

## **Chairside Risk Screening**

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The following information is for dentists who may wish to consider providing patients with the option of chairside screening for coronary heart disease (CHD) and diabetes mellitus (DM) in the dental office.

### **Screening versus Diagnosis**

It is very important to understand the purpose of a screening test versus a test for disease diagnosis. Screening is done to identify those at increased risk of disease and is not meant to be a definitive diagnosis of disease. This is a critical distinction especially for those who may think that chairside screening for medical conditions in a dental setting is outside the scope of dental practice.

### **Screening tests are NOT meant to be a diagnosis**

***Screening*** tests are primarily conducted to assess the risk of developing disease among individuals who may present with no clinical signs or symptoms of disease. Early identification of individuals at increased disease risk yet unaware of their increased risk allows for early entry into the medical system when medical and or behavioral interventions can impact the risk of developing disease. Screening can be considered as a flagging mechanism to select individuals who may warrant further confirmatory testing. Screening tests are done to assess the presence or level of well-recognized disease markers or risk factors and are a critical component of strategies to prevent and control disease epidemics. Individuals with positive screening tests are referred to an appropriate health care provider for diagnosis or follow up for disease/risk factor monitoring. Screening tests can also be done to monitor an individual's disease progression and or control of the individual risk factors once disease diagnosis is made or the presence of specific risk factors is confirmed. Our purpose is the former.

***Diagnostic*** tests involve confirmation of the presence or absence of disease or of specific markers of a disease in symptomatic individuals or in those suspected to be at increased risk of disease. Diagnostic testing is conducted by appropriately trained practitioners that often require rigorous and complex laboratory testing. Diagnostic tests are most often used to establish a definitive disease diagnosis or indicate disease prognosis using referenced standards. Diagnostic testing for medical conditions often will be outside the scope of dental practice.

### **Why Screen for Medical Conditions in a Dental Setting?**

Screening for risk of developing disease can alert patients to potential disease risks or health issues that they are unaware of. On average 65-70% of adults visit the dentist in a given year,<sup>1</sup> 10-20% of whom have not seen a physician in the preceding year,<sup>2</sup> suggesting a potentially significant role for oral health care providers on public health strategies to prevent the onset of, or control the severity of diseases of important public health significance, such as heart disease and diabetes. We are presenting rapid, simple and relatively inexpensive chairside screening tests for heart disease and diabetes to be used in a dental setting that yield immediate results. This strategy takes advantage of the dental visit to reveal a potential health issue by identifying patients who may be at increased risk of developing disease yet unaware of their increased risk.

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<sup>1</sup>The American Dental Association does not endorse any of the products referred to by the authors.

Relevant references:

1. Centers for Disease Control. Health, United States, 2010 with special feature on death and dying. Trend tables, table 93. Dental visits in the past year by selected characteristics: United States, selected years 1997-2009. <http://www.cdc.gov/nchs/data/hus/hus10.pdf>.
2. Pollack HA, Metsch LR, Abel S. Dental examinations as an untapped opportunity to provide HIV testing for high-risk individuals. *Am J Public Health*. 2010; 100:88-9

## I. SCREENING FOR CORONARY HEART DISEASE (CHD) AND DIABETES MELLITUS (DM)

### Overview

Coronary heart disease, responsible for 50% of cardiovascular disease, and diabetes mellitus are among the primary causes of mortality and morbidity worldwide.<sup>(1)</sup> Both conditions are associated with well-recognized risk factors. Studies have shown that behavioral and medical interventions can decrease the incidence and/or severity of disease. Identification of risk factors in persons who are asymptomatic and unaware of their increased disease risk allows for early intervention strategies that can decrease or ameliorate the risk of developing the disease. According to the American Heart Association approximately 13 million Americans have active symptoms of CHD.<sup>1</sup> As the life expectancy and obesity rate increase in the population, cardiovascular disease and DM are becoming increasingly more prevalent with 80 million people recognized as having some type of cardiovascular disease and 26 million with DM.<sup>2</sup> Associated with the increasing disease prevalence are increasing levels of disability and growing health care expenditures for these conditions. More importantly, a significant proportion of individuals are unaware of their disease. The prevalence of undiagnosed disease is estimated to be 29-71% for cardiovascular disease (depending on the specific risk factor) and 27-53% for DM and pre-diabetes.<sup>1-7</sup> Primary and secondary prevention activities aimed at modifying well-recognized risk factors associated with these diseases (e.g., high blood pressure, high cholesterol, and overweight/obesity) have resulted in substantial reductions in disease-specific incidence, morbidity and mortality.

Among the numerous screening tools for CHD-associated events, the well-validated Framingham Risk Score (FRS), which uses demographic and clinical measurements, is among the most widely used in the United States.<sup>8-10</sup> The FRS estimates the 10-year risk of developing a severe CHD outcome based on demographic, clinical and laboratory data.<sup>8</sup> Recently, the use of a simple and effective screening test for DM, the hemoglobin A1c test (A1c), was endorsed by an expert panel.<sup>11</sup> Subsequently, a global study demonstrated that hemoglobin A1c levels can be used to estimate average blood glucose levels for the majority of patients with DM.<sup>12</sup> In April 2010, the American Diabetes Association recommended the use of the hemoglobin A1c test for screening and diagnosis of DM in routine clinical practice.<sup>13</sup> A community-based study validating the use of hemoglobin A1c for diagnosis of DM found the baseline levels of hemoglobin A1c in an adult population were significantly associated with newly diagnosed DM and cardiovascular disease.<sup>14</sup> This is a significant step forward in the screening for DM as, prior to this, the accepted screening test for DM required the determination of fasting plasma blood glucose levels.

In previous studies members of this team (Glick and Greenberg) developed and pilot-tested a CHD and DM screening strategy for use in a dental setting to identify asymptomatic individuals who are at increased risk for developing DM- and CHD-associated events.<sup>15-17</sup> Among males  $\geq 40$  years of age with no reported cardiovascular risk factors, who had not seen a physician in the previous 12 months but had seen a dentist, 17-18% were at an increased risk for a severe CHD event.<sup>15-16</sup> A recent study in Sweden found that 50% of the individuals identified with an elevated risk of developing a cardiovascular event were subsequently given medical intervention following evaluation by a physician.<sup>17</sup>

Relevant references:

1. American Heart Association Writing Group. Heart Disease and stroke statistics- 2009 update. A report from the American Heart Association Statistics Committee and Stroke Statistics Subcommittee. *Circulation*. 2009; 119:e21-e181.

2. Centers for Disease Control and Prevention (CDC). National Diabetes Fact Sheet, 2011. url: [http://www.cdc.gov/diabetes/pubs/pdf/ndfs\\_2011.pdf](http://www.cdc.gov/diabetes/pubs/pdf/ndfs_2011.pdf)
3. Centers for Disease Control and Prevention. National Diabetes Fact Sheet 2007. [http://www.cdc.gov/diabetes/pubs/pdf/ndfs\\_2007.pdf](http://www.cdc.gov/diabetes/pubs/pdf/ndfs_2007.pdf)
4. Cowie, CC, Rust KF, Ford ES, Eberhardt MS, Byrd-Holt DD, Li C, Williams DE, Gregg EW, Bainbridge KE, Saydah SH, Giess LS. *Diabetes Care* 2009; 32:287-94.
5. Ayanian JZ, Zaslavsky AM, Weissman JS, Schneider EC, Ginsburg JA. *Am J Public Health* 2003; 93:2051-54.
6. Centers for Disease Control and Prevention. Vital Signs: prevalence, treatment and control of hypertension-United States, 1999-2002 and 2005-2208. Morbidity and mortality weekly report. Early release 1, 2011/60(Early Release);1-6.  
[url:http://www.cdc.gov/mmwr/preview/mmwrhtml/mm60e0201a1.htm?s\\_cid=mm60e0201a1\\_e&source=go](http://www.cdc.gov/mmwr/preview/mmwrhtml/mm60e0201a1.htm?s_cid=mm60e0201a1_e&source=go)  
[vdelivery](#)
7. Centers for Disease Control and Prevention. Vital Signs: prevalence, treatment and control of high levels of low-density lipoprotein cholesterol- United States, 1999-2002 and 2005-2008.
8. D'Agostino RB Sr, Grundy S, Sullivan LM, Wilson P. Validation of the Framingham coronary heart disease prediction scores: results of a multiple ethnic group investigation. *J Am Med Assoc* 2001; 286:180-187.
9. Menotti A, Lanti M, Puddu PE, Kromhout D. Coronary heart disease incidence in northern and southern European populations: a reanalysis of the seven countries study for Europe coronary risk chart. *Heart* 2000; 84:238-244.
10. Liao Y, McGee DL, Cooper RS, Sutkowski MB. How generalizable are coronary risk prediction models? Comparison of Framingham and two nations' cohorts. *Am Heart J* 1999; 137:837-844.
11. Saudek CD, Herman WH, Sacks DB, Bergenstal RM, Edelman D, Davidson MB. A new look at screening and diagnosing diabetes mellitus. *J ClinEndocrinolMetab* 2008; 93:2447-2453.
12. Nathan DM, Kuenen J, Borg R, Zheng H, Schoenfeld D, Heine RJ; A1c-Derived Average Glucose Study Group. Translating the A1c assay into estimated average glucose values. *Diabetes Care* 2008; 31:1473-1478.
13. Lu ZX, Walker KZ, O'Dea K, Sikaris KA, Shaw JE. A1c screening and diagnosis of type 2 diabetes in routine clinical practice. *Diabetes Care* 2010; 33:817-819.
14. Selvin E, Steffes MW, Zhu H, Matsushita K, Wagenknecht L, Pankow J, Coresh J, Brancati FL. Glycated hemoglobin, diabetes and cardiovascular risk in nondiabetic adults. *New Engl J Med* 2010; 362:800-811.15.
15. Glick M and Greenberg BL. The potential role of dentists in identifying patients' risk of experiencing coronary heart disease events. *J Am Dent Assoc* 2005; 136:1541-1546.
16. Greenberg BL, Glick M, Goodchild J, Duda PW, Conte NR, Conte M. Screening for cardiovascular risk factors in a dental setting. *J Am Dent Assoc* 2007; 138(6):798-804.
17. Jontell M, Glick M. Oral health care professionals' identification of cardiovascular disease risk among patients in private dental offices in Sweden. *J Am Dent Assoc* 2009; 140:1385-1391.

## II. GUIDELINES FOR MEDICAL REFERRAL FOR SCREENING FOR INCREASED RISK OF DEVELOPING CHD AND/OR DM

A. **Framingham Risk Score (FRS) calculation:** The Framingham Risk Score (FRS) which is the 10-year risk for developing a severe CHD that is a quantitative evaluation of multiple risk factors will be calculated for each patient. An FRS of >10% for adults ≥40 years of age is considered a moderate, above average risk and ≥20% is considered a high risk for developing a CHD event within the next 10 years. The FRS is calculated by summing points corresponding with a set of risk factors, including age, cholesterol levels, high density lipoprotein levels, smoking status and blood pressure. To calculate the FRS, clinical measurements of total cholesterol, high density lipoprotein and blood pressure, along with smoking history, gender and age, are entered into a computer-based program to calculate the 10-year overall risk of developing a severe coronary heart disease event. In order for this to be a successful chairside screening strategy in a dental setting, the necessary clinical measurements must be available immediately and ideally obtained with a minimum amount of blood specimen. The CardioChek Analyzer™ (Polymer Technology System), a small hand-held, well-validated device is used chairside with a finger stick blood specimen to assess total cholesterol and high-density lipoprotein levels. The machine uses specific test strips to analyze the clinical values of interest. The machine can be used repeatedly, with one test strip used per blood specimen. Results are accurate to ± 2% and are available within 5-7 minutes. The CardioChek machine was selected because it is the only commercially available, well-validated, hand-held machine giving immediate results for both total cholesterol and HDL cholesterol using a single sample of finger stick blood. Blood pressure is measured according to guidelines promulgated by the National High Blood Pressure Education Program.

The clinical measurements (blood pressure, total cholesterol, high density lipoprotein cholesterol) and the demographic information (gender, age, self-reported smoking history (current smoker: yes/no) are entered into a computerized calculation to generate the 10-year Framingham risk score. The web base program for calculating the FRS can be found online at the following website provided by the National Heart, Lung and Blood Institute (NHLBI) National Cholesterol Education Project (NCEP): <http://cvdrisk.nhlbi.nih.gov/calculator.asp>

### B. **Hemoglobin A1c test**

The DM screening can use the A1c Now Testing System™ (Bayer) to measure hemoglobin A1c. Hemoglobin A1c is a measure of the 3-month average level of circulating glycosolated red blood cells. The A1c test is used solely to assess hemoglobin A1c level as an indicator of how well your blood sugar is controlled over time and therefore, an indicator of possible increased risk of DM. The finger stick blood sample is used with the A1c test kit, one kit per individual, and has a 99% accuracy. Results are available within 5-7 minutes. The Bayer A1c kit, a test that has been approved for home use and provides an immediate measure of hemoglobin A1c.

#### Relevant references:

1. D'Agostino RB Sr, Grundy S, Sullivan LM, Wilson P. Validation of the Framingham coronary heart disease prediction scores: results of a multiple ethnic group investigation. *J Am Med Assoc* 2001; 286:180-187.
2. Nathan DM, Kuenen J, Borg R, Zheng H, Schoenfeld D, Heine RJ; A1c-Derived Average Glucose Study Group. Translating the A1c assay into estimated average glucose values. *Diabetes Care* 2008; 31:1473-1478.
3. Lu ZX, Walker KZ, O'Dea K, Sikaris KA, Shaw JE. A1c screening and diagnosis of type 2 diabetes in routine clinical practice. *Diabetes Care* 2010; 33:817-819.
4. Greenland P, Alpert JS, Beller GA, et al. 2010 ACCF/AHA guideline for assessment of cardiovascular risk in asymptomatic adults: a report of the American College of Cardiology Foundation/American Heart Association Task Force on Practice Guidelines. *J Am Coll Cardiol* 2010; DOI: 10.1016/j.jacc.2010.09.001.

### III. RESCOMMENDATIONS FOR MEDICAL REFERRAL FOR INDIVIDUAL RISK FACTORS

**Blood pressure:** Patients with blood pressure level  $\geq$  to that meeting the definition of hypertension should be referred for further evaluation by a physician.

A.

Classification of Hypertension			
	SBP (mm Hg)		DBP (mm Hg)
Normal	<120	and	<80
Pre-hypertension	120-139	or	80-89
Hypertension			
Stage 1	140-159	or	90-99
Stage 2	$\geq$ 160	or	$\geq$ 100
Hypertensive urgency			
	$\geq$ 180	or	$\geq$ 100
Without associated organ damage			
Hypertensive emergency			
	$\geq$ 180	or	$\geq$ 120
With associated organ damage			

Hypertensive urgency:

Blood pressure  $\geq$ 180 mm Hg or  $\geq$ 100 mm Hg without associated organ damage.

Hypertensive emergency:

Blood pressure  $\geq$ 180 mm Hg or  $\geq$ 120 mm Hg with associated organ damage.

According to the latest blood pressure classification JNC 7, controlled blood pressure is defined as a systolic pressure below 140 mm Hg and a diastolic pressure below 90 mm Hg (<140/ 90 mm Hg). For patients with diabetes or chronic kidney disease, controlled BP is defined <130/80 mm Hg.

Relevant references:

1. Chobanian AV, Bakris GL, Black HR, Cushman WC, Green LA, Izzo JL, Jones DW, Materson BJ, Oparil S, Wright JT, Roccella EJ, and the National High Blood Pressure Education Program Coordinating Committee. Seventh report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure. JNC 7-complete version. *Hypertension*. 2003; 42: 1206–1252.

**B. Lipids**

Normal laboratory values and medical referral levels

	Normal values	Ideal	Medical referral
<b>Total cholesterol (mg/dL): men</b>	140-284	<200	≥240
<b>Total cholesterol (mg/dL): women</b>	140-252	<200	≥240
<b>High density lipoprotein cholesterol (HDL) (mg/dL)</b>	40-60*	>60	<40 (men) <50 (women)
<b>Total Cholesterol/HDL</b>	<3.4-5.0 (men) <3.3-4.5 (women)	4.0 (men) 3.8 (women)	>5.0 (men) >4.5 (women)

\*Can be higher; >60 mg/dL considered protective against heart disease

The ratio of total cholesterol to HDL cholesterol, in place of the total blood cholesterol, is considered a better predictor for cardiovascular disease than total cholesterol. The importance of the ratio lies in the fact that it is a marker for the time LDL spends in the blood, not that it is a causal factor itself. The ratio is obtained by dividing the HDL cholesterol level into the total cholesterol. For example, if a person has a total cholesterol of 200 mg/dL and an HDL cholesterol level of 50 mg/dL, the ratio would be 4:1. The goal is to keep the ratio below 5:1; and preferably below 3.5:1. The total cholesterol/HDL-cholesterol ratio is subsumed in the Framingham global risk equations that are the basis of the 10-year risk assessment.

Relevant references:

1. Graham I, Atar D, Borch-Johnsen K, Boysen G, Burell G, Cifkova R, Dallongeville J, De Backer G, Ebrahim S, Gjelsvik B. et al. European guidelines on cardiovascular disease prevention in clinical practice: full text. Fourth Joint Task Force of the European Society of Cardiology and other societies on cardiovascular disease prevention in clinical practice (constituted by representatives of nine societies and by invited experts) *Eur J Cardiovasc Prev Rehabil.* 2007;14(Suppl 2):S1–113.
2. Prospective Studies Collaboration. Blood cholesterol and vascular mortality by age, sex and blood pressure: a meta-analysis of individual data from 61 prospective studies with 55,000 vascular deaths. *Lancet* 2007;370 December 1; 1829-1839.
3. 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) *JAMA* 2001;285:2486–2497.

Full report at: <http://www.nhlbi.nih.gov/guidelines/cholesterol/atp3full.pdf>

**C. Body Mass Index (BMI)**

A body mass index (BMI), calculated by dividing a person's weight in kilograms by the person's height in meters squared (kg/m x m, or (lbs/ inches x inches) x 703), may suggest a healthy vs. less healthy weight to height ratio. While BMI is not used to directly calculate the FRS score, it is an important risk factor for heart disease and diabetes. BMI is defined as:

1. < 18.5: underweight.
2. 18.5-24.9: healthy
3. > 25: overweight
4. > 30: obese

Relevant references:

Chairside Risk Screening  
Greenberg BL, Glick M, Gruninger SE  
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1. "Clinical Guidelines on the Identification, Evaluation, and Treatment of Overweight and Obesity in Adults: Evidence Report".1998. [http://www.nhlbi.nih.gov/guidelines/obesity/ob\\_gdlns.pdf](http://www.nhlbi.nih.gov/guidelines/obesity/ob_gdlns.pdf)
2. [http://www.cdc.gov/healthyweight/assessing/bmi/adult\\_bmi/english\\_bmi\\_calculator/bmi\\_calculator.html](http://www.cdc.gov/healthyweight/assessing/bmi/adult_bmi/english_bmi_calculator/bmi_calculator.html)

#### IV. SUGGESTED ELIGIBILITY CRITERIA FOR CHD AND DM DISEASE RISK SCREENING

##### A. CHD risk screening

1.  $\geq 40$  years of age
2. No history of diagnosis of stroke, heart attack, heart disease, hypertension, hypercholesterolemia
3. No medication use for high blood pressure, high cholesterol
4. No visit to a primary care provider in the prior 12 months

##### B. DM risk screening:

1.  $\geq 40$  years of age
  2. No history of diabetes
  3. No medication use for impaired glucose metabolism
  4. No visit to a primary care physician in the prior 12 months
  5. Additional criteria have been outlined by the American Diabetes Association as follows. This was directly abstracted from the recently published article on standards of medical care in diabetes:\*
- a. Testing should be considered in all adults who are overweight (BMI  $>25$  kg/m<sup>2</sup>\*) and have additional risk factors:
- 1) physical inactivity
  - 2) first-degree relative (parent, child, sibling) with diabetes
  - 3) high-risk race/ethnicity (e.g., African American, Latino, Native American, Asian American, Pacific Islander)
  - 4) women who delivered a baby weighing  $>9$  lb or were diagnosed with GDM (gestational diabetes mellitus)
  - 5) hypertension ( $<140/90$  mmHg or on therapy for hypertension) • HDL cholesterol level  $<35$  mg/dL (0.90 mmol/L) and/or a triglyceride level  $>250$  mg/dl (2.82 mmol/L)
  - 6) women with polycystic ovarian syndrome (PCOS)
  - 7) A1c  $>5.7\%$ , IGT (impaired glucose tolerance), or IFG (impaired fasting glucose) on previous testing
  - 8) other clinical conditions associated with insulin resistance (e.g., severe obesity, acanthosis nigricans)
  - 9) history of cardiovascular disease.

“In the **absence** of the above criteria, testing for diabetes should begin at age 45 years. If results are normal, testing should be repeated at least at 3-year intervals, with consideration of more frequent testing depending on initial results and risk status.”\*

\*American Diabetes Association. Standards of Medical Care in Diabetes-2011. Diabetes Care, 2011; Volume 14, supplement 1, January: S11-S61



**A. QUICK CHECK RECOMMENDATIONS FOR WHEN TO MAKE MEDICAL REFERRAL \***

Clinical measurement	Critical value	Medical referral
Framingham Risk Score	> 10 %	√
Hemoglobin A1c	> 5.7 %	√
Systolic Blood Pressure	≥ 140 mm/Hg	√
Diastolic Blood Pressure	≥ 90 mm/Hg	√
Total Cholesterol	≥ 240 mg/dL	√
HDL Cholesterol	<40 mg/dL (men) <60 mg/dL (women)	√
Total Cholesterol/HDL	>5.0 (men) >4.5 (women)	√
BMI	>30	√

\*a. Following recommended guidelines as published medical literature cited in above sections. All screening results should be validated by a physician. When making referrals factors such as family history of diabetes and heart disease should be consider. For example, individuals with average CHD risk or borderline D risk with a family history should also be encouraged to see a primary care provider.

b. Negative screening tests:

**Screening results that are negative (indicate no medical referral is necessary) should be interpreted cautiously as these are screening tests to identify the presence of risk factors indicative of increased risk of developing the diseases of interest. These patients should be instructed to visit their primary care physician regularly (yearly) to monitor their risk profiles.**

**IV. WEB-BASED RESOURCES:**

1. National diabetes education program working together to manage diabetes guidelines: <http://www.cdc.gov/diabetes/ndep/ppod.htm>
2. American Diabetes Association website: <http://www.diabetes.org/>
3. Diabetes clinical guidelines:[http://care.diabetesjournals.org/content/34/Supplement 1](http://care.diabetesjournals.org/content/34/Supplement_1)
4. American Heart Association website: <http://www.heart.org/HEARTORG/>
5. Centers for Disease Control. Diseases and conditions website: <http://www.cdc.gov/diseasesconditions/>
6. Framingham Risk Score calculator: <http://hp2010.nhlbihin.net/atp/iii/calculator.asp?usertype=prof>
7. ICE Medical Support. Medical Consideration for Dental Practice: <http://www.icemedicalsupport.com>

**EXAMPLE BUDGET FOR CHAIRSIDE SCREENING OF  
 CORONARY HEART DISEASE & DIABETES MELLITUS RISK**

	<i>unit cost</i>	<i>quantity to run 150 tests</i>	<i>total</i>
<b>CHAIRSIDE SCREENING READERS:</b>			
Polymer Technology Systems CardioChek multianalyzer: (for lipid measurements)	549.95	1	549.95
Bayer A1cNOW+ reader with 20 tests	195.00	8	1,560.00
<b>Total cost for machines</b>			<b>\$2,109.95</b>
<b>SUPPLIES to accommodate 150 tests</b>			
Test strips for CardioChek analyzer total cholesterol and high density lipoprotein cholesterol (25/box)	184.95	6	1109.70
Quality control strips for CardioChek multi chem	45.00	2	90.00
HDL	35.00	2	70.00
Omron blood pressure unit	59.95	1	59.95
<b>Other supplies to accommodate 150 tests</b>			
40 microliter capillary tubes (25/tube)	6.99	6	41.94
30 microliter capillary tubes (25/box)	6.99	6	41.94
CardioChek capillary plungers (25/tube)	3.99	6	23.94
lancets (100/bag)	7.98	2	15.96
<b>Total cost of supplies for 150 people</b>			<b>\$1,453.43</b>
<b>TOTAL COST OF MACHINE AND SUPPLIES FOR 150 TESTS</b>			<b>\$3,563.38</b>

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