

# Diagnostic Instruments

For Medical Students



WelchAllyn



# You want to start as early as possible perfecting your clinical assessment skills.

### The physical exam is key in every patient encounter

Your responsibility to physically assess a patient, will be a major characteristic differentiating yourself from others in the healthcare field. The information you gather is also one of the primary components required to bill an insurance company for the clinical services you deem necessary, after the physical evaluation of a patient is conducted and the clinical decision is made.

### Many clinicians believe over 80% of diagnoses come from the history and physical assessment of the patient

There will be increasing pressure on physicians to pay close attention to the high cost of healthcare, and payers will insist on well-documented evidence that advanced care or testing is required. Although great advances have been made in medicine, approximately 80% of your diagnoses will still come from basic history and physical assessment.

### So why invest with Welch Allyn?

When purchasing your first diagnostic instruments, it's important to understand this is an investment for your future. The medical equipment presented here will be critical tools to your success when gaining physical diagnosis skills that are fundamental to clinical practice. Invest in Welch Allyn diagnostic equipment, and get a head start on the opportunities it will provide you to practice and perfect these skills on your peers, family members and friends.

From our beginnings in 1915 with the invention of the world's first hand-held direct illuminating ophthalmoscope to our latest innovations like the PanOptic™ Ophthalmoscope and the MacroView™ Otoscope, Welch Allyn has long been the leader in diagnostic instruments. Want proof? Ninety-five out of 100 physicians in the United States own Welch Allyn instruments—and count on them daily to help diagnose and treat patients.

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# **OPHTHALMOSCOPES**



Welch Allyn PanOptic Ophthalmoscope Head shown with Lithium Ion Handle



### What is the ophthalmoscope and what can be seen with it?

The ophthalmoscope is used to view the back of the eye, commonly called the fundus. This is the only place where arteries, veins, and nerves can be seen without surgically entering the patient.

A good view of the fundus will not only give an indication as to the health of the eye, but can also tell you a lot about the patient's overall health.

# Revolutionary technology for a

### 3.5 V PanOptic™ Ophthalmoscope

The fundamental challenge in ophthalmoscopy is to get a good view of the fundus in order to make a sufficient assessment. Let the Welch Allyn PanOptic Ophthalmoscope help you meet this challenge.

### Prevents interference from unwanted

Prevents interference from unwanted glare and reflections

Patient eyecup: Establishes and maintains proper viewing distance, provides image stability, serves as a pivoting point for panning around the retina, helps with orientation, and screens out ambient light. The eyecup is cleanable and reusable

**Soft grip handle:** Ergonomically designed for maximum comfort, balance, and access to controls

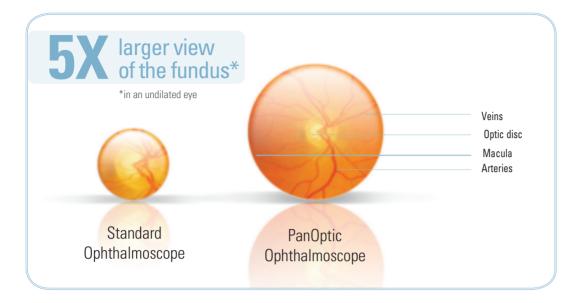


select from micro, small, and large spot sizes, slit aperture, red-free and cobalt blue filters

### Why ophthalmoscopy is an important diagnostic skill

Prevalent Disease/Condition	Specialty
Diabetic Retinopathy > only 30% of diabetic patients see the ophthalmologist for annual exam	Internal Medicine Family Medicine Nephrology
Hypertensive Retinopathy > useful in finding undetected hypertension > helps monitor control and management of disease	Internal Medicine Family Medicine Nephrology
Papilledema/Head Trauma > patient complains of headaches	Internal Medicine Family Medicine Nephrology Emergency Medicine
Central Nervous System Problems > manifestation commonly seen in retina	Neurology
Shaken Baby Syndrome > can visualize retinal hemorrhages consistent with syndrome	Pediatrics Family Medicine Emergency Medicine
Foreign Bodies/Corneal Abrasions	Internal Medicine Family Medicine Emergency Medicine Pediatrics

# difference you can see

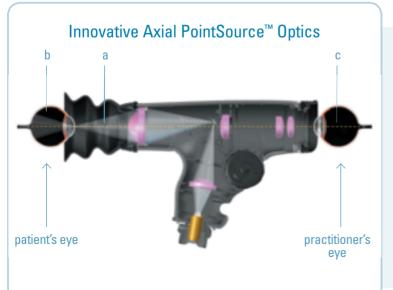


### Advantages when using the PanOptic Ophthalmoscope

- > Fast, easy entry into undilated pupils—the entire optic disc and surrounding vessles should be visible
- $> 25^{\circ}$  field of view vs. the standard  $5^{\circ}$  field of view
- > Greater working distance improves comfort for both practitioner and patient

### What you see—Clinical applications

Direct viewing of the fundus through the PanOptic can reveal valuable clinical observations. Systematic diseases such as diabetes mellitus and hypertension leave footprints in the retina and aid the practitioner in the evaluation of these and many other diseases.



The practitioner is actually viewing the fundus through the mirror that directs illumination into the eye maximizing the alignment of the viewing axis with the illuminated areas.

### How it works

- a. Converges the illumination to a point at the patient's comea, allowing easy entry into small pupils
- b. Then diverges the illumination pathway to the patient's retina, illuminating a very wide area of the fundus
- Simultaneously enables the practitioner to view the illuminated area on virtually the same axis, creating the widest field of view attainable

Welch Allyn Coaxial Ophthalmoscope Head shown with Lithium Ion Handle



### Apertures (programs of light) commonly used during a patient exam

The majority of the time you will use the small aperture as the standard aperture for the examination of an undilated eye. The other two apertures you will use most often are the micro-spot and the large.



Small Aperture: Provides easy view of the fundus through an undilated pupil. Always start the examination with this aperture and proceed to micro-spot aperture if pupil is particularly small and/or sensitive to light.



Micro-Spot Aperture: Allows easy entry into very small, undilated pupils, and light-sensitive eyes.



Large Aperture: For dilated pupil examination of the eve.



Red-Free Filter: Excludes red rays from examination field for easy identification of veins, arteries, and nerve fibers.



Cobalt Filter: Used with fluorescein dye to view small lesions, abrasions, and foreign objects on the cornea.

# Traditional quality, reliability and performance

### 3.5 V Coaxial Ophthalmoscope

Welch Allyn Coaxial ophthalmoscopes provide benefits over standard ophthalmoscopes including easier entry into the eye, a larger field of view, reduced glare, and bright, white Halogen HPX™ light.



Triple-sealed ophthalmoscope: Keeps dust from reaching optics

Cross-linear polarizing red-free filter: Eliminates unwanted reflections

Lens selection disc: Offers easy, fast, one-hand selection of 28 focusing lenses

### The Welch Allyn Coaxial Vision System: makes learning easier



Anerture selection dial: Offers six

apertures, including the micro-spot

convenient access to all controls



# Bigger, better, sharper view of the tympanic membrane

### MacroView™ Otoscope

This instrument is a significant advance in hand-held otoscopy, providing an improved view for enhanced learning and decision making.

**Tip grip:** Ensures ear specula are fastened securely and easily



Choose between disposable or reusable ear specula made of the highest quality construction for an unobstructed, glare-free view

Insufflation port: Creates closed system for pneumatic otoscopy to assess middle ear disorders. Apply positive and negative air pressure and view tympanic membrane using an insufflator bulb

**Default focus:** Optimal setting for most ear examinations

**2 in 1 Throat illuminator:** Provides light with a handy built-in penlight







Welch Allyn MacroView Otoscope Head with Throat Illuminator shown with Lithium Ion Handle



### Field of view

Delivers almost twice the field of view at higher magnification compared to standard otoscopes, making it easier to visualize the auditory canal and tympanic membrane.



Standard Otoscope



MacroView™ Otoscope



Lithium Ion Handle

# Transformer ETL/UL Recognized NiCad Battery C-cell Converter



® CYCOLOY is a registered trademark of General Electric Company

### 3.5 V Lithium Ion Power Handle

The Welch Allyn Lithium Ion Handle powers any 3.5 V instrument head for 110 minutes—twice as long as a conventional handle. This "Smarter" lithium-ion battery technology also means no memory effect, often found with NiCad batteries.



### 3.5 V Convertible Handle

Traditional chrome-plated breass construction for durability and long life.



### Accessories

### Bivalve Nasal Speculum

Adjustable speculum facilitates removal of foreign bodies, autoclavable for complete sterilization.

**26035** Bivalve Nasal Speculum Only—for use with the diagnostic otoscope/throat illuminator

**26038** Bivalve Nasal Speculum—complete with illuminator base



### Insufflator Bulb

Attaches to port for pneumatic otoscopy.

**23804** Insufflator Bulb for MacroView<sup>™</sup> Otoscope



### Pneumatic Otoscope

Includes powerful Halogen HPX" lamp and rotating lens with ultra-seal for pneumatic otoscopy.

20200 Pneumatic Otoscope



### Operating Otoscope

Features powerful Halogen HPX lamp and convenient open system

21700 Operating Otoscope



### LED Replacement Lamps

Upgrade to LED lamps for longer life, high efficiency, and SureColor™ LED technology that reduces glare while preserving the color and clarity of the view.

03100-LED Traditional Diagnostic Otoscopes 06500-LED MacroView Diagnostic Otoscopes 04900-LED Traditional Ophthalmoscopes 03800-LED PanOptic™ Ophthalmoscopes

### Disposable Universal KleenSpec® Specula

2.75 mm and 4.25 mm disposable specula eliminate cross-contamination.

**52432-U, 52434-U** Disposable KleenSpec Specula



### **Corneal Viewing Lens**

Replaces the patient eyecup on the PanOptic ophthalmoscope to provide extra magnification for exams of the cornea.

11875 Corneal Viewing Lens



### Fiber-Optic Nasal Illuminator

Provides superb view of nasal passages.

**26535** Fiber-Optic Nasal Illuminator Section—for use with diagnostic otoscope/throat illuminator

**26538** Fiber-Optic Nasal Illuminator —complete with illuminator base



### Fiber-Optic Finnoff Transilluminator

Eliminates patient discomfort in transillumination of frontal and maxillary sinuses.

**41100** Fiber-Optic Finnoff Transilluminator



### Patient Eyecup

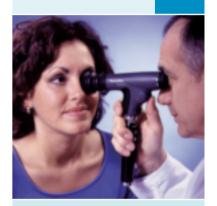
Package of 5 reusable eyecups for PanOptic ophthalmoscope.

11870 Patient Eyecup





LED Replacement Lamps





30X the Lamp Life of a traditional halogen lamp in just one LED lamp.

- 7-year guarantee
- 80% cost savings over the life of the lamp



Welch Allyn 3.5 V Diagnostic Set

### What is a diagnostic set?

A basic diagnostic set consists of an ophthalmoscope for examination of the eye, an otoscope for examination of the ear, and a battery handle to power these instruments.

# Why should I consider purchasing a Welch Allyn diagnostic set?

Owning your own diagnostic instruments will ultimately support your ability to be proficient. And, your proficiency with these diagnostic tools is essential for your goal of becoming a licensed practitioner.

Welch Allyn has the features, optics, and durability that make your job of learning how to examine the eyes and ears easier. This is important because you are investing in equipment that represents the fundamentals of your profession, and which will serve you throughout your education and career.

Service is always local and prompt; Welch Allyn has the most extensive distributor network, and your equipment is unconditionally guaranteed while you are a student or resident.

# Traditional quality, reliability and

### 3.5 V Diagnostic Set Components

All Welch Allyn student diagnostic sets come with the following components:



#97800-MS



### Hard Case

Leather-grained black vinyl with molded inserts, lays flat displaying instruments for easy access



### Soft Case

Made of durable corduroy with interior pockets for instruments, this smaller profile case fits right in your lab coat.

# performance



### #97200-MS

### **Diagnostic Sets**

SET CONTENTS & ORDER NUMBERS						
Ophthalmoscope		Otoscope	Handle		Cases/Part Number	
-		Sa.	å	Î		
PanOptic 11820	Coaxial 11720	MacroView 23820	NiCad 71000-C	L.ion 71900	Hard	Soft
11020	11720	23020	71000-0	71300	97800-MS	97801-MS
		•		•	97800-MC	97801-MC
		•	•			
	•	•		•	97200-MS	97201-MS
	•	•	•		97200-MC	97201-MC

When selecting the set that is right for you, consider which of these diagnostic components best fit your needs:





### Tycos DS58 Classic Hand Aneroid

### Why is it important to invest in a sphygmomanometer (aneroid)?

Taking a patient's blood pressure is one of the most frequent diagnostic tasks you'll perform throughout your medical career. High blood pressure (hypertension) affects nearly one in three Americans and plays a major role in deaths due to cardiovascular disease. The sphygmomanometer is your tool for early detection of this silent killer and will be used on nearly all of your patients.

It is vitally important to be well trained in blood pressure measurement technique and to have an accurate, reliable instrument to properly diagnose and determine treatment options. Owning your own sphygmomanometer will allow you to practice and gain competency in blood pressure measurement.

### Tycos® DS58 Classic Hand Aneroid

With gear-free DuraShock™ technology, you can count on the classic aneroid to remain in calibration longer than traditional aneroids, providing more accurate readings over time.





### Welch Allyn DS66 Trigger Hand Aneroid

The Trigger Hand Aneroid features a modern, ergonomic design to fit perfectly in the right or left hand. This aneroid makes taking accurate blood pressure measurements easy and comfortable.



### Welch Allyn DS45 Integrated Aneroid

Welch Allyn's DuraShock Model DS45 offers quality and accuracy in an easily affordable system. It features a traditional thumbscrew design, and the gauge clips onto the cuff and bladder. It is also shock-resistant to 30 inches, lightweight and is backed by a 10-year calibration warranty.

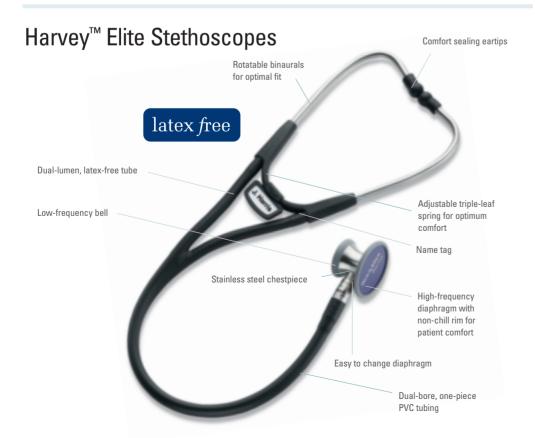


### Harvey<sup>™</sup> Cardiology Stethoscopes

Harvey DLX and Elite stethoscopes were developed during a 30-year association with the preeminent Dr. W. Proctor Harvey, MD—the first and only "Master" of cardiology bestowed by the American College of Cardiology. He designed these stethoscopes to accentuate important high-frequency heart sounds like clicks, murmurs and ejection sounds.

### Harvey™ DLX Double-head Stethoscopes







Harvey DLX Stethoscope



# What should I look for in a stethoscope?

You want to be sure that the stethoscope fits correctly. If you can't get sound past the eartip to your tympanic membrane, all other features are unimportant. The more custom the fit, the easier the sounds travel to your ear.

As a student, you must consider the versatility of the scope. Remember you will be doing rotations, including pediatrics and cardiology. The Harvey DLX and Elite, for example, adapt easily for pediatrics, and the bell is essential for cardiology.

Every Harvey DLX and Elite stethoscope comes with a free copy of **Harvey Heart Sounds Sampler**, an interactive CD for learning heart sounds and a Cardiology Accessory Kit and a Cardiology Accessory Kit

Cardiology Accessory Kit Includes: Pediatric Diaphragm Assembly One Pair Medium Soft Eartips One Pair Large Hard Eartips One Pair Extra Large Hard Eartips

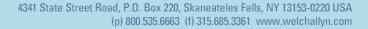
### Warranty Information

### For Medical Students

Our diagnostic instruments are rugged, durable, and dependable. We are so confident of the quality of our products, that no matter what you buy—whether it's a stethoscope, ophthalmoscope, otoscope, or even the lamp inside—we give you an enhanced warranty for the time you're a student through your first two years of residency. The only thing we do not cover is loss or theft.

If it breaks, we'll repair or replace it. That's our guarantee, plain and simple.







# Please use this sheet as a guide as you make decisions on the

# Equipment you'll invest in for your career.

Every diagnostic set starts with our exclusive MacroView™ Otoscope Pick your Ophthalmoscope (please check one box in each step) 11820 PanOptic<sup>™</sup> Ophthalmoscope— 11720 Coaxial 3.5V Ophthalmoscope— 5X field of view for textbook image of fundus Full-featured traditional ophthalmoscope. and fast easy entry into small undilated pupils. Pick your Power Source 71000-C Convertible Handle— 71900 Lithium Ion Handle-Accepts rechargeable or alkaline C-cell batteries. Lightweight & portable with twice Useful for overseas travel when it's difficult to the on time of our NiCad handle. No find electricity. memory—cell phone battery technology.

Pick your Carrying Case

Hard Case—
Keeps your instruments in place, organized, and protected.



Soft Case— Lightweight, portable and durable protection.

	SET CONTENTS & ORDER NUMBERS						
	Otoscope	Ophthalmoscope		Handle		Cases/Part Number	
DIAGNOSTIC SETS	9	7					
SOF	MacroView	PanOptic	Coaxial	L. ion	NiCad		0.6
<u>5</u>	23820	11820	11720	71900	71000-C	Hard	Soft
⊴	•	•		•		97800-MS	97801-MS
	•	•			•	97800-MC	97801-MC
	•		•	•		97200-MS	97201-MS
	•		•		•	97200-MC	97201-MC

Not an order form. Product selection, availability varies by sale. Please check with your local distributor or Welch Allyn on-site representative to place an order.



# 5

### Pick your Stethoscope



### Harvey DLX Premium Cardiology Stethoscope—

Brass chest piece for superior sound transmission, student bonus accessory kit (additional ear tips & pediatric diaphragm), 10-year warranty.



### Harvey Elite Cardiology Grade Stethoscope—

Stainless steel chest piece, student bonus accessory kit (additional ear tips & pediatric diaphragm), 10-year warranty.

- S	CARDIOLOGY GRADE STETHOSCOPES			
표일	Harvey DLX (Brass)	5079-XXX	Colors: Black (325), Burgundy (328), Green (327), Navy (326)	
SC	Harvey Elite (Stainless)	5079-XXX	Colors: Black (125), Burgundy (270), Green (284), Navy (271)	



### Pick your Blood Pressure Device



### DS58 Hand Aneroid—

Traditional thumbscrew style air release valve, adult & child cuff or family practice set available, lifetime calibration warranty.



### DS66 Hand Aneroid—

Trigger air release valve, adult cuff or family practice set available, 15-year calibration warranty.



### DS45 or DS44 Integrated Aneroid—

Integrated design w/ inflation system, adult cuff, 5-year calibration warranty (DS44) or 10-year calibration warranty (DS45).

\* All models above are shock resistant.



# Hand Aneroid, Cuff Kits for DS66 and DS58

With child print, adult, and large adult inflation systems in a dual-compartment zippered case.

	BLOOD PRESSURE				
BLOOD RESSURE		ADULT CUFF	FAMILY PRACTICE		
SS	DS58 Thumbscrew	DS58-11	DS58-MC		
一番	DS66 Trigger	5098-27	5098-30		
	DS45 Integrated Aneriod	DS45-11C	DS45-MC		



# WelchAllyn° ¡EXAMINER™

EYE IMAGING ON YOUR iPhone®
\*COMPATIBLE WITH IPHONE 4 AND IPHONE 4S

Our innovative iExaminer facilitates education, allowing you to document and study fundus images, as you perfect ophthalmoscopy



The complete iExaminer system consists of three core components:



PanOptic<sup>™</sup> Ophthalmoscope



iExaminer Adapter



iExaminer App



Take a peek at this amazing medical breakthrough in action.



# WelchAllyn° ¡EXAMINER™

EYE IMAGING ON YOUR iPhone®

- iExaminer adapter works with the Welch Allyn PanOptic Ophthalmoscope, and through your iPhone,\* and the iExaminer app to create a mobile digital imaging device
- Rapid capture of fundus images on your iPhone for easy eyeground documentation
- Document and study images in any clinical environment
- Share and consult with peers across the continuum of care at a moment's notice