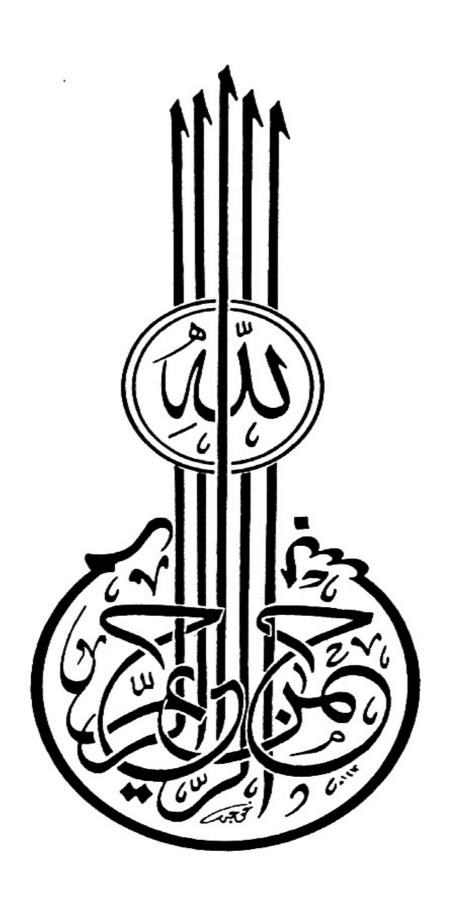
: نوف بنتعلي آل سليمان



```
VLDL
                    HDL
                              LDL
                               (
( , ) ( , )
                               ( , )
                                    ( , )
                              .( )
```

# ﴿ والنكر والتقرير ﴾

/

•

/

•

•

••••

### contents

مقرالصفحت

الموضوع

الباب الأول: (خطة البحث)

الباب الثاني: (الدراسات السابقة) الفصل الأول: حجر إنشار الأمراض المزمنة

النصل الثاني: العوامل المنبطة بالأمراض المزمنة

الباب الثالث: (أدمات البحث)

\_\_\_\_

مقرالصفحت

الموضوع

الباب الرابع: (النائج مالمناقشتر)

:

: :

:

І-Ш

-

List of Tables

مقرالجلول الموضوع مقرالصنعة

رقر الجدول الموضوع رقد العضوة

رقر الجابول الموضوع رقد العضمة





Introduction

# **Introduction:**

```
.(Rising, 1995)
```

```
AL-Lawati &
                                                    Jousilahti, (2004)
```

.

( )

.

.
Bener et al., (2004)

•

AL-Turki, (2000)

•

(EL-Hazmi

**Research Significance:** 

**Research Problem:** 

#### Aim of the Work:

#### The Research Terminology List:

#### **Body Mass Index (BMI)**

#### **Obesity**

)

#### **Diabetes mellitus**

		.(	)		(	)	
			Ну	perte	ension		
	Ц	yperchol	.(	amia		)	
( -	_	y per choi	lestei oi	eiiiia	•		
		1	(	-	)		/
	.(	)					
			Trig	lyceri	des :		
)	/	( -	)				. (
High De	ensity Lipo	protein	(HDL)	:			• (
8	<i>,</i> <b>, , ,</b>		, ,		(		)

	.(	)	
Low Density Lipoprotein:			
		(	(LDL)
	.(	)	

```
(Obesity) :
  ( - ) ( - )
                                    (WHO, 1997)
                                   (MMWR, 1997)
Al-Mahroos & Al-Roomi (1999) (AOA, 1999)
                           .(WHO, 2000)
              .(WHO, 2002)
            BMI
```

```
(Jessica et
                                                             .al., 2001)
                                Afolabi et al.,(2004)
                                Bowie et al., (2007)
                             ) Ajlouni et al., (1998)
                                  .(Mokhtar et al., 2001)
       Ahmad et al., (2002) (
                                     Tukan et al., (2002) (
```

```
(Hajian & Heidari,
                                                          .2007)
.(Al-Isa, 1995) ,
                                           .(Al-Hamad, 1999)
                   .(
                              Musaiger & Qazaq (2000)
```

```
.(Carter et al., 2004)
(Al-Haddad,
                                                              .2005)
(IOTF,
                                                              .2005)
                                     Khashoggi et al., (1993)
                                    Al-Shammari (1994)
             El-Hazmi & Warsy (1997)
```

```
, , ) ( -
                                     .(
 .(Binhemd et al., 1999)
     (Al-Malki et al., 2003)
AL-Nozha et
                                         al., (2005)
```

()

Musaiger et al., 1998			
		1	
Al Angeri et al 2000			
Al-Ansari et al., 2000	,	,	
	•	,	
	1	ı	
		-	
	,		
Musaiger, 2003			
1,14541501, 2005		_	
4131 1 4 1 6005			
Al-Nozha et al., 2005			
		1	

## Diabetes mellitus:

.(Alwan, 1994)

.(Powell & Blair, 1994)

```
.(Hermam et al., 1995) ( ) ( .(Ajlouni et al., 1998)
```

```
:
( - )
( )
( )
```

.(Simin et al., 2000)

```
.(David et al., 2002)
                      Habib & Aslam (2003)
                    \cdot , \geq (
                               MoH (1996)
                     (Ajlouni et al.,1998)
  Haddad et al., (2002)
```

```
.(Alwan, 1996)
(МоН,
                                                          .2000 a)
                                     .(
                                   Al-Awed et al., (1997)
                           ( )
             .(Osman & Al-Nozha, 2000)
                            AL-Nozha et al., (2004)
                                                       ()
```

Asfour et al., 1995		
Ajlouni et al., 1998	ı	
	,	
МоН 2000а		
Al-Nozha et al., 2004		
	ı	

	Hypertension :					
.(	)					
	<u>:</u>					
( - )						
1	ı					
. (Gregory et al., 199	90)					
( )	( )	( )				

•

```
.(Macmahon et al., 1990)
( )
                                ( )
                                               .(MoH, 1996)
                   NIN (2000) NIS (2002)
                               .(MoH, 1992)
                   .(Hasab et al., 1999) ( )
```

```
(MoH, 2000 a)
(MoH, 2000
                                                                  .b)
(Abalkhail et al.,
                         Osman & Al-Nozha (2000)
                                                              .1998)
                                                .(Siddiqui et al., 2001)
```

				(	)	
		AL-	-Nozha et	al., (200°	7) .	
			(		)	
•	1	,		ı	. ,	
		ı	ı			ı
					. ()	

МоН, 1996	(		)		
Hasab et al., 1999		ı		ı	
		ı		ı	
МоН, 2000 b					
		ı		ı	
Al-Nozha et al., 2007		ı		,	

Hypercholesterolemia: \*\*

```
(Kris-Etherton, et al.,
                                                                 .1988)
                                     .(Wynder et al., 1989)
                        .(Deckelbaum, 1990)
     .(
                              .(Powell & Blair, 1994)
  .(Milner, 2000)
                                  Castelli, (1992)
                        .HDL
                         Batieha et al., (1997)
                                  Haddad et al., (2002)
```

```
.(HDL)
                                                    (LDL)
(NIS, 2002)
         (
(Wrong Diagnosis,
                                                          .2005)
                           Al-Boqai et al., (2006)
HDL
                         LDL
                      .VLDL
                              Agrwal et al., (1994)
```

```
.(MoH, 2000 b)
                               . ( , , )
                     .(Wrong Diagnosis, 2005) (,,,)
                      El-Hazmi & Warsy (1999)
HDL
                                    LDL
            HDL
                                               LDL
                          .(Abalkhail et al., 2000)
                    Osman & Al-Nozha (2000)
```

Ogbeide et al., (2004)

. (Al-Issa et al., 2005)

( , , )
. (Wrong Diagnosis, 2005)

	(		)	,		
Osman & Al-Nozha 2000	(		)	1		
МоН, 2000 b						
		ı		1		
Al-Boqai et al., 2006	(		)			

()

.

.(WHO,1990)

.(WHO, 1995)

.(Alwan, 1997)

. (Ashton et al., 2001)

( )

. (NIH, 1998; Trerney, 1998)

.(Ajlouni et al., 1998)

.(BNF,2000) (FAO, 2002; Al- ( .Hazzaa, 2002) Subar & Block, (1990) Hulshof et al., (1991)

```
Paerakul et al., (1998)
                              ( - )
                             .(Nakura et al., 1998)
       . ( , - , )
(Sjostrom et
                                                       .al., 1999)
                                   Pereira et al., (2005)
```

```
.(Bowie et al., 2007)
  Ahmad et al., (2002)
                        Tukan et al., (2002)
( ) (
```

'

. ( ) • • .( ) . ( )

.

.(Aghaeishahsavari et al., 2006) Hajian & Heidari, (2007) (Musaiger & AL-Radwan, 1995;

.Al-Mannai, et al., 1996; Amine & samy, 1996)

• .( )

r

•

.(

,

.( Al-Hazzaa et al., (1993) LDL HDL Shah et al., (1993) ) Al-Shagrawi et al., (1994)

Abalkhail et al., (1998)

.(Al-Malki et al., 2003)

• \*\*

.(Franz et al., 1994)

.(NIH, 1998)

.(Paul, 2002)

:

Simin et al., (2000)

```
(Jessica, et al., 2001)
.(Tuomilehto et al., 2001)
                        DPPRG (2002)
```

Pereira et al., (2005) .(McVeigh & Gloria, 2004) .(Schulze et al., 2005) Wolfenstetter, (2006) .(Schulze et al., 2007) . (Rana et al., 2007)

:	. ( )	
•	•	( )
:	.(	)

( )

```
.(Asfour et al., 1995)
AL-
                                     Mahroos & AL-Roomi (2007)
  El-Hazmi & Warsy (1999)
                          .(El-Zubier, 2000)
```

.

```
.(Al-Saeedi et al., 2002)
                                       AL-Nozha et al., (2004)
.(Dressler, 1996; Krieger & Sidney, 1997; Wilson et al., 2000;)
                           Atkinson & Hubbard (1994)
```

.(Brunner et al., 1997)

Bottoni et

al., (1997)

.

.(Burke et al., 2007)

Rhoades et al., (2007)

•

.

.(

.(

ı

• 1

```
.(Aghaeishahsavari et al., 2006)
                                  El-Mugamer et al., (1995)
El-Badawy et al., (2005)
                                  .(Hasab et al., 1999)
```

(

.(AL-Tuwijri & AL-Rukba	an, 2006)
	Al-Nozha et al., (2007)
. ( )	( )
•	.(AL-Rukban et al., 2007)
:	**
. (Taylor & Willia	ms, 1998)
.(WHO, 2003)	
: HDL	Bottoni et al., (1997)

-	)	(	)
			HDL
			.(Wamala et al., 1998)
			Michelle et al., (2003)
	)	,	( )
		(	( )
	•		

.(Colgan et al., 2004)

(Clifton et

```
Al-Mannai et al., (2001)
                         HDL
HDL
                                 LDL
```

:

(Inam et al., 1991)

.(Abalkhail et al., 2000)

Abdel-Gayoum,

(2004)

Al-Ajlan & Mehdi, (2005)

HDL

- , -

## The Research Limitations:

: -

. / . / . / . /

. / . / . / . /

: -

- )

								<u>:</u>			
		(	)						(	-	)
LDL .(				(	- )	DI.		HDL		(	)
.(						.Cluste:	r	HDL	(	)	
( )											
								<u>:</u>			
	•										
	.(				)						
						: Que	estion	: naire		_	

: - - ) .( - ) .( - ) .( ): .(

.

. -. -

:Laboratory Analysis

= VLDL

÷ TG

```
:DM
 ( )
            mg/dI ( – )
              :TC
 ( )
                mg/dI ( )
             :TG
                mg/dI ( )
                            TG
    :HDL
                    mg/dI ( )
                       HDL
   :LDL
  ( )
                      mg/dI ( )
                        . LDL
:VLDL
( )
                 mg/dI ( )
                VLDL
```

## Statistical Analysis : -

:

.Statistical Package for Social Science (SPSS V 12.0 for Windows)

-:

. -

. -

•

 $\alpha = ( , )$  P-Value

\*

 $\alpha = ( , )$  P-Value

 $\alpha = (\ , \ )$  P-Value

. (

: .

· : .

: :

: .

```
( )
     !!..
         , ( ) ( - )
, ( )
, ( )
( )
  . ( )
    ( )
           . ( )
( )
       ( ) , ( )
                ()
```

		:
1		
1		
1		
1	*	
		:
		_
,		
ı		_
		-
1	**	-
		•
ı		
1	*	
		:
,		
ı	*	
<u> </u>	=	*

: , ( ) ()
, ( ) ( - ) , ( )
, ( ) ( - )
, ( ) ( - )
, ( ) ( - )
, ( )

()

	:
,	-
ı	_
/ **	-
	-
	:
ı	_
,	
**	
,	**

			, ( )	( )	
	•	( ) AL-Nozha et al.,(2004)	•	, (	)
		. ( )		, ( ) , ( )	
(	)	() (-)	, (		- )

, ( ) , ( ) . ( ) () () : = ( ) , ( )

()		
		:
ı	*	
1		:
1	*	
1	,	•
ı		•
ı		-
1	**	-
		:
ı		
1	**	

=

() () , ( ) ( ) EL-Zubier (2000) , ( ) Musaiger (1999)

```
( )
()
```

Bowie et al.,

(2007) ( )

()		
1		:
ı	*	
		:
ı		
1	*	
		:
ı		-
ı		-
ı		-
ı	did	-
ı	**	*

( )

• •

( , )

Al-Malki et .(	Musa )	02)	al., (2003)	
	1	( )	1	<u> </u>
	()	()	()	
p= , = , = ,	*	1 1	1	
( - )	1	( )	= ( )	*
( ,	)	• 1		( )
• 1	•	(	)	
		Hajian & H	Ieidari (2007)	
		(	)	
	()	()	()	
p= , , =		1	1	-

=

```
.( , )
    .(
                                 (
             ()
                        ()
                                     ()
p= ,
                             ( )
                                              .( , )
                   .(Musaiger et al, 2002)
```

( () () () p= , .( , ) AL-Mahroos & AL-Roomi (2007) Rana et al., (2007)

()

()

()

P= ,

, = =		k	<u>-</u>	ı		,		-
					= ( )			*
	,		ı			ı		ı
(Jessica, et	al 20	01)			( , )			
(Jessica, et	ai., 20	V1 <i>)</i>		٠	,			
					(	)		
	()		()	) .	()			
P= , =				,	,			
=		*		1	,			
					=	,		*
						(	)	
		, (	)			(	)	
.( ,	)				( , )			
					(	)		

	()	)		()		()			
P= ,			*	1		,			-
			=				(	)	*
				. ,					
NIS,						(	)	.( ,	) (2002)
							,		
	-	()		()		()			
p= , , = =			*	1		1			
	.(	ı	)			=	( )		*
NIN,			,		I	ı			

() () () p= , .( , ) AL-Nozha et al.,(2007) .(Rhoades et al., 2007) ( )

	()		()	 ()	 ()	
P= ,			,	1	1	-
, =			,	,	,	-
=		*	ı	ı	,	-

= \*

( )

.( )

. ( )

. ( )

AL-Nozha et al.,(2007)

	()		()	()	()	
P= ,			ı	1	ı	
=			ı	1	ı	
ı			1	1	ı	
=		*	,	ı		

\_ \*

( )

ı

.

.( , ) ( ) () () () () P= , .AL-Nozha et al.,(2007) ( ) () () () () P= ,

= \*

( )

•

, Tuwijri & AL-Rukban (2006)

Rose et al., . . . . (1999)

( )

	()		()	()	()	
P= ,			ı	ı	ı	
, =			1	,	ı	
=			ı	1	ı	
		*	ı	ı	ı	

= \*

: -

( )

.( , )

•

( ) () () () P= , ( ) .( , ) ( ) () () () P= ,

=

( ) (, ) .( , ) ( ) () () () p= , ( ) .( , ) ( ) () () () P= , =

.( )

Wamala et al., (1998) .

.

( )

			( )	()		
	( )		( )	( )		
P= ,			ı	1		
=						
ı						
=		*	,	ı		

= \*

. ( ) ( )
( )

	()		()		()			
							:	
p= ,			ı		ı			-
, =			ı		ı			-
=		*	ı		ı			-
			ı		ı			-
p= ,							:	
, =								-
=			ı		ı			-
		*						

```
, ( )
Wolfenstetter (2006)
                                ( )
         ()
                   ()
                              ()
p= ,
                 ( )
```

( ) () () () p= , , ( ) .( , ) .( , ) (,) .( , )

. , .( , )

•

( )

	()		()	()	
p= ,					
, =			ı	1	
=			ı	ı	
p= ,					
=					
ı			ı	ı	
=		*	ı	1	
P= ,					
		*	ı	ı	
		^			
p= ,					
=					
=		*	ı	ı	
_			ı	ı	
p= ,					
		*	ı	ı	
			1	1	

= ( ) .( , ) . .( , ) • 1 ı ı · ( )

,
,
,
,
,
,
,
,
,
,
,
,

( )

( )	()	()	
*	1	ı	
	,	ı	-
	1	ı	-
	1	ı	-
	1	ı	-
	1	ı	-
	*	* 1	

.( , ) · ,

. ( - )

	()		()	()		()		
p= ,							:	
,			1		1			-
=		*	,		,			-
			1		1			_
p= ,			ı		ı			-
		*	1		1			-

= \*

( )

,

.( , )

•

EL-Zubier, (2000)

& AL-Roomi,(2007)

( )

	()		()	()		
p= ,			ı	ı		
=			ı	ı		
,		*	ı	ı		
=						

= \*

( )

•

.( , )

• 1

. (AL-Mahroos & AL-Roomi, 2007)

(2006)

.

Siraj et al.,

```
.( , )
                                   Siraj et al., (2006)
                ( , )
                                           .( , )
                                            .( , )
                   .( , )
```

( )

	()	()	()		
p= , , = =	*		1		:
p= , , = =	*	:	1		:
p= ,	*	:	1		:
p= , , = =	*	1	1		:
p= , , = =	*		,		:

```
.( , )
       AL-Mahroos & AL-Roomi,(2007)
Rana
                                          et al., (2007)
                                  ( )
             ()
                                   ()
                        ()
p= ,
                 .( , )
```

: . ()

.( , )

( )

	()		()	()		()		()		
p= , = , = =		*	1		1		1			- - -
p= ,		*	1		1		1			-

= \*

, ( )

'

.( , )

, ,

, AL-Nozha et al.,(2007)

.

(Al-Rukban et

.al., 2007)

( )

	()		()		( )		()		
p= ,			,		ı		ı		
, =		*	ı		ı		ı		
=									

\_ \*

. ( )

,

.( , )

```
Aghaeishahsavari et al., (2006)
                   Rhoades et al., (2007)
.( , )
                              (, )
                                             .( , )
                                   .( , )
               Aghaeishahsavari et al., (2006)
```

ı

\_

( )

()		()		()		()		
	*	ı		ı		ı		
		1		ı		,		
		ı		ı		ı		
	*	ı		ı				
	*	1		ı		ı		
		ı		ı		,		
		ı		ı		ı		
	*	ı		ı		ı		
	*							
		*	* !  * !  * !	*	* 1	* 1	* ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' '	* 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

( ) AL-Nozha et al., (2007) ( ) () () () () p= ,

· ( )
· ( , )

( - )

	()						
			()	()			
p= ,						:	
=			,		ı	-	
=			ı		ı	-	
		*	ı		ı	-	
			ı		1	-	
p= ,						:	
=			ı		ı	-	
=		*	ı		ı	-	
		, î	1		1		

=

( )
.
.
.
.
.
.
.
Abdel-Gayoum, (2004)

•

( )

	()		()		()		
p= ,			1		1		
, =		*	,		1		
=							

•

.( , )

• ,

( )

	()		()	()		()		
p= ,			,		ı			
, = =		*	ı		ı			
			1		,			

= \*

. ( )

.( , )

• •

ı

( , ) .( , )

.( , )

• ,

.( , )

.

•

( )

	()		()	()		
p= , = ,						
=		*	1	1		
p= ,						
		*	ı	,		
p= , =						
=	,	*	,	1		
p= , =						
=		*	ı	,		
			I	ı		

=

( )

	()		()					
p= ,								
, =			,		ı			
=		*	,		ı			

= \*

```
.( , )
                                                 .(Cho et al., 2003)
                                  Levy & Heaton (1993)
Hulshof et
                                                       al., (1991)
        .(
                                                  Hu et al., (2001)
                                          (, )
.( , )
```

Pereira et al., (2005) Mc Crory et al., (1999) Hill et al., (2000)

	()		()	()	
p= ,					
=			ı	ı	
=		*	,	1	
p= ,			ı	1	
		*	,	1	
p= ,					
, =			ı	ı	
=		*	1	ı	-
			ı	1	-
p= ,					
			,	1	
, =			,	1	
=		*	,	ı	-

p= ,	*		! !		1		
p= ,	*		,		1		
			:			=	· - ( )
.( , )	ı			( ,	)		•
Hu et a	al., (2001)						,
•	.( , )				( ,	)	
. ,	, )					.(	, )
	Pereira et	al .,	(2005)				( - ) Archer et al., (2004)

.

. ( - )

Archer et al., (2004) .

.( , )

.( , )

	()		()	()	
p= ,			ı	ı	
		*	ı	ı	
			ı	ı	
p= ,			,	,	
		*	1	1	
p= ,					
, =			ı	ı	
		*	ı	ı	-
p= ,			ı	ı	

		ı	ı	-
	*	ı	I	-
p= ,		ı	1	
1	*	ı	1	
p= ,		1	1	
	*	ı	ı	
				*

. ( , ) ( , )

( , ) . .( , )

( , ) .( , ) • ,

•

. ( - )

1

( - )

·

.( , )

,

•

1

ı

( , )

.( , )

( )

	()	()	()	()	
p= ,			ı		
	*	,	ı	1	
p= ,		,	,	,	
	*	,	,	1	
p= ,		ı		,	
, =	*	ı	1	,	-
p= ,		,	ı	,	
, = =		1	ı	1	
			1	ı	-

		*	,			,			-
p= ,		*	1	1		1			
p= ,		*	1	1		1			
	:	)	.( ,				, )	( )	*
•		)			( ,	)			

ı

• 1 1

.( , )

r

· ,
.( , )

( )

	()		()	()	
p= ,			ı	ı	
Γ,		*	1	,	
			1	ı	
p= ,			ı	ı	
		*	ı	ı	
			1	ı	
			ı	ı	
p= ,			ı	,	

	*			-
p= ,		ı	ı	
		ı	ı	
		,	,	_
	*			_
		1	ı	_
p= ,		ı	ı	
		ı	ı	
	*			
		ı	ı	
p= ,		ı	ı	
	*	1	ı	
		1	ı	

= \*

```
.( , )
                          ( , )
              Hajian & Heidari, (2007)
```

!!..

.( , ) ( , ) Livingstone et al., (2001) .( , ) ( , ) .( , )

( )

	( )		()	( )	
	()		()	()	
p= ,			1	1	
			ı	,	
		*	ı	ı	
p= ,					
P '		*	1	ı	
p= ,			ı	ı	
		*	1	1	
			ı	1	
p= ,					
			ı	ı	
, = =			ı	1	
		*	1	1	
p= ,			1	1	
			ı	1	-
		*	,	1	- -
			ı	1	

= \*

```
.( , )
                                          DPPRG, (2002)
               Tuomilehto et al., (2001)
                            Hostmark et al., (2006)
(, )
               AL-Mahroos & AL-Roomi, (2007)
                        ( , )
                                                       .( , )
               ( , )
                                                  .( , )
```

```
(, )

Hu et al., (2001) .(, )

.
```

	()		()	()		
p= ,						
			1	ı		
, =						
=		*	1	,		
			1	ı		
p= ,			1	ı		
		*				
p= ,			1	ı		
		*	1	1		
p= ,			1	ı		
			1	ı		
			1	ı		
		*	1	ı		
				•		
p= ,			1	ı		
			1	ı	_	

		*	1		1		1
			•		=		*
			•			(	)
						( , )	
					,		• ,
.(1)	Aghaeis	' hahsava	ari et al.	, 2006)			• 1
		<b>Δ1</b> -Τ1	(, uwiiri <i>8</i>		ukban,	(2006)	.( ', ')
				C TILL IX	unoun,	(2000)	,
(Rhoades et					.(Aghae	eishahsav	eari et al., 2006) .al., 2007)
( , )	1				.( , )		ı
	ı						.( , )

.(,)
(,)

	()		()	()	()		
P= ,							
, =			,	,	,		
=	k	*	ı	ı	ı		
P= ,	k	*	,	,	,		
			1	1	ı		
P= ,			,	1	1		
	*	*	,	1	ı		
P= ,							
, =			,	,	,		
=			ı	 ,	 ,		

		*	,		,		,				
P= ,											
			,		,		,		-		
		*	1		1		1		-		
	:						=		*		
							(	)			
I I											
	( , )										
			z tjian	CC IVI	onar, (	2003)		•	( )		
			ı								
			.( ,	)				( ,	)		
		Abalk	hail e	t al., (	(2000)	)					
			•								
									ı		
· .( ,	)				( ,	)			ı		

	()	()	()		
P= ,		ı	,		
	*	ı	1		
P= ,		ı	,		
	*	,	1		
P= ,	*	ı	1		
		ı	,		
P= ,		,	,		

	*	1	,	
		1	,	
P= ,		,	,	-
	*	,	ı	J

= \*

( , ) Shah et al., (1993) Appleby et al., (1998) ( , )

	()	()	()	-
p= ,	*	,	1	
p= ,	*	,	,	
p= ,	*	1	1	
p= ,	*	1	1	
p= ,	*	1	1	
p= ,				
, = =	*	1	1	
p= ,				

, = =	*	1	
p= ,	*	,	
		=	*
	1	ı	·
	( ,	.( , )	( , )
( )	• 1		.( , )
		I	•
		.( , )	
	ı		.( , )

```
Hulshof et al., (1991)
Musaiger et al.,
                               (BHF, 1999)
                                    .(
```

(2002)

	()		()	()	
p= ,			,	,	
		*	1	,	
p= ,		*	,	1	
p= ,					
= =		*	1	1	

p= ,								
, =		,		ı				
=	*	,		ı				
p= ,								
, =		,		ı				
=	*	ı		ı				
p= ,								
, =		,		ı				
=	*	ı		ı				
1	· ·	•	•	=			*	
	•						-	
	(	)			•			
•							•	
	.( , )			(	, )			
						1		
				.( ,	)			
				.( ,			. ,	
( ,	)					,		
.( , )	,			(	. )	,	,	
. (				`	, ,			
		( ,	)					
		\ 1	,				· , .( , )	
							.( , )	

## Archer et al., (2004)

( )

	()	()	()	
p= ,				
	*	ı	ı	
p= ,				
, =		,	,	
=	*			
p= ,		1	ı	
	*	,	,	

p= ,	*	ı		ı			
		,		,			
p= ,		,		,			
	*	,		ı			
p= ,							
, =		,		,			
=	*						
		,		,			
p= ,	*	,		,			
	^	,		ı			
p= ,		,		,			
	*	,		ı			
	<u> </u>	1	=	<u> </u>	<u> </u>	*	
				(	)		
				`	,		
			•		1 1		
	.( , )			( , )			
	.( , )						

Archer et . ,

al., (2004)

Schulze et al., (2007)

.

ı

```
.( , )
                     Schulze et al., (2007)
               .( , )
     .( , )
                                  (, )
                                  Lopez et al., (2006)
                                            ( )
                      ()
            ()
                                  ()
```

p= ,

p= ,					
, =		1		1	
=					
p= ,					
, =		ı		ı	
=	*	ı		,	
p= ,					
, =		,		1	
=	*	,		1	
p= ,					
, =		ı		ı	
=		,		1	
p= ,		,		1	
	*	ı		ı	
			=		*

. (Burke et al., 2007) ( , ) .( , ) .( , ) () () () () p= ,

p= ,	*	,	,	,	
p= ,	*	,	ı	•	
p= ,	*	,	ı	,	
р,	*	<i>i</i>	,	,	
p= , , = =	*	,	,	,	
p= , , = =	*	,	,	,	
p= ,	*	1	ı	,	

= ( )

( , ) .( , )

```
( , )
(Burke
                                            .et al., 2007)
    .( , )
                                    .( , )
      ( , )
                                               .( , )
                   EL-Badawy et al., (2005)
```

.

( )

	<u> </u>	<u> </u>	<u> </u>		<u> </u>
	( )	()	()	()	-
p= ,		,	,	,	
	*	ı	ı		
p= ,	*	,	ı	,	
p= , , =					
=	*	1	1	1	
p= , , =		1	,	,	
=	*	,		,	
p= ,	*	,	ı	,	
p= ,			,	,	
	*	,	ı	1	

=

```
( )
                                            ( , )
       .( , )
                                   ( , )
                                                 .( , )
                                    ( , )
                 Clifton et al., (2004)
                                    .( , )
Clifton et al., (2004)
```

( , ) . , . , . ( , ) ( )

	()	()	()	
p= ,	*	1	1	
p= ,	*	1	1	
p= , , = =	*	1	ı	
p= ,	*	,	,	
p= ,	*	1	1	
p= , , = =	*	1	1	
p= ,	*	1	1	
p= ,		,	1	

=

```
( )
                 ( , )
                                          .( , )
                 (, )
                                          .( , )
                      Colgan et al., (2004)
           ( , )
                                .( , )
·
.( , )
                       ( , )
  .( , )
```

( )

	()						
			()		( )		
p= ,		*	1		,		
p= ,		*	ı		,		
p= ,		*	1		ı		
p= ,		*	,		,		
p= ,		*	1		,		
p= ,		*	,		,		

=



```
( )
                             :(
                                  )
                          :( )
    .spss
    :( )
                         :(
                     :(
                       )
             :( )
                       :( )
```

```
:( )
 :( )
:( )
               :( )
()
      :( )
        :( )
         :( )
:( )
```

```
:( )
                ( - )
                   :( )
                  :( )
                 :( )
           :( )
            :( ):
                   :( ):
- () ()
          :( )
          :( ):
:( ):
```

:( ): :( ) .( ) . :( ) ) :( ) .( :( ) .( ) :( ) . :( ) / ) :( ) ( / :( )

```
:( ):
()
:( )
.( - ) :
           :( ):
          :( ) ( )
          :( )
          :( )
           :( ):
            :( ):
         :( )
```

:( ) \*
... \*
... (
... - - ... :( ) ... \* :**( )** .( ) . -\* ( ): :( )

- --Abalkhail, B; Shawky, S; Ghabrah, T and Milaat, W. (2000): hypercholesterolemia and 5-years Risk of Development of Coronary Heart Disease among University and School, workers in Jeddah, Saudi Arabia. American Health Foundation and Academic Press. 31(4): 390-395.
- --Abalkhail, B; Ghabrah, T and Albar, H. (1998): Cardiovascular disease health risk appraisal in king Abdulaziz university, Jeddah. JKAU Med Sci. 7(1): 57-66.
- --Abdel-Gayoum, A. (2004): The effect of glycemic control in type2 diabetic patients with diabetes related dyslipidemia. Saudi Med .J. 25 (2): 207-211.
- --Afolabi, W; Addo, A; and Sonibare, M. (2004): Activity pattern, energy intake and obesity among Nigerian urban market women. International Journal of Food Sciences and Nutrition. 55(2): 85-90.
- --Aghaeishahsavari, M; Noroozianavval, M; Veisi, P; Parizad, R and Samadikhah, J. (2006): Cardiovascular disease risk factors in patients with confirmed cardiovascular disease. Saudi Med J. 27(9): 1358-1361.
- --Agrwal, M; Hughe, P; Haliga, A; Newma, F; Sheekh Hussein, M; and Shalabi, A. (1994): Relevance of cholesterol screening in UAE (Abstract). Workshop on Nutrition and chronic diseases in the Arab Middle East Countries, UAE University, AL-Ain.
- --Ahmad, M; Tukan, S and Takruri, H. (2002): Anthropometric assessment of young adult women in Northern Badia of Jordan; Comparison with women in Amman. (submitted for publication).
- --Ajlouni, K; Jaddou, H and Batreha, A. (1998): Obesity in Jordan. International Journal of Obesity. (22): 624-628.

- --Al-Ajlan, A and Mehdi, S. (2005): Effects and dose response relationship of physical activity to high density lipoprotein cholesterol and body mass index among Saudis. Saudi Med J. 26(7): 1107-1111.
- --Al-Ansari M, Al-Mannai M and Musaiger AO. (2000): Body weight of university student in Bahrain. Bahrain Med Bull. 22(3): 135-36.
- --Al-Awed, A; Al-Sheik, A and Taha, S. (1997): Survey and Auditing for Caring Diabetes in a big sample Concerning family and community medicine clients in Riyadh. Saudi Med J. 18(2): 175-179.
- --Al-Boqai, O; Suleiman, A; Al-Natour, M; Al-Hourani, H and Abuirmeileh, N. (2006): Estimated risk of coronary heart disease in obese adult males in Northern Jordan. Saudi Med J. 27(5): 681-686.
- --Al-Haddad, F Little, B and Abdul Ghafoor, A. (2005): Childhood obesity in United Arab Emirates Children: A national study. Annals of Human Biology. (32): 72-79.
- --Al-Hamad, N. (1999): Determinants and Consequences of Obesity in adult Kuwaiti females. Unpublished doctorate degree thesis. Presented to London School of Hygiene and Tropical Medicine. University of London, England.
- **--Al-Hazzaa, H. (2004):** Tracking of physical activity, cardio respiratory fitness and selected CAD risk factors from childhood and adulthood: An 11 year follow-up study. Proceedings of the 9<sup>th</sup> Annual Congress of the European College of Sport Sciences. France. July, 2004.
- --Al-Hazzaa, H. (2002): Physical activity, fitness and fatness among Saudi children and adolescents; for implications for cardiovascular health. Saudi Med J. (23): 144-150.
- --Al-Hazzaa, H; Sulaiman, M; Al-Mobaireek, K and Al-Attass, O. (1993): Prevalence of coronary artery disease risk factors in Saudi children. J Saudi Heart Assoc. (5): 126-133.
- **--Al-Isa, N. (1995):** Prevalence of obesity among Kuwaitis: A cross-sectional study. Int J Obes. (19): 431-433.

- --Al-Issa, E; Bahajiri, S and Gordon, A. (2005): Dietary macronutrient intake of Saudi males and it's relationship to classical coronary risk factors. Saudi Med J. 26(2): 201-207.
- --Al-Lawati, J and Jousilahti, P. (2004): Prevalence and 10-year secular trend of obesity in Oman. Saudi Med J. 25(3): 346-351.
- --Al-Mahroos, F and Al-Roomi, K. (2007): Diabetic neuropathy, foot patients with diabetes in Bahrain: nationwide primary care diabetes clinic-based study. Ann Saudi Med. 27(1): 25-31.
- --Al-Mahroos, F and Al-Roomi, K. (1999): Overweight and obesity in the Arabian Peninsula; An Overview. J R Soc Health. 119(14): 251-253.
- --Al-Malki, J; Al-Jaser, M and Warsy, A. (2003): Overweight and obesity in Saudi Females of childbearing age. International Journal of Obesity. (27): 134-139.
- --Al-Mannai, A; Khalfan, H; Dickerson, J and Morgan, J. (2001): Blood Lipids and Body Fat in Bahraini Women. Saudi Med J. 22(9): 793-796.
- --Al-Mannai, A; Dickerson, T; Morgan, B and Khalfan, H. (1996): Obesity in Bahraini adults. J R Soc Health. (116): 30-32 & 37-40.
- --Al-Nozha, M; Arafat, M; Al-Mazrou, Y; Al-Maatouq, M; Kkan, N; Khalil, M; Al-Khadra, A; Abdullah, M; Al-Harthi, S; Al-Shahid, M; Nouh, M and Al-Mobeireek, A. (2007): Hypertension in Saudi Arabia. Saudi Med J. 28(1): 77-84.
- --Al-Nozha, M; Al-Maatouq, M; Arafat, M; Khalil, M; Al-Harthi, S; Al-Mobeireek, A; Nouh, M; Al-Mazrou, Y; Kkan, N; Al-Marzouki, K; Abdullah, M; Al-Khadra, A and Al-Shahid, M. (2005): Obesity in Saudi Arabia. Saudi Med J. 26(5): 824-829.
- --Al-Nozha, M; Al-Maatouq, M; Al-mazrou, Y; Al-harthi, S.Arafah, M; Khalil, M; Khan, N; Al-Khadra, A; Al-Marzouki, K; Nouh, M; Abdullah, M; Attas, O; Al-Shahid,

- M and Al-Mobeireek, A. (2004): Diabetes mellitus in Saudi Arabia. Saudi Med. J 25(11): 1603-1610.
- --Al-Rukban, M. (2003): Obesity among Saudi male adolescents in Riyadh, Saudi Arabia. Saudi Med J. 24(1): 27-33.
- --Al-Rukban, M; AL-Sughair, A; AL-Bader, B and AL-Tolaihi, B. (2007): Management of hypertensive patients in primary health care setting, auditing the practice. Saudi Med J. 28(1): 85-90.
- --Al-Saeedi, M; El-Zubier, A; Bahnassy, A and Al-Dawood, K. (2002): Treatment-related misconceptions among diabetic patients in Western Saudi Arabia. Saudi Med J. 23(10): 1243-1246.
- --Al-Shagrawi, R; Al-Bader, A and El-Hag, E. (1994): Factors affecting the prevalence of obesity among Saudi college female students. Emir. J. Agric.Sc. (6)227-236.
- --Al-Shammari, S; Khoja, T and Al-Subaie, A. (1994): Trans-cultural attitude towards being overweight in patients attending health centers, Riyadh, Saudi Arabia. Family Practice Research Journal. (14): 149-156.
- --Al-Turki, Y. (2000): The prevalence of overweight and obesity amongst hypertensive and diabetic adult patients in primary health care .Saudi Med J. 21(4): 340-343.
- --AL-Tuwijri, M and AL-Rukban, M. (2006): Hypertension control and co-morbidities in primary health care centers in Riyadh. Ann Saudi Med. 26(4): 266-271.
- --Alwan, A. (1997): Noncommunicable diseases: A major challenge to public health in the Region. Eastern Mediterranean Health Journal. 3(1): 6-16.
- **--Alwan, A. (1996):** Chronic diseases in the Eastern Mediterranean Region. In. Diet-Related Non-Communicable Diseases in the Arab Countries of the Gulf. FAO/RNE, Cairo, Egypt.

- --Alwan, A. (1994): Chronic diseases in the Eastern Mediterranean Region; An Overview. Emir. J Agric Sc. (6): 6-19.
- --American Obesity Association (AOA) (1999): Obesity: A global epidemic. 1-12.
- --Amine, K and Samy, M. (1996): Obesity among female university students in the United Arab Emirates. J R Soc Health. (116): 91-96.
- --Appleby, N; Thorogood, M; Mann, I and Key, J. (1998): Low body mass index in non-meat eaters: The possible roles of animal fat, dietary fiber and alcohol. Int Obes Relate Metab Disord. 22(5): 454-460.
- --Archer, S; Greenland, K; Valdez, R; Casper, M; Rith-Najarian, and Croft, J. (2004): Differences in food habits and cardiovascular disease risk factors among Native Americans with and Without diabetes: The Inter-Tribal Heart Project. Public Health Nutr. 7(8): 1025-1032.
- --Asfour, M; Lambourne, A; Soliman, A; Al-Behlani, S; Al-Asfoor, D; Bold, A; Mahtab, H and King, H. (1995): High prevalence of diabetes mellitus and impaired glucose tolerance in the Sultanate of Oman: results of the 1991 national survey. Diabetic Med. 12(12): 1122-1125.
- --Ashton, W; Nanchahal, K and Wood, D. (2001): Body mass index and metabolic risk factors for coronary heart disease in women. Eur Heart J. (22): 46-55.
- --Atkinson, R and Hubbard, V. (1994): Report on NIH workshop on pharmacologic treatment of obesity. Am J Clin. Nutr. (60) 153-156.
- --Batieha, A; Jaddou, H and Ajlouni, K. (1997): Hyperlipidemia in Jordan; Acountry-based survry. Saudi Med J. 18(3): 279-285.
- --Bener, A; Al-Sawedi, J; Al-Jabar, K; Al-Marri, S; Dagash, M and Al-Elagi, I. (2004): The prevalence of hypertension and

- it's associated risk factors in a newly developed country .Saudi Med J. 25(7): 918-922.
- --Binhemd, T; Larbi, E and Absood, G. (1999): Obesity in primary health care centers: a retrospective study. Ann Saudi Med. (11): 163-166.
- --Bottoni, A; Cannella, C and Del Balzo, V. (1997): Lifestyle and dietary differences in Smokers and non-Smokers from an Italian employee population. Public Health J. 111(3): 161-164.
- --Bowie, J; Juon, H; Cho, J and Rodriguez, E. (2007): Factors associated with overweight and obesity among Mexican Americans and Central Americans results from the 2001 California Health Interview survey. Prev, Chronic Dis. 4(1): A10.
- --British Heart Foundation, (BHF) (2000): Coronary Heart Disease Statistics Database. London, UK.
- --British Nutrition Foundation, (BNF) (2000): Obesity. Blackwell Science, London, UK.
- --British Heart Foundation, (BHF) (1999): Obesity. Blackwell Science, London, UK.
- --Brown, W; Miller, Y and Miller R. (2003): Sitting Time and work patterns as in dicators of over weight and obesity in Australian adults. Int Jobs Relat Metab Disord. 27(11): 1340-1346.
- --Brunner; Eric; White; Ian; Thorogood; Margaret; Beistow; Amanda; Curle; Deborah; Marmot and Michael. (1997): Can dietary interventions change diet and cardiovascular risk factors? A Meta-analysis of randomized controlled trials. American Journal of Public Health. 87(9): 1415-1422.
- --Burke, V; Beilin, L; Cutt, H; Mansour, J; Williams, A and Mori, T. (2007): A lifestyle program for treated hypertensive improved health-related behaviors and cardiovascular risk factors, a randomized controlled trial. J Clin Epidemiol. 60(2): 133-141.

- --Carter, A; Saadi, H and Reed, R and Dunn, E. (2004): Assessment of obesity, lifestyle, and reproductive health needs of female citizens of Al-Ain, United Arab Emirates. J Health Popul Nutr. 22(1): 75-83.
- --Castelli, W. (1992):
- Epidemiology of triglycerides: a view from Framingham. Am J Cardio 1; 70 (19): 3-9.
- --Cho, S; Dietrich, M; Brown, C; Clark, C and Block, G. (2003): The effect of break fast type on total daily energy intake and body mass index result from the third national health and nutrition examination survey (NHANES). JAM Coll Nutr. 22(4): 296-302.
- --Clifton, P; Noakes, M; Sullivan, D; Erichsen, N; Ross, D; Annison, G; Fassoulakis, A; Cehun, M and Nestel, P. (2004): Cholesterol-lowering effects of plant sterol esters differ in milk, yoghurt, bread and cereal. Eur J Clin Nutr. 58(3): 503-509.
- --Colgan, H; Floyd, S; Noone, E; Gibney, M and Roche, H. (2004): Increased intake of fruit and vegetables and low-fat diet, with and without low-fat plasma lipoprotein and carotene metabolism. J Hum Nutr Diet. 17(6): 571-574.
- --David, W; Paul, Z; Timothy, A; Maximilian, P; Adrian, J; Richard, A; Terry, D; Stephen, C; Damien, J; Matthew, K; Robert, A and Jonathan, E. (2002): The Rising Prevalence of Diabetes and Impaired Glucose Tolerance. J Diabetes Care. 25(5): 829-834.
- **--Deckelbaum, J. (1990):** Nutrition, the Child and Atherosclerosis. Acta Pediatr Scand. (365): 7-12.
- --Diabetes Prevention Program Research Group (DPPRG) (2002): Reduction in the incidence of type 2 diabetes with lifestyle intervention or metomorfin. N Engl J Med. (346): 393-403.
- **--Dressler, W. (1996):** Hypertension in the African American Community: Social, Cultural, and Psychological factors. Seminar Nephrology. (16): 71-82.

- --El-Badawy, A; Al-Kharusi, H and Al-Ghanemy, S. (2005): Health habits and risk factors among Omanis with hypertension. Saudi Med J. 26(4): 623-629.
- **--El-Hazmi, M and Warsy, A. (2001):** Prevalence of hypertension in obese and non-obese Saudis . Saudi Med J. 22(1): 44-48.
- --El-Hazmi, M and Warsy, A. (1999): Lipids and Related Parameters in Saudi Children. Ann Saudi Medicine.19(4):304 307.
- --El-Hazmi, M. and Warsy, A. (1997): Prevalence of obesity in the Saudi population .Ann Saudi Med.17(3):302 -306.
- --El-Mugamer, I; Ali Zayat, A; Hossain, M and Pugh, R. (1995): Diabetes, obesity and hypertension in urban and rural people of Bedouin origin in UAE. J. Trop. Med. Hyg. (98): 407-415.
- --El-Zubier, A. (2000): Hypertension in Diabetics Registered in Primary Health Care Centers in Makkah District, Saudi Arabia. Journal of Family & Community Medicine.7(3): 23-28.
- --Ezenwaka, C and Kalloo, R. (2005): Carbohydrate induced hypertrigliceridemia among west Indian diabetic and non-diabetic subjects after ingestion of three local carbohydrate foods. Indian J Med Res. 121(1): 23-31.
- --Food and Agriculture Organization (FAO) (2002): Jordan Nutrition Country Profile. Rome.
- --Franz, J; Mazze, S; Splett, L and Mark, M. (1994): Non-insulin dependent diabetes mellitus practical guidelines outcomes and cost-effectiveness. Presented at the 77<sup>th</sup> Annual Meeting and Exhibition of the American dietetic Association. October 19, 1994. Orlando, USA.
- --Gregory, P; Peter, J and Margaret, C. (1990): Hypertension Prevalence and the Status of Awareness, Treatment, and Control in the Hispanic Health and Nutrition Examination Survey (HHANES), 1982-84. Am J Public Health. (80): 1431-1436.
- --Habib, S and Aslam, M. (2003):Risk factors, knowledge and health status in diabetic patients. Saudi Med J. 24(11):1219-1224

- --Haddad, F; Omari, A; Shamailah, Q; Malkawi, O; Shehab,A; Mudzbber, H and Shubaki, M. (2002): Lipid profile in patients with coronary artery disease. Saudi Med J.23(9): 1054-1058.
- --Hajian, K and Heidari, B. (2007): Prevalence of obesity central obesity and the associated factors in urban population aged 20-70 years, in the north of Iran: a population based study and regression approach. Obes Rev. 8(1): 3-10.
- --Hasab, A; Jaffer, A and Hallaj, Z. (1999): Blood pressure patterns among the Omani population. East. Mediterr. Health J. 5(1): 46-54.
- --Hassan, S and Al-Mousa, A. (1993): Nutritional Quality of Some Fructose and Sorbitol Sweetened Diabetic Foods Marketed in Kuwait. Saudi Med J. 14(5): 415-418.
- --Herman, W; Ali, W and Aubert, M. (1995): Diabetes mellitus in Egypt: risk factors and prevalence. Diabetic Medicine. (12): 1126-1131.
- --Hill, J; Melanson, E and Holly, T. (2000): Dietary fat intake and regulation of energy balance: Implications for obesity. Journal of Nutrition. (130): 284S-288S.
- --Hostmark, A; Ekeland, G; Beckstrom, A and Meen, H. (2006): Postprandial light physical activity blunts the blood glucose increase. Prev Med. 42(5): 369-371.
- --Hu, F; Michael, F; Meir, J and Graham, A. (2001): Physical Activity and Television watching in relation to risk for Type2 Diabetes Mellitus in Man. Arch Intern Med. (161): 1542-1548.
- --Hulshof, F; Lowik, R; Kor, J; Wedel, M; Brants, A; Hermus, J and Tenhoor, F. (1991): Diet and other Lifestyle factors in high and low socio-economic groups (Dutch Nutrition surveillance system). Eur J Clin Nutr. 45(9): 441-450.
- --Inam, S; Cumberbatch, M and Judzewitsch, R. (1991): Importance of Cholesterol Screening in Saudi Arabia. Saudi Med J. 12(3): 215-220.
- --International Obesity Task Force (IOTF) (2005): Online. http://www.iotf.org.

- --Jessica, M; Viola, D; Heping, Z and Stanislav, K. (2001): Socioeconomic Status and Type 2 Diabetes in African and Non-Hispanic White Women and Men: Evidence from the Third National Health and Nutrition Examination Survey. American Journal of Public Health. 91(1): 76-83.
- --Khashoggi, R; Madani, K; Ghaznawi, H and Ali, M. (1993): The effects of Ramadan fasting on body weight. The Journal of Islamic Medical Association of North America. (25): 44-45.
- --Krieger, N and Sidney, S. (1997): Prevalence and health implications of anti-gay discrimination: A Study of black and white women and men in the CARDI cohort: Coronary Artery Risk development in young adults. Int J Health Service. (27): 157-176.
- --Kris-Etherton, M; Krummel, D; Russell, E; Mackey, S; Borchers, J and Wood, D. (1988): The Effect of Diet on Plasma Lipids, Lipoproteins and Coronary Heart Disease, Metabolism. 88(11): 1373-1399.
- --Levy, A and Heaton, A. (1993): Weight control practiced of us adults trying to loose weight. Ann Intern Med. 1,1119(7pt2): 661-666.
- --Livingstone, M; Robson, P; Mc Carthy, S; Kiely, M; Harrington, K; Browne, P; Galvin, M; Ware Ham, N and Rennie, K. (2001): Physical activity patterns in a nationally representative sample of adults in Ireland. Public Health Nutr. 4(5a): 1107-1116.
- --Lopez, G; Van-Dam, R; Qi, L and Hu, F. (2006): Coffee consumption and markers of inflammation and endothelial dysfunction in healthy and diabetic women. Am J Clin Nutr. 84(4): 888-893.
- --Macmahon, S; Peto, R; Cutler, J; Collins, R; Sorlie, P and Neaton, J. (1990): Blood Pressure, Stroke and Coronary Heart Disease. Par 1, Prolonged Differences in Blood Pressure: Prospective Observational Studies Corrected for the Regression Dilution Bias. (335): 765-774.

- --Mc Crory, M; Fuss, P; Hays, N; Vinken, A; Greenberg, A and Roberts, S. (1999): Overeating in America association between restaurant food consumption and body fatness in healthy adult men and women ages 19 to 80. Obes Res. 7(6): 564-571.
- --McVeigh and Gloria. (2004): Breakfast Cereal beats Diabetes. Prevention J. 56(12).
- --Michelle, S; Alice, L and Lynette, L. (2003): Immunological Effects of Low-Fat Diets with and without Weight Loss. Journal of the American College of Nutrition. 22(2): 174-182.
- --Milner, A. (2000): Functional foods: The US perspective. American Journal of Clinical Nutrition. 71(6): 1654-1659.
- --Ministry of Health (MoH) (2000) (a): Vital Statistic Dept. Vital statistic report, Kuwait.
- --Ministry of Health (MoH) (2000) (b): Study of Health of the Kuwaiti Family in 1996.
- --Ministry of Health (MoH) (1996): Jordan morbidity study. MoH/Directorate of disease prevention and control, Amman, Jordan.
- --Ministry of Health (MoH) (1992): Results of National Nutrition Survey. Abu-Dhabi, U.A.E.
- --Mokhtar, N; El-ati, J; Chabir, R; Bour, A; El-Kari, K; Schlossman, P; Caballero, B and Aguenaou, H. (2001): Diet Culture and Obesity in Northern Africa. J Nutr. 131(3): 887-982.
- --Morb Mortal Wkly Rep (MMWR) (1997): Prevalence of overweight among children, adolescent, and adult. United States. (1988-1994). (46): 99-202.
- --Musaiger AO. (2003): Socio-Cultural Factors affecting obesity in the Arab Countries. Bahrain, Bahrain Center for Studies and Research. (tehnical report).
- --Musaiger, AO. (1999): Lifestyle and dietary Patterns associated with Acute Myocardial Infarction in the Bahraini Population. Bahrain Center for Studies and Research, Bahrain.

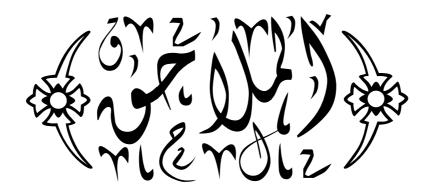
- --Musaiger, A and Qazaq, H .(2000): Nutrition status of Emirati women in Al-Ain city, UAE. Bahrain Med. Bulletin. 22 (3): 140-144.
- --Musaiger, A and Al-Radwan, M. (1995): Social and dietary factors associated with obesity in university female students in the United Arab Emirates. J R Soc Health. (115): 96-99.
- --Musaiger, A; AL-Awadi, A and AL-Mannai, M. (2002): Lifestyle and Social factors associated with obesity among the Bahraini adult Population. Ecol Food Nutr. (39): 121-133.
- --Musaiger, A; Al-Kalaf, F and Shahbeek, N. (1998): Factors associated with obesity among women attending health contres in Qatar. Int J Food Sci Nutr. (49): 65-70.
- --Nakura, I; Tatara, K; Kato, H; Nishi, N; Kikukawa, N and Mikawa, K. (1998): Relation between dietary behavior and body mass index, serum and socioeconomic factors in urban residents. Nippon Koshu Eisei Zasshi. 45(10): 988-999.
- --National Institute of Health (NIH) (1998): Clinical guidelines on the identification, Evaluation, and treatment of overweight and obesity in adults. Rockville, MD: NHLBI.
- --National Institute of Nutrition (NIN) (2000): National Nutrition Survey, 1996-1997: assessment of Tunisian population nutritional status. Ministry of Public Health, Tunisia.
- --National Institute of Statistics (NIS) (2002): National Survey on Food Intake, 2000. Ministry of Development and International Cooperation, Tunisia.
- --Ogbeide, D; Karim, A; Al-Khalifa, I and Siddiqui, S. (2004): Population based study of serum lipid levels in Al-Kharj Health Center, Saudi Arabia. Saudi Med J. 25(12): 1855-1857.
- **--Osman, K and Al-Nozha, M. (2000):** Risk Factors of Coronary Artery Disease in Different Regions of Saudi Arabia. East Mediterr Health J. 6 (2-3): 465-475.
- --Paerakul, S; Popkin, M; Keyon, G; Adair, S and Stevens, J. (1998): Changes in diet and Physical activity affect the body

- mass index of Chinese adults. Int Jobes Relat Metab Disord. 22 (5): 424-431.
- --Paul, E. (2002): New intervention in diabetes with medical nutrition therapy. Case Manager. (1312): 78-81.
- --Pereira, M; Kartashov, A; Ebbeling, C; Van Horn, L; Slattery, M; Jacobs, D and Ludwig, D. (2005): Fast food habits, weight gain, and insulin resistance (The CARDIA Study): 15-year prospective analysis. Lancet J. 365(9453): 36-42.
- --Pescatello, S; Franklin; B and Fagard, R. (2004): American College of Sports Medicine Position Stand: Exercise and hypertension. Med Sci Sports Medicine Position Stand: Exercise and hypertension. Med Sci Sports Exerc. (36): 533-553.
- --Powell, K and Blair, S. (1994): The public health burdens sedentary living habits: Theoretical but realistic estimates. Med Sci Sports Exerc. (26): 851-856.
- --Rana, J; li, T; Manson, J and Hu, F. (2007): Adiposity compared with physical inactivity and risk of type2 diabetes in women. Diabetes Care J. 30(1): 53-58.
- --Rhoades, D; Welty, T; Wang, W; Yeh, F; Devereux, R; Fabsitz, R; Lee, E and Howard, B. (2007): Aging and the prevalence of cardiovascular disease risk factors in older American Indians: The strong Heart study. J Am Geriatr Soc. 55(1): 87-94.
- --Rising, R. (1995): The pathophysiology of childhood obesity. Childhood Nutrition Ed by: Lif-Shitz, Z. CRC. Press. USA 81-97.
- --Rose, K; New man, B; Bennett, T and Tyroler, H. (1999): The association Between extent of employment and hypertension among women participants of the second national health and nutrition survey. Women and Health. 29(3); 13-20.
- --Schulze, M; Hoffmann, K; Manson, J; Willett, W; Meigs, J; Weikert, C; Heidemann, C; Colditz, G and Hu, F. (2005):

- Dietary pattern, in flammation, and incidence of type2 diabetes in women. Am J Clin Nutr. 82(3): 675-684.
- --Schulze, M; Manson, J; Ludwig, D; Colditz, G; Stampfer, M; Willett, W; Hu, F. (2007): Sugar-Sweetened beverages, Weight gain, and incidence of type2 diabetes in young and middle aged women. Metabolism J. 56(2): 179-184.
- --Shah, M; French, A; Jeffery, W; Mc Govern, G; Forster, L and Lando, A. (1993): Correlates of high fat calorie food intake in a worksite population: The Healthy worker project. School of public health, University of Minnesota, Minneapolis.1054-1015.
- --Siddiqui, S; Ogbeide, D; Karim, A and Al-Khalifa, I. (2001): Hypertension Control in a Community Health Centre at Riyadh, Saudi Arabia. Saudi Med J. 22(1): 49-52.
- --Simin, L; Joann, E; Meir, J; Frank, B; Edward, G; Graham, A; Charles, H and Walter, C. (2000): A prospective Study of Whole-Grain Intake and Risk of Type 2 Diabetes Mellitus in US Women. American Journal of Public Health. 90. (9): 1409-1415.
- --Siraj, E; Seyoum, B and Abdulkadir, J. (2006): Lipid and Lipoprotein profiles in Ethiopian patients with diabetes mellitus. Metabolism J. 55(6): 706-710.
- --Sjostrom, C; Lissner, L; Wedel, H and Sjostrom, L. (1999): Reduction in incidence of Diabetes, Hypertension and Lipid Disturbances after intentional weight Loss induced by bariatric Surgery: The SOS Intervention study. North American Association for the Study of Obesity. (7): 477-484.
- --Subar, F and Block, G. (1990): Use of Vitamin and Mineral supple med. Am J Epidemol. 132(6): 1091-1101.
- **--Taylor, R and Williams, M. (1998):** Effect of probiotics and prebiotics on blood lipids. British Journal of Nutrition. 80(2): 225-230.

- --Trerney. (1998): Published by Appleton and Lange, Connecticut. Current Medical Diagnosis and Treatment. U.S.A.
- --Tukan, S; Takruri, H and Ahmad, M. (2002): Growth pattern of adolescent females living in Northern Badia of Jordan (Submitted for publication).
- --Tuomilehto, J; Lindstrom, J; Eriksson, T and Valle, H. (2001): Prevention of type 2 diabetes mellitus by changes in lifestyle among subjects with impaired glucose tolerance. N Engl Med J. (344): 1343-1350.
- --Wamala, P; Wolk, A; Schenck-Gustaffsson, K and Orth-Gomer, K. (1998): Lipid profile and socioeconomic status in healthy middle aged Women in Sweden. J Epidemiol Community Health. 52(3): P340.
- --Wilson, K; Kliewer, W; Plybon, L and Sica, A. (2000): Socioeconomic Status and Blood pressure reactivity in healthy black adolescents. Hypertension J. (35): 496-500.
- --Wolfenstetter, S. (2006): Juvenile obesity and co morbidity type2 diabetes mellitus (T2DM) in Germany: development and cost of illness analysis. Gesundhei tswesen. 68(10): 600-612.
- --World Health Organization (WHO) (2004): Global Strategy on Diet, Physical Activity and Health. WHA 57.17. Geneva, Switzerland.
- --World Health Organization (WHO) (2003): Diet, Nutrition and the Prevention of Chronic Diseases. Geneva, Switzerland.
- --World Health Organization (WHO) (2002): The World Health Report 2002, Reducing Risks, Promoting Healthy Life. Geneva, Switzerland.
- --World Health Organization (WHO) (2000): Obesity Preventing and Managing the Global Epidemic. Geneva, Switzerland.
- --World Health Organization (WHO) (1997): Obesity epidemic put millions at risk related diseases. Press Release. 46,12 June. Geneva, Switzerland.

- --World Health Organization (WHO) (1995): Diet, nutrition and the prevention of chronic diseases. Geneva, Switzerland.
- **--World Health Organization (WHO) (1990):** Diet, nutrition and the prevention of chronic diseases. Technical Report Series. 797 Geneva, Switzerland.
- --Wynder, L; Berenson, S; Strong, B and Williams, C. (1989): Coronary Artery Disease Prevention: Cholesterol, a pediatric Perspective. Prev Med J. (18): 323-409.
- --Wrong Diagnosis. (2005): Statistics by county for height cholesterol and heart failure, 2000-2005. www.Wrong Diagnosis. Com. Adviware pty Itd



```
( )
() () () ():
() :
        () ()
                      ()
       () (): /
]
    ( )
       ()
       ()
          () ()
          () ()
         () ()
        ( )
()
     ()
             ()
                      /
     ( )
         () ()
     () ()
    () ()
                      /
    ( )
()
                 ( )
```

```
() ()
             ] () ()
() ()
() ()
( )
()
     ( )
() ()
() ()
                    /
  () ()
     () ()
  () ()
( )
                    /
            : (BMI)
       : LDL
       : HDL
```

					:						V.L.D.L		
********													
											:		_
											1		
													/
													/
													/
													/
													1
													/
													/
													/
													/
													1
													/
													/
													/
													/



### **Arabic Summary**

VLDL HDL LDL

: :

.

1

ı

<del>-</del>

1

.

.

.

. ( . :

•

.

.

· :

ı ·

· : Kingdom of Saudi Arabia
Ministry of Higher Education
King Abdulaziz University
Deanship Higher Studies
College of Education for Home
Economics and Art Education
In Jeddah
Agency of Girls Colleges

# Nutritional and Health Factors Associated with Chronic Diseases among Saudi female in Jeddah City

A thesis submitted to Nutrition & Food Sciences department for education college of home economics, Jeddah, Master Degree of Nutrition & Food Sciences, the Specialty of Applied Nutrition

#### Prepared by:

Postgraduate Student:

#### Nouf Ali Al-Sulaiman

#### **Supervision**

Dr. Eman Mohammed Saleh Ismail Assistant professor and Head of Nutrition & Food Sciences Department, Faculty of Home Economy & Art Education, Jeddah

1428H - 2007G.

#### **Abstract**

The aim of the study is to determine some factors associated with chronic disease among Saudi woman at Jeddah City. Weights, high, and blood pressures measurements have taken for (604) of Saudi women, aged ranged between (25-55years). The Sample has been selected From the primary health center existing in Jeddah city, and also taken the sample of blood for (502) ladies had been taken when they were faster within (10-14hours), in order to set up the following necessary tests (diabetes, level of cholesterol, and low condensed fat protein LDL, (low destiny lipoprotein, High Density lipoprotein and very low density Lipoprotein in the blood, as well as triglyceride). Questions have been addressed to the individual subject with information related to their social, health, nutritional status and their life style and consuming some of their foods.

The results of the study reveals that rate of overweight and obesity were together 70.5%, diabetes was 22.5%. as for self-reported of diabetes were 15.5% only. But the rate of none- recognized of self-reported were 7% before doing the test .Cholesterol findings show that 9.8% of the sample has high Cholesterol, blood pressures measurements result indicate that 16.6% have high blood pressure, and age, marital status, education and employment status association high statistical sign with obesity, diabetes, high blood pressure and cholesterol, the result shows also that number of children has relation with obesity high blood pressure and cholesterol at confidence degree 99%, there is a link that ha significant value between frequency of having fast food weekly and obesity, diabetes and high blood pressure. Also a correlation between frequency of eating food out of home and obesity and high blood pressure. The performance of the sport practice women of big effect in hypercholesterolemia.

It has been observed that obese individuals are more inclined to consume food rather than non obese female. As for the female who are affected with diabetes. High blood pressure, high of cholesterol, that their rate of consuming food was less than those who are non affected with these illness.

The study has recommended investigating the factors that associated with chronic diseases for preparing precaution planning modifying with the reality of Saudi Community.

#### **Key Words:**

Chronic disease, Obesity, diabetes, high blood pressure, high cholesterol in blood, food habits, food consumption.

## Summary

#### ( English summary )

The customs and nutrition habits played a crucial role to form the family and individual health condition, then left its effects whether it positive or negative in the community.

The Arabia societies were passed through many stages, during its the social and economic life have fast developed being made, it cased as a result of foods abundant and variety with big quantities, and it not followed by health awareness which go along with it these changes, to select the optical choice for the kind of food and regulated it accordingly to the physically & health needs for each community person, then there is a wrong nutrition habits raised, it's the main seasons of chronic disease, which case as a result of with not abide the health & nutrition awareness.

Hence these reasons, there is a search has been made for shed a light on the important factors that related of nutrition and health links factors related to chronic disease in Saudi society ladies, and that through many aims it include the Saudi woman's nutrition pattern and its links to chronic disease, and also knowing of some social and health factors related to chronic diseases and study the life method.

And to achieved these goals and to get the information related to the research there is a form has been made, it includes the basic sides in the research of social and health cases of the individual, and study of some nutrition habits and life pattern, and the habit of different foods eating and knowing some body measurements and measurement the blood pressure and take a blood sample for the following diagnosis.

The Faster diabetes, Cholesterol, low condensed fat proteins LDL and high condensed HDL and very low condensed VLDL in Blood and triplicate Gllistrates and the sample has been taken by the bluster select method and the size of sample is a total of 604 Saudi ladies, and takes the blood sample of 502 ladies, and after get the data this has been loaded in the research form and prepared it in inter in computer and there are many resulted showed we can summarized the important results in the followings.

### Firstly: the personal and demographic information and ladies health condition:

The ages of ladies were ranged between 25-55 years and about 58% of married ladies samples and 27% unmarried, the divorcee was 8% and widow were 7%.

And about 41% of whom with a high education and 33% of middle education, and 26% of lower education ladies.

The results is showed the body chunk indicator that is 70.5% their body showed higher that 24.9 kg/m<sup>2</sup>. That is meaning they were suffer of overweight or obesity and fatness, and the research showing that 36.8% of obesity ladies were subject to nutrition diet to lose their overweight.

And mentioned that 15.5% of sample were diabetes, while the sugar analysis for faster samples showed 22.5% are ill or about 7% are not know that there infected by diabetes.

And the analysts of fatness blood samples showed of about 9.8% of obesity were suffered of high Cholesterol in blood and 12% of trip city glistrates were highest and 8.8% the proteins condensed were high , but 23.3% has hyper in lowest protein condensed , while 3.8% the results showed they were suffer of the protein lowest condensed in blood and about 16.6% were suffered of the blood hypertension and 11.1% complain of the blood pressure low.

#### Secondly: the Chronic disease links with social live level:

The results showed that where as the percent of disease exposed high in each one of chronic diseases, the percent of ladies suffered of fatness is increased in ages ranged between 45-55 years 92.4%, while in the ladies between 25-34 years be 47.9% and whom were suffer of diabetes 45-55 years is reached to 47% of age 25-34 years is only 7%, and who were suffered of the high of cholesterol of the two above stages were 18.7% and 3% frequently. And they found the percentage of married women were high than unmarried, as the fatness is spread among married women in percent of 81.2%, while is reached of single women to 43.9%, and the percentage of married women by diabetes 23.9% compared of unmarried women 7.5%, while the high blood pressure for married women reach to 16.7% and 9.1% for unmarried women and the analysts results showed that 13.2% of married women has blood pressure and high cholesterol, and about 2.1% only is the percentage of unmarried.

And the education level has role in affected by these diseases, where as the education level is low among the ladies the percent of these chronic disease were increased, and the job title has a rule in chronic diseases, it showed that the percent of these chronic disease were high in house ladies, and these results has a high moral value and it has an static's indicate.

And the results showed that, where as the number of children was increased the percent of affecting of one of these following disease were increases: fatness, blood hypertension, and cholesterol.

#### Thirdly: the relation of chronic disease of the health condition:

The researching results showed that there is relation between the frequency pregnancy times and effects with chronic disease, and the repetition of the times of miscarriage has links and related to the fatness and the hypertension of Cholesterol.

The chronic diseases has morality connection with each other in static data. the who are effected by diabetes were 85.8% and about 94.5% who were effect by the blood hypertension who were have Cholesterol suffer of fatness. And there about 27.7% of fatty and 36.4% of affected by blood pressure and 1% who were have high cholesterol were have diabetes, and they found that 21.1% of fat women and 28.3% of sugar, and 38.8 of have

high cholesterol with high blood pressure, and there is percentage of 12.9% of fat women and 22.1% of who have a diabetes disease of diabetes and 21.6% with high blood pressure have a high cholesterol percentage.

And they were notices that the high of triple Glistrates and fat protein with low condensed in blood has relation of chronic disease such as (fat, diabetes, high pressure of blood and cholesterol).

While the high of lowest fat protein, it has a moral relation with diabetes disease and the blood and cholesterol pressure.

#### Fourthly: the relation of chronic disease with nutrition habits:

The study is not emphasized the relation of eat the breakfast or leave among the fat women, and also there is not relation showed that watching TV. During eating the breakfast.

Where as there is found a relation of the numbers of eating the fast foods, it show that have the food out the house have relation between fatness and blood hypertension in a percentage of 99%.

And there is no relation of remove the chicken skins before it cooking or has the salad as daily and affected with chronic diseases.

#### Fifthly: the relation of chronic disease with the life pattern:

The results showed that the sport habit has a big effect to reduce of chronic disease, there were found 17.1% who practice regular sport have a diabetes while 27.3% who were not held sport practice by diabetes, and there were 11.6% of ladies percentage have a high blood pressure. And who are practice the sport regularly.

When the percentage of illness to not practice the sport 21.5% and who are high Cholesterol of who practice regularly of this disease were 2.9%, while whom were sportive the predict of Cholesterol was 10.7%.

And the researcher found that about 63.1% of fat women with diabetes and 17.4% have diabetes and 9.2% of high pressure and 6.5% of diabetes ladies suffer of high cholesterol pressure of who was smoke.

The homes works there were 17.8% of fat effected and 20.7% of diabetes and 15.7% of who have high pressure, and there were 7.3% suffer of high of cholesterol, are doing their works.

And the woman who cocking the food, that the percentage of blood pressure and cholesterol were high, when the daughter is cooker, while the percentage of fat were high when the cooking complete by the home maid.

And we haven't found a moral links and indicates what showing relation with longtime TV. Watching with chronic disease.

#### Sixthly: the relations of chronic disease with the food consumption:

The researcher found that the fat women were more intendance to eating the food more than slim one , but those who suffer of diabetes and also the who suffer of hypertension and high cholesterol their food consumption were more little than those who affect by these diseases.