2.5%
f. Tretinoin

Vitamins
All Vitamins and Vitamin Preparations including Biotin and Intrinsic Factor

STATE OF NEW HAMPSHIRE
BOARD OF NATUROPATHIC EXAMINERS
Department of Health and Human Services
Office of Operations Support
129 Pleasant St, Concord, New Hampshire 03301
603-271-0853 Fax: 603-271-5590 TDD Access: 1-800-735-2964

April 2, 2010

Board of Pharmacy
57 Regional Drive
Concord, NH 03301-8518

The following Naturopathic Formulary was approved by the New Hampshire Council on Doctors of Naturopathic Medicine Formulary on June 9, 2009 pursuant to RSA 328-E:16, III and Nat 103.03. Licensed Naturopathic Doctors may prescribe the following categories of substances in all forms within their scope of practice. A current list of Naturopathic Doctors licensed in New Hampshire is available from the New Hampshire Board of Naturopathic Examiners, 129 Pleasant Street, Brown Building Concord, NH 03301, (603) 271-0277.

Sincerely,

Brian J. Paterson ND, CHz

Chair of the New Hampshire
Board of Naturopathic Examiners

BJP/clb
Enclosure

Naturopathic Formulary by Classification

The following are classifications for substances listed in RSA 328-E:16, III revised and adopted on June 09, 2009 by the Board of Naturopathic Examiners Formulary Council established by the New Hampshire Legislature. Substances listed on the formulary compendium can be prescribed in any dosage or any dosage form. Products marked with an asterisk (*) may be used by Naturopathic Doctors, but may not be prescribed. A double asterisk (**) indicates examples included and are not limited to the substances listed within the category.

1) **Amino Acids**;**
   - A) Acetyl Carnitine
   - B) EDTA
   - C) GABA
   - D) Glutathione
   - E) Levocarnitine
   - F) Succinic Acid (DMSA)
   - G) Tryptophan

2) **Animal Preparation and their derivatives**;**
   - A) Adrenal
   - B) Thymus
   - C) Thyroid (See Hormones section 15)

3) **Antigout Agents;**
   - A) Allopurinol;
   - B) Colchicine;
   - C) Probenecid;

4) **Antihistamines;**
   - A) 1st generation, ethanolamines (aminoalkyl ether);
     - i) Diphenhydramine
   - B) 1st generation, piperazine-derived;
     - i) Meclizine

5) **Anti-Hyperglycemic Agents (Diabetic)**;
   - A) Alpha Glucosidase Inhibitors
     - i) Acarbose;
   - B) Biguanides
     - i) Metformin;
   - C) Insulin – synthetic and human

6) **Anti-infective Agents**;
   - A) Antibacterial Agents**;**
     - i) Aminoglycosides**;
       - (1) Gentamicin;
       - (2) Kanamycin Sulfate;
       - (3) Tobramycin;
     - ii) Beta-lactam antibiotics;
       - (1) Cephalosporins**;
         - (a) Cefaclor;
         - (b) Cefadroxil;

(c) Cefdinir;
(d) Cefditoren;
(e) Cefibuten;
(f) Cefixime;
(g) Cefonicid Sodium;
(h) Cefpodoxime Proxetil;
(i) Cefprozil;
(j) Ceftibuten;
(k) Cefuroxime;
(l) Cephalexin;
(m) Cephradine;

(2) Penicillins**;
(a) Amoxicillin and Clavulanate;
(b) Amoxicillin;
(c) Ampicillin and Sulbactam;
(d) Ampicillin;
(e) Bacampicillin;
(f) Cloxacillin;
(g) Dicloxacillin;
(h) Oxacillin;
(i) Penicillin;

iii) Macrolides and Ketolides**;
(1) Azithromycin;
(2) Clarithromycin;
(3) Dirithromycin;
(4) Erythromycins;
(5) Telithromycin;
(6) Troleandomycin;

iv) Quinolones**;
(1) Fluoroquinolines;

v) Sulfonamides;
(1) Sulfonamide/Trimethoprim/Sulfones;

vi) Tetracyclines**;
(1) Demeclocycline Hydrochloride;
(2) Doxycycline;
(3) Minocycline;
(4) Oxytetracycline;
(5) Tetracycline;

vii) Miscellaneous antibacterials;
(1) Bacitracin;
(2) Clindamycin;
(3) Colistimethate;
(4) Lincomycin;
(5) Novobiocin;
(6) Polymyxin B Sulfate;
(7) Spectinomycin;
(8) Vancomycin;

B) Antifungals;

i) Polyene;
(1) Amphotericin B;
(2) Nystatin;
ii) Gentian Violet;
iii) Griseofulvin;

C) Antihelmintics;
i) Mebendazole;
ii) Thiabendazole;

D) Antitubercular and antimycobacterial agents;
i) Aminosalicylic Acid;
ii) Cycloserine;
iii) Pyrazinamide;
iv) Rifabutin;
v) Rifampin;

E) Antiprotozoal and antiparasitic agents;
i) Halogenated 8-hydroxyquinolines
(1) Iodoquinol;
ii) Nitroimidazoles;
(1) Metronidazole;
(2) Tinidazole
iii) Quinolines;
(1) Chloroquine;
(2) Hydroxychloroquine;
(3) Mefloquine;
(4) Quinine Sulfate;
iv) Hydroxynaphthoquinones
(1) Atovaquone

F) Miscellaneous;
i) Immune Globulins **
ii) Mupirocin;
iii) Permethrin;
iv) Pyrethrins;

7) **Anti-thyroid Agents;**

A) Thionamides (thioureylenes);
i) Methimazole
ii) Propylthiouracil

8) **Autonomic Drugs;**

A) Anticholinergic agents;
i) Antimuscarinic agents
(1) Atropine;
(2) Atropine Sulfate;
(3) Belladonna;
(4) Flavoxate;
(5) Homatropine Hydrobromide;
(6) Hyoscyamine;
(7) Methscopolamine;

(8) Scopolamine;
ii) Muscarinic receptor agonists (cholinomimetics)
(1) Pilocarpine;
B) Ergot derivatives
i) Ergonovine Maleate
ii) Methergine
C) Sympathomimetic;
i) Ephedrine;
ii) Epinephrine, including auto-inject forms;
iii) Psuedoephedrine;
D) Sympatholytic (adrenergic blocking) agents;
i) Alpha adrenergic blocking agents;
(1) Yohimbine;
ii) Beta adrenergic blocking agents**
(1) Propranolol;
E) Miscellaneous;
i) Nicotine;

9) **Barrier Contraceptives**
A) Cervical Caps
B) Diaphrams
C) Exclusion: IUD

10) **Biologicals;**
A) Biological Response Modifiers
i) Candida and Tricophyton Extracts
ii) Rho(D) Immune Globulins
iii) Skin test antigens
iv) Tuberculin Tests
B) Blood Typing Serum
C) Enzymes**;
i) Collagenase;
ii) Desoxyribonuclease (deoxyribonuclease, multiple other synonyms);
iii) Fibrinolysin;.
iv) Hyaluronidase;
v) Pancrelipase;
vi) Papain;
D) Electrolytes and Fluid Replacement **
i) Saline solutions
ii) Sterile water
iii) D5W
iv) Lactated Ringers Solution
v) Sodium Bicarbonate
E) Hormones – see Hormones (section 13)
F) Immune globulins - see anti-infective, misc;
G) Prostaglandins and prostaglandin analogs**;
i) Alprostadil;
ii) Bimatoprost;

iii) Dinoprostone;
iv) Iloprost;
v) Misoprostal;

11) **Blood Formation and Coagulation;**
i) Heparin; subcutaneous, sublingual and heparin locks;

12) **Botanicals** **
i) Non-legend or controlled Vinca species derivatives
ii) Exclusions
(1) Digitalis
(2) Cocaine
(3) Legend or controlled Vinca species derivatives
(4) Papaver somniferum derivatives
(a) Codeine
(b) Morphine
(c) Opiates
(d) Paclitaxel

13) **Cardiovascular Drugs**;
A) Antilipemic;
i) HMG CoA Reductase Inhibitors**;
(1) Atorvastatin;
(2) Fluvastatin;
(3) Lovastatin;
(4) Pravastatin;
(5) Simvastatin;
B) Anti-angina agents;
i) Piperazine derivatives
(1) Metabolism modifiers (p-FOX Inhibitors);
(a) Ranolazine;
(b) Trimetazidine;
C) Rauwolfia Alkaloids;

10) Central Nervous System Agents;
A) Anticonvulsants
i) Agents that enhance GABA (gamma amino benzoic acid) Activity**;
(1) GABA Analogs and analog derivatives
(a) Gabapentin;
(b) Nipecotic Acid Derivatives
(i) Tigabine;
(c) Pregabalin;
B) Psychotherapeutic;
i) Anxiolytics, Sedatives and Hypnotics;
(1) Benzodiazepines**;
(2) Non-benzodiazepine sedative-hypnotic agents;
(a) Imidazopyridine agents;
(i) Zolpidem;

(b) Cyclopyrrolone agents;
(i) Eszopiclone;
(3) Anti-Manic;
(a) Lithium;

12) **Childbirth preparations**
A) Triple Dye

13) **Homeopathic preparations and their derivatives****

14) **Hormones**;**
A) Adrenal
i) Aldosterone
ii) Cortisone acetate
iii) DHEA
iv) Epinephrine
v) Hydrocortisone
vi) Pregnenalone
B) Agents acting at estrogen receptors;
i) Selective Estrogen-Receptor Modulators (SERMs) and anti-estrogens (estrogen antagonists)**;
(1) Clomiphene;
(2) Tamoxifen;
(3) Toremifene;
(4) Raloxifene;
ii) Agents with mixed activity at steroidal receptors**;
(1) Tibolone;
C) Gonadal
i) Conjugated Estrogens
ii) Estrogen
iii) Estradiol
iv) Estriol
v) Estrone
vi) Estropipate
vii) Ethinyl Estradiol
viii) HCG
ix) Quinestrol
x) Progesterone
xi) Testosterone
D) Thyroid (See also Animal preparations section 2)
E) Pituitary
i) ACTH
ii) Growth Hormone
iii) Oxytocin
F) Parathyroid
i) Calcitonin

15) **Local anesthetics**;**
- A) Amino Esters
  - i) Procaine*;
  - ii) Chloroprocaine*;
  - iii) Tetracaine*;
  - iv) Benzocaine*;
- B) Amino Amides
  - i) Lidocaine * (injectable and non-injectable dosage forms);
  - ii) Mepivocaine*;
  - iii) Bupivacaine*;
  - iv) Levobupacaine (Chirocaine)*;
  - v) Etidocaine*;
  - vi) Prilocaine*;
- C) Other topical anesthetics
  - i) Ketones
    - (1) Dyclonine*;
  - ii) Ethers
    - (1) Pramoxine;
  - iii) Skin refrigerants
    - (1) Ethyl Chloride (chloroethane);
- D) Methyl Group Donors
  - i) Betaine;
- E) Sclerosing Agents
  - i) Laureth 4 (Polidocanol, hydroxyl polyethoxy dodecane, lauromacroglolum 400)*;

16) **Mineral, Trace Minerals, and their derivatives ****
- A) Super Saturated Potassium Iodine (SSKI);

17) **Miscellaneous**
- A) Bee Venom;
- B) DMSO;
- C) Ethyl Chloride Spray;
- D) Fluro-Ethyl Spray;
- E) Fluro-Methane Spray;
- F) Hydrogen Peroxide;
- G) Hydrochloric Acid;
- H) MSM;
- I) Oxygen;
- J) Salicylic Acid – topical application;
- K) Urea;

18) **Periphenalia**
- A) Needles*;
- B) Syringes*;
- C) IV Tubing*;
- D) Filters*;

19) **Respiratory Anti-inflammatory Agents**
   A) Cromolyn sodium

20) **Vaccinations****
   A) BCG*;
   B) Cholera*;
   C) Diphtheria*;
   D) DPT*;
   E) Haemophilus b Conjugate*;
   F) Hepatitus A Virus*;
   G) Hepatitus B*;
   H) Influenza Virus*;
   I) Japanese Encephalitis Virus*;
   J) Measles Virus*;
   K) Mumps Virus*;
   L) Pertussis*;
   M) Plague*;
   N) Pneumococcal*;
   O) Poliovirus - Inactivated*;
   P) Poliovirus - Live Oral*;
   Q) Rabies*;
   R) Rubella*;
   S) Smallpox*;
   T) Tetanus IG*;
   U) Tetanus Toxoid*;
   V) Typhoid*;
   W) Varicella*;
   X) Yellow Fever*;

21) **Vitamin – all forms of prescription and non-prescription vitamin preparations and their derivatives**
   A) Exclusion;
      i) Isotretinoin;

NATUROPATHIC MEDICINE: AN OVERVIEW OF PROFESSIONAL EDUCATION

A licensed naturopathic physician (ND) attends a four-year, graduate-level naturopathic medical school and is educated in all of the same basic sciences as an MD, but also studies holistic and nontoxic approaches to therapy with a strong emphasis on disease prevention and optimizing wellness. In addition to a standard medical curriculum, the naturopathic physician also studies clinical nutrition, homeopathic medicine, botanical medicine, psychology, and counseling. A naturopathic physician takes rigorous professional board exams so that he or she may be licensed by a state or jurisdiction as a primary care general practice physician.

Academic Prerequisites

There are currently seven accredited naturopathic schools in North America. These belong to the Association of Accredited Naturopathic Medical Colleges (AANMC), and require a base of undergraduate science courses that include biology as well as general and organic chemistry. Anatomy, biochemistry, botany, developmental psychology, and physiology courses may also be specified.

Academic Curriculum

Naturopathic medicine students learn to treat all aspects of family health and wellness, from pediatrics to geriatrics. They attend four-year graduate-level programs at accredited institutions, where they are educated in the same biomedical sciences as allopathic physicians.

During their first two years of study, the curriculum focuses on basic and clinical sciences and diagnostics, covering:

- Anatomy
- Biochemistry
- Human physiology
- Histology
- Human pathology
- Immunology
- Macro- and microbiology
- Neuroscience
- Pharmacology

For at least the final two years of their medical program, students intern in clinical settings under the close supervision of licensed professionals, learning various therapeutic modalities including:

- Botanical medicine
- Clinical nutrition
- Counseling
- Homeopathy
- Laboratory & clinical diagnosis
- Minor surgery
- Naturopathic physical medicine
- Nutritional science

Some member schools in the AANMC actually require more hours of basic and clinical science than many top allopathic medical schools. Students of naturopathic medicine use the Western medical sciences as a foundation on which to build a thorough knowledge of holistic, non-toxic therapies and develop skills in diagnosis, disease prevention and wellness optimization.

Accreditation

All AANMC member institutions have been accredited by one of the regional accrediting agencies approved by the U.S. Department of Education.

In addition, all of the naturopathic medicine programs of the member schools have been accredited by the Council on Naturopathic Medical Education (CNME), the recognized accreditor for naturopathic medical programs in North America.

Every state, province, and other jurisdiction that licenses naturopathic physicians as primary care health practitioners relies on CNME program accreditation and standards to quality applications for state or province licensure. Naturopathic professional schools and associations in North America rely on the CNME to establish and maintain the highest standards for naturopathic education. This is similar to the way standard medical schools reply on the Association of American Medical Colleges and the American Medical Association to sponsor a national accrediting authority for their medical programs.

CNME evaluators conduct periodic campus visits and staff/faculty interviews in order to monitor the schools' activity on an ongoing basis.

Graduation from a naturopathic medicine program that is accredited or is a candidate for accreditation guarantees eligibility to sit for the **Naturopathic Physicians Licensing Examinations (NPLEX)**, the passage of which is required to obtain licensure.

CNME is also the only naturopathic accreditor with membership in the Association of Specialized and Professional Accreditors (ASPA). This organization accepts as members those accreditors recognized by the Secretary of Education or that meet ASPA's own criteria. Among the almost 50 agencies that belong to ASPA are the recognized accreditors for allopathic (M.D.), osteopathic (D.O.), chiropractic (D.C.), acupuncture, and dental programs. Other naturopathic accrediting agencies accredit correspondence and other schools that do not prepare students to practice as licensed naturopathic physicians. None is recognized by the Secretary of Education, and none of the schools or programs they accredit has institutional accreditation from a recognized regional accrediting agency.

Comparison of ND and MD Curricula

When considering becoming a naturopathic doctor, the impulse to compare and contrast NDs' and MDs' educations is almost unavoidable. After all, an MD is the more common medical degree; it only makes sense to use it as a basis for comparison. And plenty of differences, as well as similarities, certainly do exist between the two, both in education and in medical practice. But when comparing the training and philosophies of NDs and MDs, it's important to remember that there is no right or wrong: each field is unique and offers distinct benefits to patients and the medical field as a whole.

Medicine can be seen as analogous to a tree. There are many different branches of medicine, each branch possessing its own tools and methodologies. But just as branches belong to a single tree and share common roots, so too are all medical fields based on the same founding principle: the protection and improvement of the patient's health. NDs and MDs represent two distinct branches of the medical tree, each sharing the same foundation, or "trunk." So if you want to become a health care practitioner, understanding the similarities and the differences between the two branches of medicine is essential to determining which branch may suit you best.

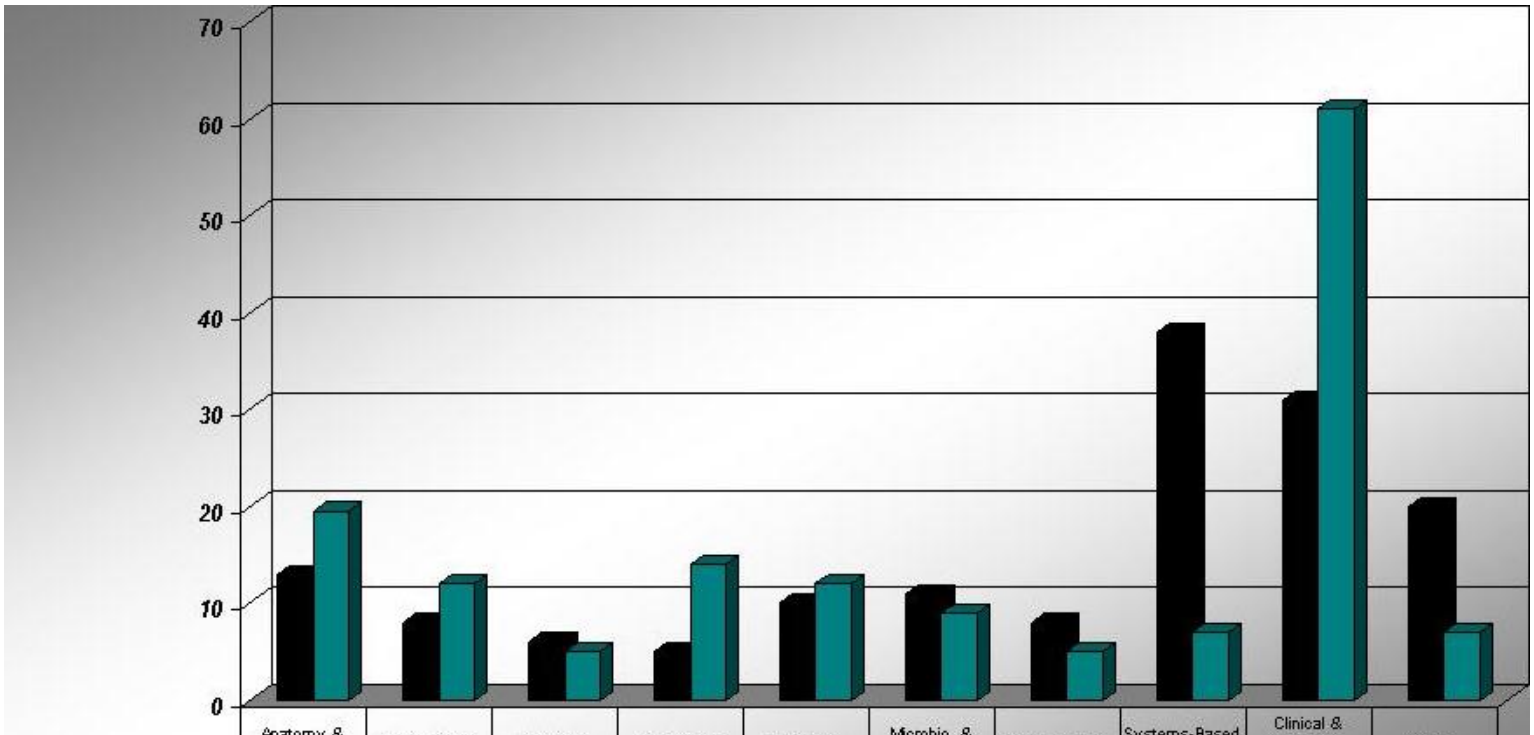
The First Two Years: A Strong Science Background

Naturopathic medical education is imbued with a unique philosophy grounded in the six principles of naturopathic medicine, which include holistic, nontoxic approaches, along with an emphasis on disease prevention and optimizing wellness. Accordingly, ND school curricula include certain areas of study not covered in conventional med school, such as clinical nutrition, homeopathic medicine and psychological counseling. However, future NDs also receive training in many of the same biomedical and diagnostic sciences as their MD counterparts, and the result is a comprehensive and well-rounded medical education.

The general educational structure is very similar for both ND and MD students. In both programs, the first year emphasizes the biomedical sciences, such as anatomy and biochemistry. During the second year, classes focus on the diagnostic sciences, including areas like evidence-based medicine and physiological assessment. Both programs progressively increase students' problem-based learning and integrated coursework, allowing students to comprehend how the different learned concepts affect one another.

During the first two years, ND students' credit loads are almost identical to those of MD students. In nearly every biomedical science, ND students are required to complete as many credits as, if not more than, MD students. Specifics vary by school, but a 2010 course comparison of the University of Washington's MD program and Bastyr University's ND program shows that during the first two years, University of Washington MD students completed a total of 150 credits and Bastyr ND students completed 151.5 credits, most of them in comparable biomedical and diagnostic science courses.

Credit Comparison
ND & MD Programs: The first two years



	Anatomy & Embryology	Biochemistry	Histology	Physiology	Pathology	Microbio. & Immunology	Pharmacology	Systems-Based Courses	Clinical & Modality Training	Other
MD Credits: Univ. of Wash.	13	8	6	5	10	11	8	38	31	20
ND Credits: Bastyr Univ.	19.5	12	5	14	12	9	5	7	61	7

Some key aspects of ND education reflected in the bar graph:

- The first two years of the ND curriculum also include early introduction to naturopathic modalities, such as homeopathy, nutrition and botanical medicine. This exposure occurs in many different courses over these two years, and therefore is not called out separately in the ND school course catalogue.

- While many conventional medical schools use a systems-based approach to medical education, most naturopathic medical programs currently do not. In a systems-based approach, anatomy, physiology, pathology and diagnostic skills are each taught individually for each body system (i.e., respiratory, digestive, nervous system, etc.). And although some ND schools may be moving toward a more systems-based approach to education, classes in a typical ND program are not divided by system, but rather focus on how a symptom in one part of the body may affect the patient's entire anatomy and well-being.

- Some ND school curricula also begin clinical training during the first and second years, just as some MD school curricula initiate observational shifts at that time.

Third and Fourth Years: Hands-on Experience via Clinical Training

After the first two years, both ND and MD curricula focus on applying medical knowledge to real-life situations; simultaneous classroom studies support this training. Both curricula strive to maximize the synchronization of classroom and clinical training during these key years, thereby improving the quality and practicality of the students' educations.

However, it is during these later years that MDs' educations begin to differ noticeably from those of NDs. MDs complete clerkships, which are courses in various medical specialties, and although MD students see plenty of patients during these clerkships, their roles are primarily observational: they are not primarily responsible for patient care.

Third- and fourth-year ND students have increasing opportunities for hands-on clinical training and practice, often at their schools' teaching clinics and off-site clinics, which offer diverse patient populations. This period of clinical training goes well beyond the observation and is absolutely essential to NDs' educations – so much so that clinical training is now being introduced during the first and second years of education at several AANMC-member schools. As a result, naturopathic medical students graduate prepared to begin practice and to diagnose and treat patients, whereas MD students are required to complete residencies after graduation in order to gain clinical experience.

Post-graduation: Residencies and Shadowing

Examining third- and fourth-year clinical training brings up another major difference: medical residencies.

- MD residencies are mandated and regulated by conventional medical schools. As a result, an abundance of such opportunities exist at a wide variety of medical facilities all across North America. Every graduate of conventional med school must expect to complete a post-graduation residency.

- Naturopathic residency opportunities, on the other hand, are not nearly as common because unlike conventional medical residencies, they are not yet required or funded by the federal government. Only 5 to 10 percent of new NDs participate in formally approved residency positions, all of which are associated with colleges approved as residency sponsors by the Council on Naturopathic Medical Education (CNME). There are some naturopathic residency opportunities available, and the naturopathic medical community is working to create more all the time, but such programs are not required (except in Utah). In place of a residency, many new NDs choose to practice with or shadow an experienced ND before setting up their own practices.

North American Board of Naturopathic Examiners

All AANMC-school graduates are in good stead with the North American Board of Naturopathic Examiners (NABNE), which examines graduates to determine minimal competency to be safe practitioners. Regulatory authorities then use exam results to determine eligibility for licensure.

Every ND who wants to qualify for state or province licensure must first pass the Naturopathic Physicians Licensing Examinations (NPLEX). Administered by NABNE, these North American board exams cover:

- *NPLEX Part I – Basic Science Examinations* – tests scientific knowledge as a foundation for clinical training.
- *NPLEX Par II – Clinical Science Examinations* – tests competency required to practice as an entry-level naturopathic physician.

Only students and graduates of AANMC-member schools (accredited by CNME or candidates for accreditation) are eligible to take the NPLEX.

A final note: the naturopathic licensing agencies mentioned above do not consider correspondence schools to provide an adequate education for preparing students to become practicing physicians; nor do naturopathic professional associations accept correspondence-school graduates as part of the naturopathic profession.