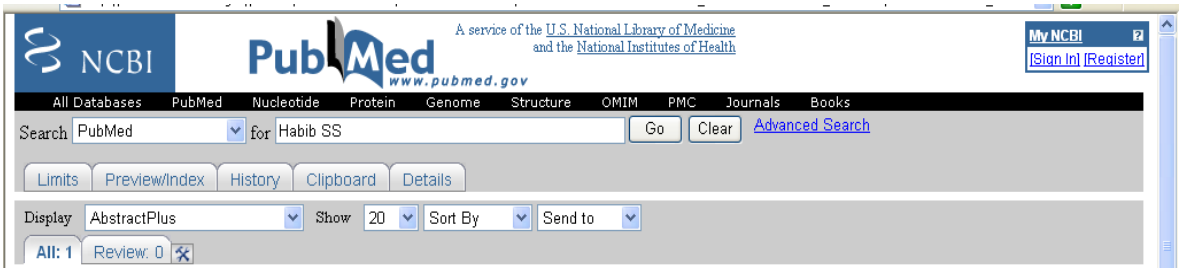



Ann Thorac Med. 2009 Apr;4(2):65-70.

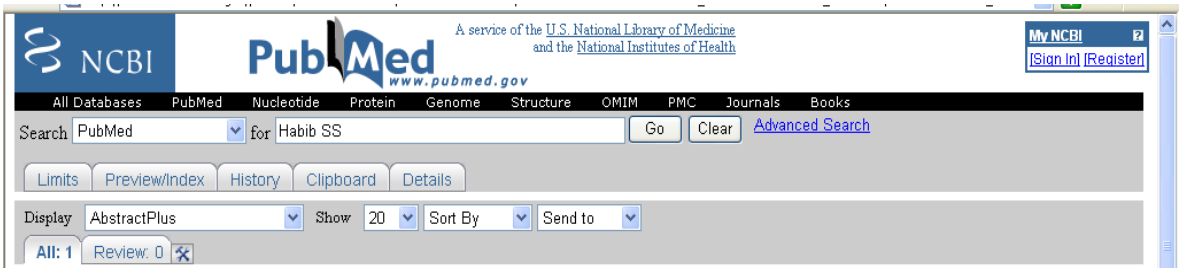
# Exhaled nitric oxide in stable chronic obstructive pulmonary disease.

Beg MF, Alzoghaibi MA, Abba AA, Habib SS.

Department of Physiology, King Saud University and King Khalid University Hospital, Riyadh, Saudi Arabia.

STUDY OBJECTIVE: The objective of the study was to test the hypothesis that fraction of exhaled nitric oxide (FENO) is elevated in nonsmoking subjects with stable chronic obstructive pulmonary disease (COPD) and compare it with the results in patients with asthma and a control population. DESIGN: Cross-sectional study. MATERIALS AND METHODS: Pulmonology Clinic at a University Hospital. Twenty five control subjects, 25 steroid naïve asthmatics and 14 COPD patients were studied. All the patients were nonsmokers and stable at the time of the study. All subjects completed a questionnaire and underwent spirometry. Exhaled nitric oxide was measured online by chemiluminescence, using single-breath technique. RESULTS: All the study subjects were males. Subjects with stable COPD had significantly higher values of FENO than controls (56.54+/-28.01 vs 22.00+/-6.69; P=0.0001) but lower than the subjects with asthma (56.54+/-28.01 vs 84.78+/-39.32 P=0.0285).The FENO values in COPD subjects were inversely related to the FEV(1)/FVC ratio. There was a significant overlap between the FENO values in COPD and the control subjects. CONCLUSION: There is a significant elevation in FENO in patients with stable COPD, but the elevation is less than in asthmatic subjects. Its value in clinical practice may be limited by the significant overlap with control subjects.

PMID: 19561927 [PubMed - in process]PMCID: PMC2700486Free PMC Article




Arq Bras Cardiol. 2009 Jul;93(1):28-33.

# Lipoprotein (a) is associated with basal insulin levels in patients with type 2 Diabetes Mellitus.

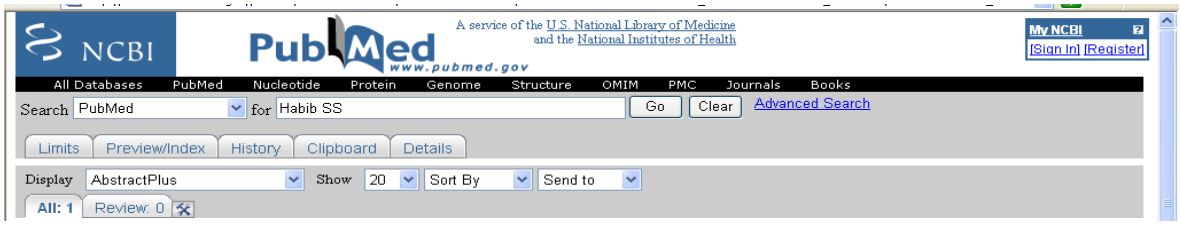
[Article in English, Portuguese, Spanish]

Habib SS, Aslam M, Shah SF, Naveed AK.

King Khalid University Hospital, King Saud University, Riyadh, Saudi Arabia.

BACKGROUND: It has not been clearly established whether insulin resistance/deficiency leads directly to atherogenesis or through its association with other risk factors such as lipoprotein(a) [Lp(a)]. OBJECTIVE: This project aimed at studying the association between basal insulin, lipids and lipoprotein(a) levels in patients with type 2 diabetes mellitus. METHODS: Fasting blood samples were analyzed for Insulin, Lipoprotein(a), total cholesterol (TC), triglycerides (TG), low density lipoprotein cholesterol (LDL-C), high density lipoprotein cholesterol (HDL-C), glucose and glycosylated hemoglobin (HbA1c) levels in 60 patients with type 2 Diabetes Mellitus (DM) and 28 healthy subjects. We divided patients into two groups based on basal insulin levels: > or = 10 microIU/ml and < 10 microIU/ml. RESULTS: Insulin levels were higher in diabetic versus control individuals [p < 0.05]. TC (p< 0.01), LDL-C (p< 0.05), TC/HDL ratio (p< 0.01) and TG levels (p< 0.05) were higher and HDL- C levels were significantly lower (p < 0.001) in both diabetic groups as compared to control. Lp(a) levels were significantly higher in both diabetic groups, when compared to the control group. Lp(a) levels were significantly lower in diabetics with basal insulin > or =10 microIU/ml when compared to those with basal insulin < 10 microIU/ml (p < 0.05). Regression analysis revealed a significant relationship of Lp(a) with insulin levels (r = 0.262, p < 0.05) and Insulin Glucose ratio (r = 0.257, p < 0.05). CONCLUSION: Lp(a) levels correlate inversely with insulin levels in Type 2 diabetic patients. Lp(a) may be one of the cardiovascular risk factor in type 2 diabetic patients with longer duration of DM.

PMID: 19838467 [PubMed - in process]Free Article




**1:** Saudi Med J. 2009 Mar;30(3):346-352. Links

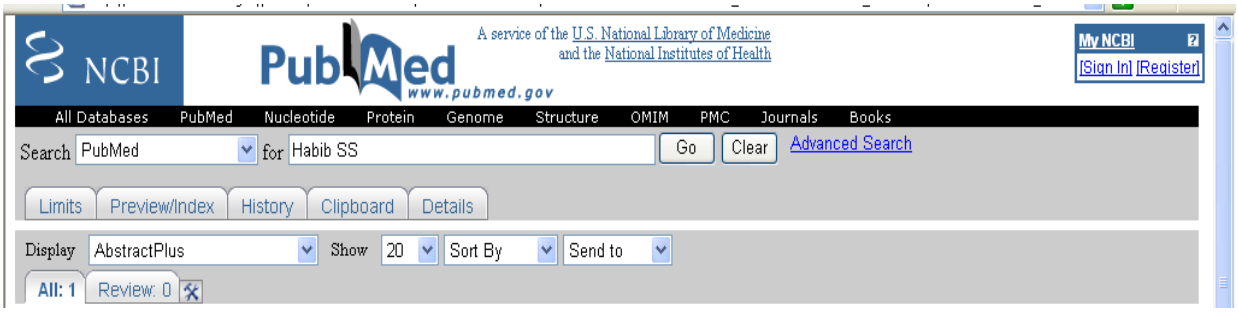
# Lipoproteina is a feature of the presence, diffuseness, and severity of coronary artery disease in Saudi population.

**Habib SS**, **Abdel-Gader AM**, **Kurdi MI**, **Al-Aseri Z**, **Soliman MM**.

Department of Physiology, College of Medicine, King Khalid University Hospital, PO Box 2925 (#29), Riyadh 11461, King Saud University, Kingdom of Saudi Arabia. Tel: +966-508942522. Fax. +966 (1) 4671607. Fax. +966 (1) 4672567. E-mail: shahidhabib44@hotmail.com.

OBJECTIVE: To study lipoprotein(a) [Lp(a)] levels in Saudi patients with angiographically defined coronary artery disease and to see its relationship with its severity and diffuseness. METHODS: This cross sectional study was carried out at King Khalid University Hospital, Riyadh, Saudi Arabia in 2006-2007. One hundred and forty-seven individuals with coronary artery disease (CAD) and 49 healthy individuals matched for age and body mass index were studied. Among CAD patients, 133 underwent angiography. Blood samples were analyzed for total cholesterol (TC), triglycerides (TG), low density lipoprotein (LDL) and high density lipoprotein (HDL) and Lp(a). RESULTS: Coronary artery disease patients had higher Lp(a) levels than controls (25.78 +/- 25.09mg/dl versus 14.57 +/- 11.81 mg/dl, p=0.0030). Patients without stenosis (10.97 +/- 8.06mg/dl) and one vessel involvement (19.67 +/- 17.33mg/dl) had significantly lower levels of Lp(a) compared to double (31.88 +/- 32.17mg/dl) and triple (29.70 +/- 28.12mg/dl) vessel disease. Lipoprotein(a) levels correlated significantly with coronary vessel score (r=0.234, p=0.033) and Gensini score (r=0.256, p=0.02). Smoking (odds ratio [OR]: 1.86; 95% confidence interval [CI]: 1.020-2.510; p=0.04), TG levels (OR: 2.04; 95% CI: 1.251-4.932; p=0.03) and Lp(a) levels (OR: 1.56; 95% CI: 1.033-3.687; p=0.025) significantly predicted CAD severity. High risk levels of Lp(a) >/=30 mg/dL were present in 66.7% of CAD patients. CONCLUSION: Lipoprotein(a) levels are significantly higher in Saudi patients with CAD compared to healthy individuals, and are associated with more severe and diffuse blockage of the coronary vessels.

PMID: 19271061 [PubMed - as supplied by publisher]




J Pak Med Assoc. 2009 Jun;59(6):368-71.

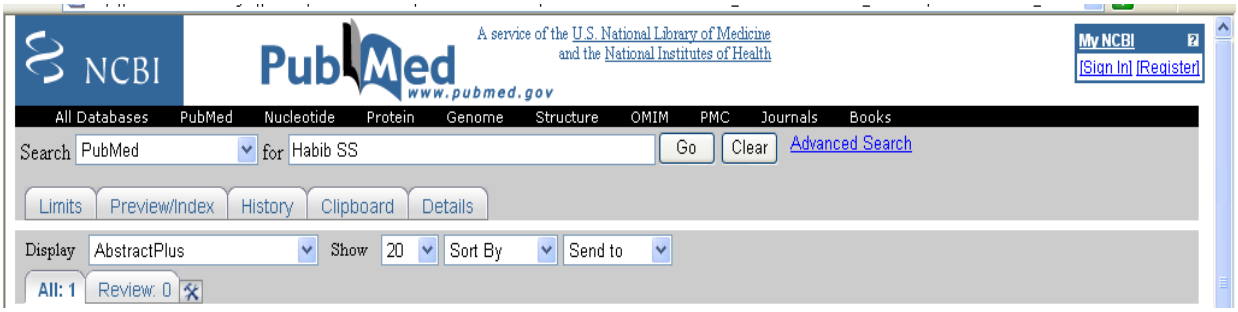
# Synergism between collagen-adenosine diphosphate and collagen-epinephrine in platelets' aggregation: different dose response relationships.

Razi MS, Hameed W, Habib SS, Aslam M, Ashraf R.

Department of Physiology, Shifa College of Medicine Islamabad.

OBJECTIVES: To evaluate the possible synergistic interaction of collagen-adenosine diphosphate and collagen-epinephrine in aggregation of human platelets. METHODS: An experimental study was carried out at Armed Forces Instiute of Pathology, Rawalpindi, Pakistan, from June 2001 to December 2002. The platelet aggregation was determined by means of turbidometric method, which measures changes in optical density of platelet suspension. After determining the sub-threshold values of each agonist with the help of dose-response curve, these agonists were added in pairs to determine the synergism between them. RESULTS: The differences between means of threshold and sub-threshold concentrations of agonists were significant (Collagen: P<0.001, ADP: P<0.001, Epinephrine: P<0.002). The responses of Collagen and Epinephrine in sub-threshold concentrations were synergistic in causing platelet aggregation, whereas there were no potentiating effects in response to that of Collagen and Adenosine diphosphate. CONCLUSION: The study reveals the synergistic potentiation of some of the agonists in circulation that might be responsible for the activated state of platelets and associated atherosclerotic complications.

PMID: 19534370 [PubMed - in process]




**1:** Saudi Med J. 2008 Dec;29(12):1697-702. Links

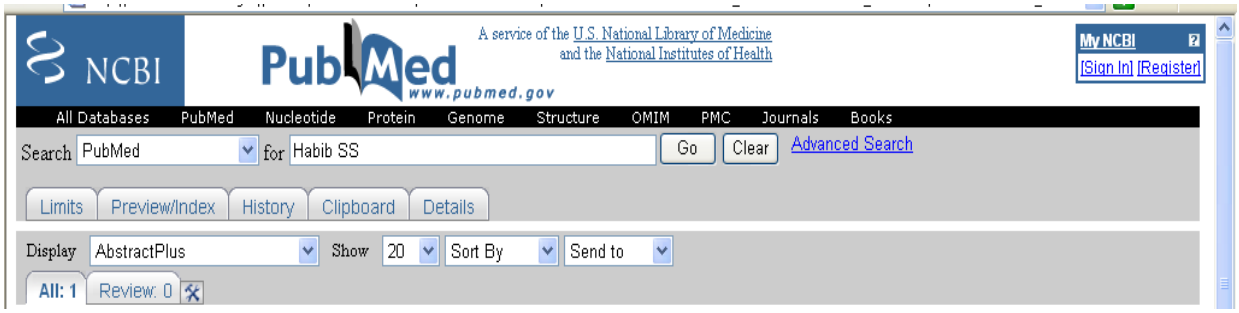
# Exhaled nitric oxide: an emerging marker of inflammation in respiratory diseases.

**Habib SS**.

Department of Physiology, College of Medicine, King Saud University, Riyadh, Kingdom of Saudi Arabia. shahidhabib44@hotmail.com

Fractional exhaled nitric oxide (FENO) is a recently introduced non invasive marker to measure inflammation and oxidative stress in the lung. The numerous roles of NO in respiratory pathophysiology have been extensively reviewed. There is contradictory evidence regarding the exact function of NO in lung diseases. In pathological states, the enzyme inducible NO synthase generates extraordinarily high concentrations of NO when the body faces an inflammatory response by attracting macrophages that generate NO and hence NO participate in host defense against specific organisms. Fractional exhaled nitric oxide measurements have been useful in asthma, chronic obstructive pulmonary disease, cystic fibrosis, and bronchiectasis. The technique used to measure FENO is well standardized, requires the same amount of time that spirometry takes, and is feasible to be performed in young children. Measuring FENO has added another dimension to the determination of adverse respiratory effects because it allows detection of inflammatory responses in the absence of functional impairments. This review provides an insight into measurement methods, physiological factors affecting FENO, interpretation of results and diseases related to changes in FENO levels. This will help physicians in diagnosing and monitoring their treatments for different respiratory diseases.

PMID: 19082216 [PubMed - indexed for MEDLINE]




**1:** Saudi Med J. 2008 May;29(5):723-7. Links

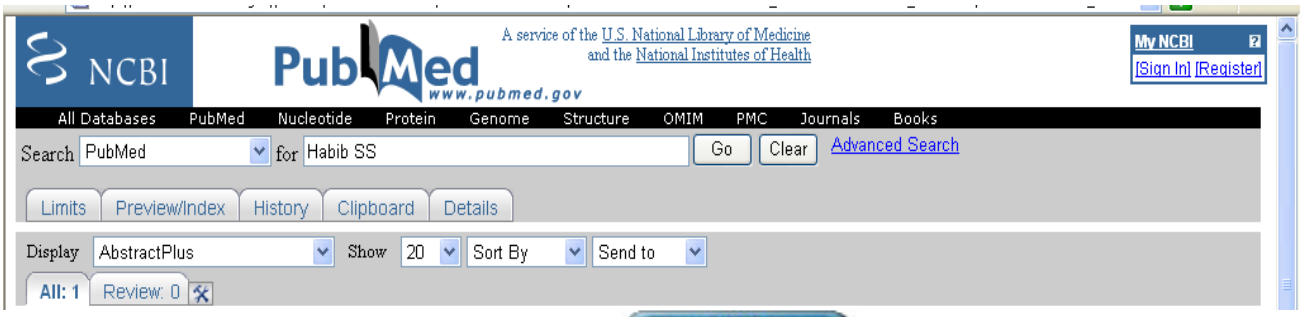
# Assessment of lipid profile in Saudi type 2 diabetic and non-diabetic periodontal patients.

**Al-Otaibi DH**, **Babay NA**, **Habib SS**, **Almas K**.

Department of Preventive Dental Sciences, College of Dentistry, King Saud University, PO Box 285506, Riyadh, Kingdom of Saudi Arabia.
dalal_dent@hotmail.com

OBJECTIVE: To study the extent of periodontal disease in diabetic and non-diabetic periodontitis patients, and to investigate the relationship of dyslipidemia and periodontal disease, in diabetic and non-diabetic periodontitis patients. METHODS: This is a cross-sectional study at the Department of Preventive Dental Sciences (College of Dentistry) and Department of Physiology (College of Medicine), King Saud University, Riyadh, Kingdom of Saudi Arabia, from February 2003 to June 2004. A total of 90 patients was recruited, and divided into 3 equal groups of 30 subjects, with age and gender matched, and divided as follows: group 1 healthy group: periodontally and systemically healthy subjects, group 2 periodontitis group: chronic periodontitis patients with no systemic disease, group 3 diabetic group: chronic periodontitis patients with type 2 diabetes mellitus. Plaque index, bleeding on probing, probing pocket depth (PPD), and clinical attachment level (CAL) were measured at the time of initial examination. The glycated hemoglobin, total cholesterol, low density lipoprotein (LDL), triglyceride, high density lipoprotein were also measured. RESULTS: Periodontal parameters (PPD and CAL) were of significantly higher value in the diabetic patients, when compared to the periodontitis patients ($p<0.05$). The total cholesterol, LDL, and triglyceride were also found to be significantly higher among the periodontitis patients than the healthy subjects ($p<0.05$). CONCLUSION: This study indicated that type 2 diabetic patients had a higher risk to develop advanced periodontal disease than the non-diabetic subjects. It also highlighted the association of dyslipidemia in periodontitis patients.

PMID: 18454222 [PubMed - indexed for MEDLINE]




**1:** Indian J Med Res. 2008 Feb;127(2):165-70. IJMR Free Full Text Links

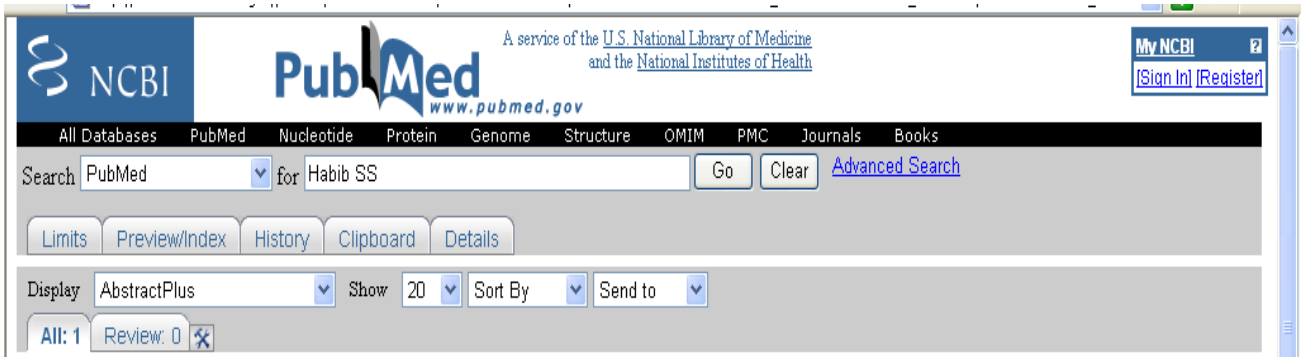
# Effect of single oral dose of sodium rabeprazole on the intragastric pH & volume in patients undergoing elective surgery.

**Hussain A**, **Al-Saeed AH**, **Habib SS**.

Department of Anesthesiology (41), King Khalid University Hospital, Al-Riyadh, Saudi Arabia. draltaf94@yahoo.com

BACKGROUND & OBJECTIVE: While evaluating the effectiveness of drugs used for the prophylaxis of acid aspiration of gastric contents, the impact of duodeno-gastric reflux on gastric contents has not been studied earlier. This study was carried out to evaluate the effect of preanaesthetic oral administration of sodium rabeprazole on pH and volume of gastric contents in adult patients undergoing elective surgery by excluding cases contaminated with duodeno-gastric refluxate. METHODS: The patients in group C (control) in the triple blind placebo controlled trial received placebo while group S sodium rabeprazole 20 mg orally at 2100 h, a night before elective surgery. Next day, gastric contents were aspirated with a large bore, multi-orifices gastric tube passed through an endotracheal tube placed blindly in oesophagus after tracheal intubation and analyzed for the presence of bile salts, pH and volume. The pH and volume of gastric contents were the primary and duodeno-gastric reflux secondary outcome measures of the study. RESULTS: The pH and volume of group S-2 were 3.97+/-1.78 and 9.48+/-8.39 ml respectively compared with 1.90+/-0.47 and 19.60+/-18.56 ml of group C-2. Sodium rabeprazole, after excluding contaminated cases with duodeno-gastric refluxate, significantly increased the pH ($P<0.001$), decreased the volume of gastric contents ($P<0.005$) and the proportion of the patients (30.76 vs 2.63%) considered at risk compared with placebo ($P<0.001$) according to the criteria defined (pH < 2.5 and volume > 25 ml). Thirty nine samples (33.33%) out of 117 were contaminated with duodenal contents. Duodenogastric reflux significantly ($P<0.001$) affected pH and volume of gastric in both groups C-1 vs C-2 and S-1 vs S-2. INTERPRETATION & CONCLUSION: Sodium rabeprazole 20 mg given orally a night before surgery provided adequate prophylaxis for acid aspiration syndrome at the time of induction of anaesthesia and duodeno-gastric reflux significantly affected both the pH and volume of gastric contents.

PMID: 18403795 [PubMed - indexed for MEDLINE]




: Saudi Med J. 2006 Feb;27(2):174-80. Links

# Comparison of lipid profiles and lipoprotein a levels in patients with type 2 diabetes mellitus during oral hypoglycemic or insulin therapy.

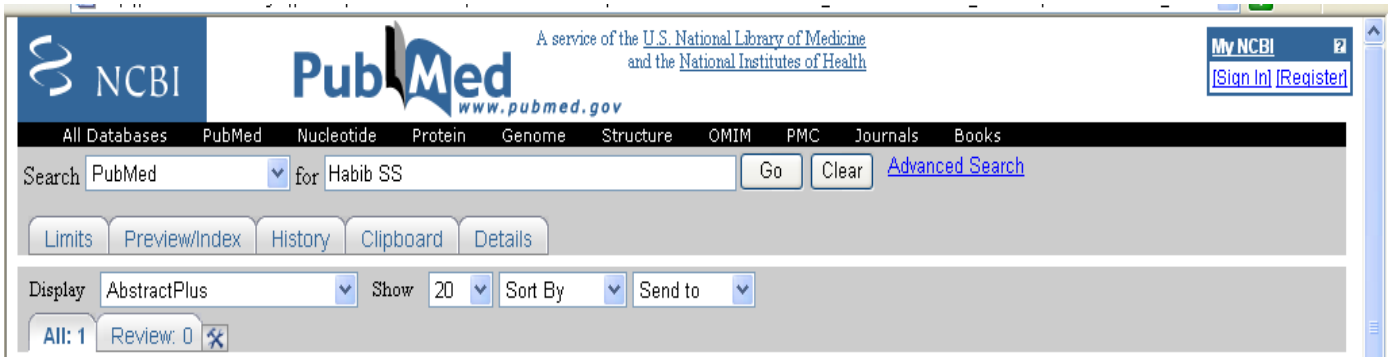
**Habib SS**, **Aslam M**, **Naveed AK**, **Razi MS**.

Department of Physiology, College of Medicine, King Saud University, Riyadh, Kingdom of Saudi Arabia. shahidhabib44@hotmail.com

OBJECTIVE: The aim of this study is to compare lipid and lipoprotein (a) profiles in patients with type 2 diabetes mellitus (DM) on insulin and oral hypoglycemic therapy. METHODS: The study took place in the Department of Physiology, Army Medical College, Rawalpindi, Pakistan, during 2002. Ninety-seven type 2 DM patients participated in the study. We divided the patients according to the type of treatment into sulphonylurea (n=40), sulphonylurea plus metformin (n=33) and insulin (n=24) therapy groups as well as 40 healthy subjects served as controls. Fasting blood samples were analyzed for lipoprotein (a) [Lp (a)], total cholesterol (TC), triglycerides (TG), low-density lipoprotein cholesterol (LDL-C), high-density lipoprotein cholesterol (HDL-C), glucose, glycosylated hemoglobin (HbA1c) and insulin. RESULTS: Different groups of diabetic patients showed elevated fasting blood glucose (FPG) levels ($p<0.0001$ for all), HbA1c ($p<0.0001$ for all) compared with controls. Meanwhile, fasting insulin levels were elevated only in insulin treated group compared with oral hypoglycemic treated groups and controls ($p<0.0001$ for all). Patients on sulphonylurea and on sulphonylurea plus metformin groups showed significantly elevated TC ($p<0.001$, $p<0.0001$), TG ($p<0.001$, $p<0.01$), LDL-C ($p<0.01$, $p<0.001$) and LDL-C/HDL-C ($p<0.0001$, $p<0.0001$) compared with controls. Insulin therapy group showed significantly decreased TC, TG, LDL-C, LDL-C/HDL-C levels compared with sulphonylurea and sulphonylurea plus metformin treated groups, however, no significant difference was noted in the levels of

above mentioned parameters and controls. Meanwhile, HDL-C levels were significantly lower in all diabetic groups compared with controls and were higher in insulin treated group compared with sulphonylurea plus metformin therapy group ($p<0.05$). Lipoprotein (a) levels were significantly higher in different diabetic groups compared with controls. While there was a non-significant difference in Lp (a) levels between different diabetic groups. CONCLUSION: Patients with type 2 DM who are being treated on insulin have a better lipid profile (TC, HDL-C, LDL-C, TG) compared with those patients on oral hypoglycemic agents. Meanwhile, Lp (a) levels were raised in all diabetic patients and seem not to be affected either by insulin or by oral hypoglycemic treatment.

PMID: 16501671 [PubMed - indexed for MEDLINE]




**1:** Diabetes Obes Metab. 2004 Sep;6(5):338-43. FULL TEXT AVAILABLE ONLINE WILEY InterScience Links

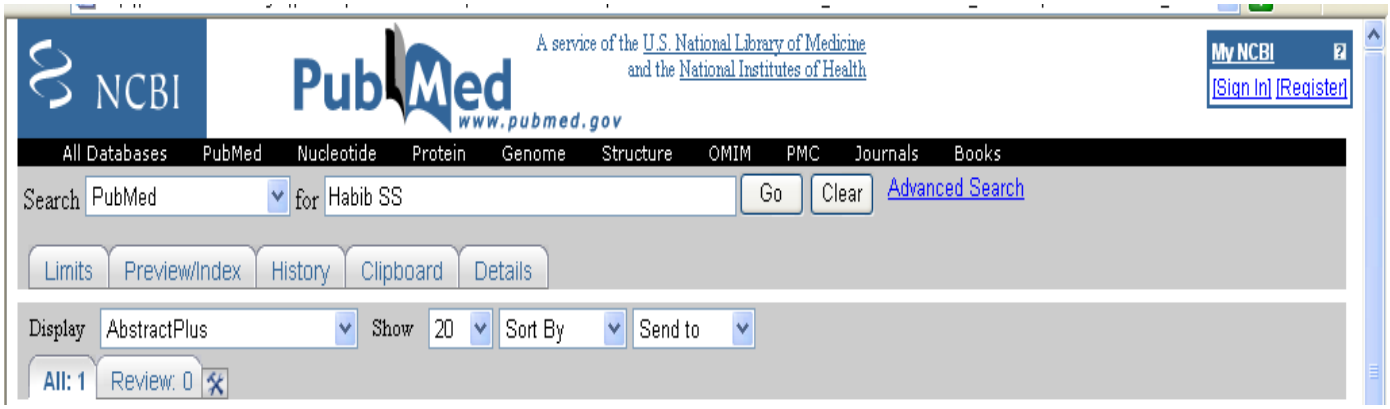
# Lipids and lipoprotein(a) concentrations in Pakistani patients with type 2 diabetes mellitus.

**Habib SS**, **Aslam M**.

Department of Physiology, Army Medical College, Rawalpindi, Pakistan. shahidhabib44@hotmail.com

AIM: The aim of the present study was to analyze serum lipoprotein(a) [Lp(a)] levels in Pakistani patients with type 2 diabetes mellitus (DM) and to find correlations between clinical characteristics and dyslipidaemias in these patients. METHODS: Fasting blood samples were analyzed for Lp(a), total cholesterol, triglycerides, low-density lipoprotein cholesterol (LDL-c), high-density lipoprotein cholesterol (HDL-c), glucose and glycosylated haemoglobin (HbA1c) in 68 Pakistani patients with type 2 DM and 40 non-diabetic healthy control subjects. RESULTS: Lp(a) levels were significantly raised in diabetics as compared to the control group. No correlation of Lp(a) was seen with age, body mass index (BMI), systolic blood pressure (SBP), diastolic blood pressure (DBP) and fasting glucose. There was a positive correlation of BMI to SBP and DBP. There was a significant positive correlation between Lp(a) and total cholesterol and LDL-c. No correlation of Lp(a) was observed with HDL-c, triglycerides and glycosylated haemoglobin (HbA1c). CONCLUSION: The present study led us to conclude that serum Lp(a) levels are significantly raised in type 2 DM and have a positive correlation with serum total and LDL-c levels. 

PMID: 15287926 [PubMed - indexed for MEDLINE]




**1:** Saudi Med J. 2004 Apr;25(4):429-33. Links

## Lipoprotein(a). The bad cholesterol.

**Habib SS**.

Department of Physiology, Shifa College of Medicine and Shifa International Hospital, Islamabad, Pakistan.

The aim of this review is to highlight the role of lipoprotein(a) [Lp(a)] in atherogenesis and coronary artery disease. After 40 years from discovery, Lp(a) still remains an enigma and we are still far in understanding the pathophysiological role of Lp(a). Based on its peculiar structure, Lp(a) has both atherogenic and thrombogenic potentials as it is internalized by macrophages and has structural similarity with plasminogen. The results of the prospective studies performed over the past decade have also shown that Lp(a) is a predictor of coronary artery disease (CAD), even though some of the studies have failed to show a statistically significant difference in Lp(a) levels on subjects that subsequently developed CAD and those that did not. Within the population, the plasma levels can vary from <0.5 mg/dl to >200 mg/dl. There is currently no safe drug for long term treatment of patients with high levels of Lp(a). However, it has been proposed that there is a possibility of interfering with apolipoprotein(a) (apoA) translation by using adenovirus mediated antisense RNA technology. Despite more than 3 decades of intense scientific research, the physiopathological role of Lp(a) is still poorly understood and the extent to which Lp(a) levels should be assessed in clinical practice remain controversial until now.

PMID: 15083210 [PubMed - indexed for MEDLINE]


**1:** Saudi Med J. 2003 Nov;24(11):1219-24. Links

# Risk factors, knowledge and health status in diabetic patients.

**Habib SS**, **Aslam M**.

Department of Physiology, College of Medicine, King Saud University, Riyadh, Kingdom of Saudi Arabia. shahidhabib44@hotmail.com

OBJECTIVE: This study aimed to assess the prevalence of risk factors, knowledge and awareness in Pakistani patients with type 2 diabetes mellitus (DM). METHODS: We studied 120 DM patients at the Diabetes Center in Rawalpindi, Pakistan, from February 2001 to July 2001. Structured questionnaires, clinical and laboratory assessments were used to determine the prevalence of dyslipidemia, glycemic control, hypertension, self monitoring of blood glucose, treatment for hyperglycemia, smoking and modes of diagnosis. The patients knowledge was assessed as regards to the laboratory investigations and treatment of DM that they are receiving. Fasting blood samples were analyzed for serum total cholesterol, triglycerides, low-density lipoprotein cholesterol (LDL-C), high-density lipoprotein cholesterol (HDL-C), glucose and glycosylated hemoglobin (HbA1c). RESULTS: It was found that 46.7% of subjects had poor glycemic control (HbA1c >7.5%). There was a higher prevalence of obesity (body mass index >30) in females (30%) as compared to males (11.4%). Approximately 56.7% of subjects had moderate to high-risk levels of serum total cholesterol, LDL-C 66.7%, HDL-C 46.7% and triglycerides 16.7%. Prevalence of hypertension was 48.3% (41.7% had systolic and 28.3% had diastolic hypertension). Approximately 46% of hypertensive subjects were unaware of their hypertension. The prevalence of hypertension was higher in patients who had a positive family history of DM. On regression analysis, poor glycemic control (raised HbA1c levels) was positively related with total cholesterol (coefficient correlation [r] = 0.24) ($p<0.05$) and LDL-C [r = 0.28] ($p<0.05$) levels and negatively related with HDL-C [r = 0.49] ($p<0.0001$). CONCLUSION: There is a high prevalence of poor glycemic control and atherogenic dyslipidemia in Pakistani patients with type 2 DM. Most of these diabetics have poor knowledge of their disease and are unaware of its complications.

PMID: 14647557 [PubMed - indexed for MEDLINE]


**1:** Saudi Med J. 2003 Jun;24(6):647-51. Links

# High risk levels of lipoprotein(a) in Pakistani patients with type 2 diabetes mellitus.

**Habib SS**, **Aslam M**.

Department of Physiology, College of Medicine, King Saud University, PO Box 2925, Riyadh 11461, Kingdom of Saudi Arabia. shahidhabib44@hotmail.com

OBJECTIVE: To find the prevalence of high risk levels of lipoprotein(a) [Lp(a)] and the ratio between low-density lipoprotein (LDL) and high-density lipoprotein (HDL) in patients with type 2 diabetes mellitus (DM) as evidence has been provided that Lp(a) and LDL can act additively in the development of atherogenesis. METHODS: This cross sectional study was carried out at the Department of Chemical Pathology, Armed Forces Institute of Pathology, Rawalpindi, Pakistan, from February 2001 to May 2001. The patients participating in the study were diagnosed cases of type 2 DM. Fasting blood samples were analyzed for Lp(a), low-density lipoprotein cholesterol (LDL-C), high-density lipoprotein cholesterol (HDL-C), glucose and glycosylated hemoglobin. The data was analyzed by computer software SPSS 10. RESULTS: The data was analyzed by considering Lp(a) levels <30 mg/dl as desirable level and > or =30 mg/dl as the high risk level. It was found that in the control group 73.3% of individuals had desirable levels of Lp(a) while 26.7% had high risk levels. In diabetic patients with good glycemic control 56.6% of patients had desirable levels of Lp(a) while 43.4% had high risk levels. The same data was also analyzed by taking Lp(a) levels of <20 mg/dl as desirable levels and the same pattern was observed. CONCLUSION: Diabetic patients have elevated levels of serum Lp(a) as compared to healthy subjects and the frequency of high risk levels of Lp(a) is also higher in diabetics compared to non-diabetic subjects. The increased prevalence of high risk levels in patients with type 2 DM may be due to increased prevalence of low molecular weight isoforms of apoprotein(a) [apo(a)].

PMID: 12847596 [PubMed - indexed for MEDLINE]


**1:** J Pak Med Assoc. 2003 Feb;53(2):54-9. Links

# Lipoprotein (a) and glycaemic control in Pakistani subjects with diabetes mellitus.

**Habib SS**, **Aslam M**, **Naveed AK**, **Sattar A**.

Department of Physiology, College of Medicine, King Saud University, Riyadh, Saudi Arabia.

AIMS: To measure lipoprotein (Lp)(a) levels in people with diabetes mellitus (DM) and to see if there is any difference in Lp(a) levels between diabetics with good glycaemic control and those with poor glycaemic control. METHODS: Sixty subjects with DM and thirty healthy individuals were studied. Fasting blood samples were analyzed for glucose, glycosylated hemoglobin, Serum total cholesterol, triglycerides, low density lipoproteins, high density lipoproteins and Lp(a). RESULTS: A non significant difference was found between the lipid profile of normal individuals and subjects with DM with a good glycemic control. Lp(a) levels were significantly raised in diabetics. The difference in Lp(a) levels between well controlled and poorly controlled diabetics was non significant. In the control group 23.4% of individuals had high risk levels of Lp(a) while it was 46.7 % for people with DM. CONCLUSION: Glycaemic control improves lipid profile positively in diabetics and may even lead to near normalization of lipoprotein concentrations. Diabetics have elevated levels of Lp(a) and the difference in Lp(a) levels between well controlled and poorly controlled diabeticsts is non-significant.

PMID: 12705484 [PubMed - indexed for MEDLINE]


**1:** J Pak Med Assoc. 2009 Mar;59(3):147-50. Links

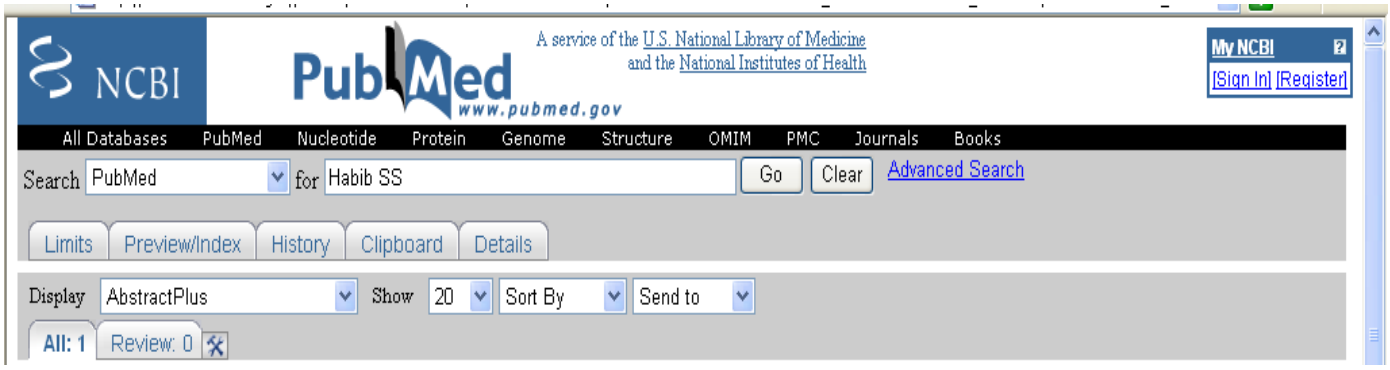
# Elevated exhaled nitric oxide (NO) in asymptomatic asthmatics taking bronchodilators on demand with controlled body composition.

**Habib SS**.

Department of Physiology, College of Medicine, King Saud University, Riyadh, Kingdom of Saudi Arabia.

OBJECTIVE: Fractional Exhaled Nitric Oxide (FENO) is a recently introduced non invasive marker to measure inflammation and oxidative stress in the lung. This study aimed to measure FENO in Saudi asthmatic adult patients who had mild to moderate persistent asthma, on inhaled short-acting? 2 agonists and compared them to healthy individuals matched for body composition without any evidence of obstructive airway disease. METHODS: As per selection criteria 61 subjects were selected. 30 subjects were known asthmatic and 31 were healthy individuals matched for age, height, weight, BMI and body composition. Forced expiratory volume in 1 s (FEV1), FVC, FEV1/ FVC, PEF, FEF25, FEF50 and FEF75 were measured by standard methods. FENO measurements were performed according to the ATS (American Thoracic Society) recommendations. RESULTS: Ventillatory function parameters FEV1 ($p = 0.0020$), FVC ($p = 0.0030$), PEF ($p = 0.0121$), FEF25 ($p = 0.0241$), FEF50 ($p = 0.0240$) and FEF75 ($p = 0.1824$) were significantly lower in asthmatic subjects compared to matched healthy control group. FENO was significantly higher (82.51 +/- 39.26) in asthmatic subjects compared to control group (23.03 +/- 8.56) $p < 0.0000$) CONCLUSION: FENO levels are increased in patients with bronchial asthma with mild to moderate symptoms taking bronchodilators on demand only. It may be suggestive of the need for more accurate evaluation and early intervention with anti inflammatory drugs in a significant proportion of these patients.

PMID: 19288939 [PubMed - indexed for MEDLINE]




: Ann Thorac Med. 2009 Apr;4(2):65-70. FREE full text article in PubMed Central Links

# Exhaled nitric oxide in stable chronic obstructive pulmonary disease.

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STUDY OBJECTIVE: The objective of the study was to test the hypothesis that fraction of exhaled nitric oxide (FENO) is elevated in nonsmoking subjects with stable chronic obstructive pulmonary disease (COPD) and compare it with the results in patients with asthma and a control population. DESIGN: Cross-sectional study. MATERIALS AND METHODS: Pulmonology Clinic at a University Hospital. Twenty five control subjects, 25 steroid naïve asthmatics and 14 COPD patients were studied. All the patients were nonsmokers and stable at the time of the study. All subjects completed a questionnaire and underwent spirometry. Exhaled nitric oxide was measured online by chemiluminescence, using single-breath technique. RESULTS: All the study subjects were males. Subjects with stable COPD had significantly higher values of FENO than controls (56.54+/-28.01 vs 22.00+/-6.69; P=0.0001) but lower than the subjects with asthma (56.54+/-28.01 vs 84.78+/-39.32 P=0.0285).The FENO values in COPD subjects were inversely related to the FEV(1)/FVC ratio. There was a significant overlap between the FENO values in COPD and the control subjects. CONCLUSION: There is a significant elevation in FENO in patients with stable COPD, but the elevation is less than in asthmatic subjects. Its value in clinical practice may be limited by the significant overlap with control subjects.

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