



References

- 1 Klingman, D., et al. (2005), Gauging the treatment gap in dyslipidemia: findings from the 1999-2000 National Health and Nutrition Examination Survey. *Am Heart J* 150: 595-601
- 2 WHO, MacKay, J. and Mensah, G.A. (2004), The Atlas of Heart Disease and Stroke
- 3 Cardium Study #4, Dyslipidemia Decision Resources, Inc. Waltham, MA (2007)
- 4 Yach, D., et al. (2004), The global burden of chronic diseases: overcoming impediments to prevention and control. *JAMA* 291: 2616-2622
- 5 Clearfield, M.B. (2003), Underidentification and undertreatment of dyslipidemia. *J Am Osteopath Assoc* 103: 5-8
- 6 Petersen, S., et al. (2005) European cardiovascular disease statistics. 2nd Edition. *European Heart Network and the British Heart Foundation*
- 7 Taylor, J.R. and Lopez, A.M. (2004), Cholesterol: point-of-care testing. *Ann Pharmacother* 38: 1252-1257
- 8 Executive Summary of The Third Report of The National Cholesterol Education Program (NCEP) Expert Panel on Detection, Evaluation, And Treatment of High Blood Cholesterol In Adults (Adult Treatment Panel III) (2001) *JAMA* 285: 2486-2497
- 9 ACE guidelines for Glycemic Control. *Endocrine Pract.* (2002) 8 (Suppl 1)
- 10 ADA guidelines Diabetes Care. (2006) 29 (Suppl 1): 4-42
- 11 Grundy, S.M., et al. (2005) Diagnosis and Management of the Metabolic Syndrome: An American Heart Association/National Heart, Lung, and Blood Institute Scientific Statement: Executive Summary. *Circulation* 112: 285-290
- 12 Tonkin, A. (2004) The metabolic syndrome - a growing problem. *Eur. Heart J.* 6 (Suppl A): A37-A42
- 13 Shaw, D.I., et al. (2005) Metabolic syndrome: what is it and what are the implications? *Proc Nutr Soc* 64: 349-57

Quick! Who needs to be screened for cardiovascular disease?
Accutrend Plus: Spot on. On the spot.

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Roche Diagnostics Ltd.
CH-6343 Rotkreuz
Switzerland
www.roche.com

05118441001® 0000



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Life needs answers

It is a hard fact – 56.3% of people suffering from dyslipidemia have not been diagnosed.¹ This is alarming considering that conventional risk factors account for around three quarters of all cardiovascular diseases (CVD).²

Characterised by abnormal levels of cholesterol and triglycerides (TGs), dyslipidemia currently affects more than 350 million people in the USA, Europe and Japan.³ But because it is a modifiable risk factor, this number could be improved given simple, reliable screening.

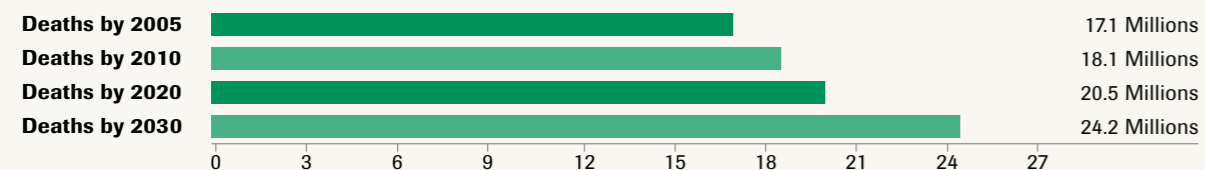
The Accutrend® Plus system gives you a fast, effective way of screening patients for CVD risk factors with immediate results.



Appearances can be deceptive

Nearly one in three deaths is due to CVD

Cardiovascular disease (CVD) is the leading cause of death and disability in industrialised countries²⁻⁶ and the incidence is continually increasing.²



Simple monitoring, rapid results

Total cholesterol, triglycerides and blood glucose levels can be used to identify those patients at risk of CVD. Regular monitoring of these parameters provides important information about disease progression.

That is where the Accutrend® Plus system can help you. Because Accutrend Plus lets you measure the key parameters of cardiovascular disease on the spot. Safely, reliably and easily.

Quick and convenient, Accutrend Plus puts the measurement of CVD risk factors in the palm of your hand.

Using conventional methods, such as sending blood samples to a laboratory, is not always convenient. For instance, it will usually mean the patient having to return for the results, taking up valuable time and there is no guarantee that they will come back.

With the Accutrend® Plus system you have a convenient and effective way for detecting and monitoring risk factors that lets you provide the patient with an on the spot result. Where necessary you can make recommendations regarding lifestyle changes or treatment and arrange follow up appointments for monitoring.

Early detection is key

CVD is associated with, and often results from, atherosclerosis. If allowed to progress the consequence may be myocardial infarction, stroke and possibly death. The best way of reducing the burden of the disease is primary prevention and early detection.

Regular monitoring makes a difference

A significant number of patients in primary care are dyslipidemic and therefore at higher risk of cardiovascular disease. In addition, many patients with lipid disorders are either treated insufficiently or not treated at all. Point-of-care lipid testing can substantially improve recognition as well as management of dyslipidemic patients in primary care.⁷

Detecting the risk on the spot

The Accutrend® Plus system from Roche is a flexible, hand-held point of care device for the three key parameters – total cholesterol, triglycerides and glucose. A cost effective, all-in-one device that provides excellent assay performance when compared with standard laboratory tests.* You can also store up to 100 different measurements with date, time and high-low flags.

Built-in safety for accurate results

The Accutrend® Plus system lets you apply blood onto the strip inside or outside the meter. For example, when conducting multiple tests where cross contamination might be an issue, you can apply blood outside the device.

With its built-in automatic performance and meter self-testing, the Accutrend® Plus system conducts multiple safety checks to prevent against potential errors and malfunction, so you can rely on accurate results.

Code strips with positive strip lot identification and parameter recognition are used to calibrate the device – an added safety feature, which ensures system performance level is maintained.

The test strips can be easily stored at room temperature.

The result: high precision and accuracy across the full measuring range.

Three simple steps, accurate results



Step One:

Switch the instrument on and insert a test strip. A flashing arrow tells you to open the device to apply the blood sample.



Step Two:

Use the lancing device, collect capillary blood and apply this directly onto the strip (alternatively, you can apply blood onto the test strip outside the device and then reinsert the strip).



Step Three:

Close the device and wait for your results. When the measurement is complete, values are displayed and high or low values indicated.

*Roche 2009, data are available on request

Key values to detect and monitor CVD

Patients with CVD typically have high total cholesterol in their blood. The first step in both primary and secondary preventative cholesterol-lowering therapy is assessment of the patient's risk status.⁸⁻¹⁰

Values for serum total cholesterol

Total cholesterol	mg/dL	mmol/L
Desirable	< 200	< 5.1
Borderline high	200-239	5.1-6.1
Very high	> 240	> 6.2

Target values for total cholesterol levels

Once cholesterol targets are achieved it is best to assess levels at least annually.

	mg/dL	mmol/L
Optimal	160	4.1
Audit standard*	200	5.1

* minimum standard of care for all high-risk people

** on more than one testing occasion

Values for fasting serum triglycerides

Triglycerides	mg/dL	mmol/L
Normal	< 150	< 1.69
Borderline high	150-199	1.69-2.24
High	200-499	2.25-5.61
Very high	> 500	> 5.62

Target values for fasting serum triglycerides

Triglycerides > 1.7 mmol/L (150 mg/dL) are a sign of metabolic syndrome.

	mg/dL	mmol/L
Normal	< 150	< 1.7

Fasting blood glucose

Blood glucose	mg/dL	mmol/L
Normal glucose tolerance	70-99	3.9-5.5
Impaired fasting glucose (pre-diabetes)	100-125	5.6-6.9
Very high	> 126**	> 7.0**

Target values for fasting blood glucose

	mg/dL	mmol/L
American College of Endocrinology ⁹	< 110	< 6.1
American Diabetic Association ¹⁰	90-130	5.0-7.2

Accutrend Plus – Test Parameters

Metabolic syndrome increases the risk of developing CVD¹¹

Metabolic syndrome increases the risk of CVD and type 2 diabetes. The worldwide prevalence is rising due to increasing obesity and sedentary life styles.¹¹

Metabolic syndrome is estimated to be present in 24% of the US adult population¹² and 15% for the same group in Europe.¹³

Diagnostic criteria for metabolic syndrome (any 3 out of 5 criteria constitute diagnosis):

- Triglycerides \geq 1.7 mmol/L (150 mg/dL)
- Fasting blood glucose \geq 5.55 mmol/L (100 mg/dL)
- Elevated waist circumference \geq 102 cm in men, \geq 88 cm in women
- Blood pressure \geq 130/85 mm Hg
- Reduced HDL («good») cholesterol¹¹

Accutrend Plus

Test	Measuring Ranges mg/dL	mmol/L	Measuring Time	Small Material	Sample Volumes	Operating Conditions
Glucose	20-600	1.1-33.3	12 sec	Fresh capillary blood	15-50 μ L	18°- 35°C
Cholesterol	150-300	3.88-7.76	180 sec	Fresh capillary blood Use of heparin-coated pipettes possible	15-40 μ L	18°- 30°C
Triglycerides	70-600	0.80-6.86	max 174 sec	Fresh capillary blood Use of heparin-coated pipettes possible	10-40 μ L	18°- 30°C
Lactate	0.8-22 mmol/L		60 sec	Fresh capillary blood Use of heparin-coated pipettes possible	15-50 μ L	5°- 35° or 15°- 35°C depending on concentration of analyte