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1.	16
1.2.	19
1.3.	20
1.4.	21
2.	,	22

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	30
	37
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1.	11
2.	,	12

disease) , 가 (health behavior) (life-related

가 가
가

(233)

(209)

가

, , , ,
가 ,

10%가

1.4 ,

1.6 ,

1.7

가
, , ,
가

14 , 15 , 16 .

, ,

가 .

가

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I.

1.

가

가

(life-related disease)

가

(, 1997; Beberg , 2000)

(Kalache, 1995)

10-20%가

(, 1991)

1998

27.2% (Suh, 2001)

1970

10

(, 1999).

1990

(Jee ,

1999) 1999

1

1

. 2000

1

2

(, 2001).

가

가

1999

(WHO)

가

JNC-6(Joint

National Committee) 140mmHg
 , 90mmHg (WHO, 1999).
 120mmHg , 80mmHg , 130mmHg ,
 85mmHg , 130 - 139mmHg, 85 - 89mmHg
 . 140 - 159mmHg, 90 -
 99mmHg 1 , 160 - 179mmHg, 100 - 109mmHg 2
 , 180mmHg , 110mmHg 3 .

80 - 90%

(, 1996).
 , , 가 .
 가 가
 , , (Kornitzer , 1999).

(WHO, 1999).
 , , , , ,
 가 (Kuller , 2001; WHO, 1999 ; Muller , 1998).

가 , ,

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(WHO, 1999).

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2.

90mmHg

140mmHg

140mmHg

90mmHg

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4)

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1.

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(Kornitzer, 1999).

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가

(Winkleby , 1991).

(Dennis

, 1993),

(Bennet, 1995).

가 ,

(

, 1994),

(1990)

30

가

.

가

(, 1997).

(health awareness)

(control of hypertension)

가

. Thakur(1999)

30

1727

(health awareness)

가 가

(33.3%), (19.44%),

가 가 (9.72%)

26 (36.1%)

23(31.9%) 가(health care professional),

Baberg(2000) , 510

가

가

Oswald(1980) 900

(1980)

가

. Kirscht(1983)

가 . Stamler

Farino(1980) 115

가

Muller(1998) (life style)

가 (side effect)

가 30mg(3 , 2),
가

20mg ,

5 - 6g

Jeffrey(1991)

Kirscht(1988)

가

가

.(,

1995)

2.

(1996)

가
가
(1996)
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(1999)
가
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가

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가

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(1998)

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가

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(1996)

가

가

(1995)

가

3.

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140mmHg 90mmHg

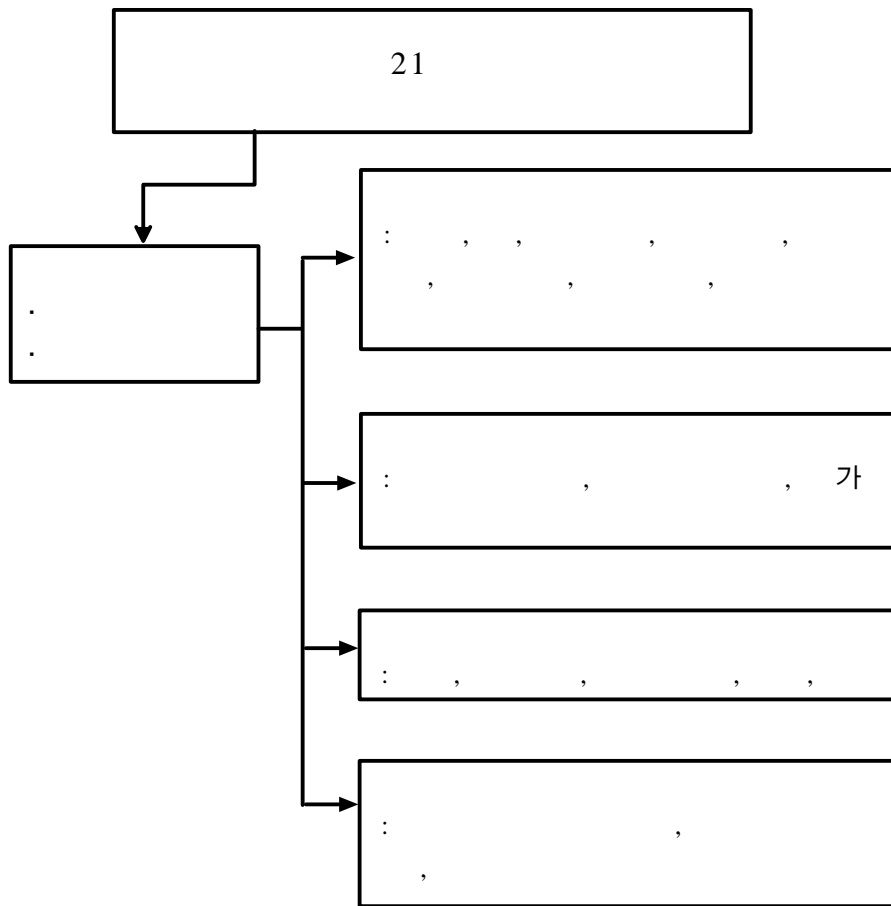
:
140mmHg 90mmHg

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5 가

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1.

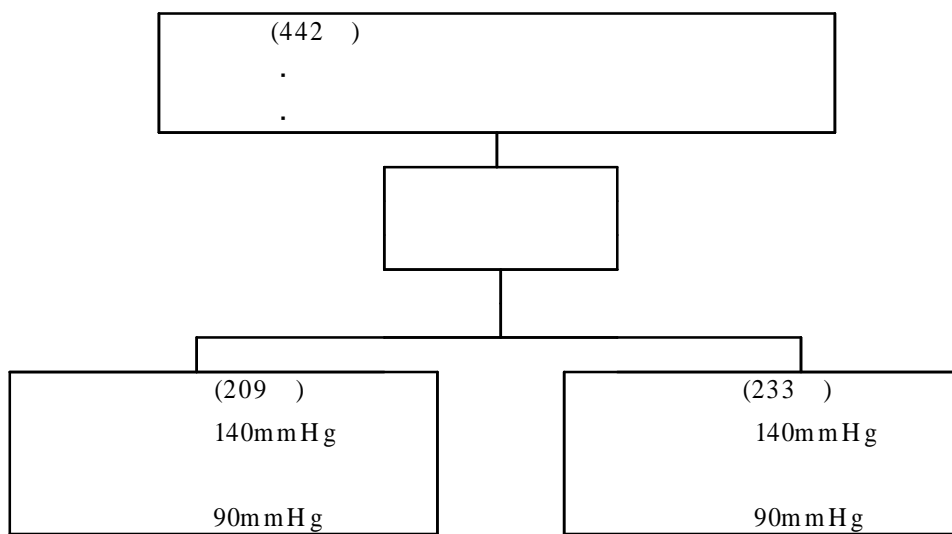


1.

90mmHg
 140mmHg
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140mmHg
 90mmHg
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2. ,

2.

‘ 21 ‘
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40
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1224
가 33 1190
442
140mmHg , 90mmHg (209)
140mmHg 90mmHg
(233) .

3. 가

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가.

x^2

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(BMI)

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x^2

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1.

가
63.8 ± 10.6
62.2 ± 12.5
1.5 가
140.9 ± 19.9mmHg
155.8 ± 16.2mmHg
89.0 ± 11.5mmHg, 81.6 ±
13.1mmHg
가 (p<0.05).
65.7%가
가 , 41.3%, 45.9%
14.4% (9.4%)
(p<0.05).
(18.0%) (4.8%) (p<0.05)
40.3% 가
33.8% 가
24.1% (17.5%)
가 29.6%
가 43.5% 가
가

가

56.3%, 가

49.6%

34.3%, 44.0%

19.7%, 가

13.7% (18.0%)

(13.0)

(BMI) (1).

Table 1. Baseline characteristics of uncontrolled hypertension group and controlled hypertension group

Variables	Uncontrolled hypertension (n=208)		Controlled hypertension (n=233)		χ^2 value	p value
	n	%	n	%		
Age(Year)	62.2 ± 15.5*		63.8 ± 10.6		17.419	0.001 [†]
Gender						
	Men	73 34.9	83 35.6		0.023	0.879
	Women	136 62.1	150 64.4			
Blood pressure						
	Systolic Blood Pressure	155.8 ± 16.2*		140.9 ± 19.9	435.9	0.001 [†]
	Diastolic Blood Pressure	89.0 ± 11.5		81.6 ± 13.1	439.9	0.001
Married status						
	Live together	129 62.0	154 66.1		3.493	0.174
	Seperated & divorced	14 6.7	7 3.0			
	Death · single · others	65 31.3	70 30.9			
Education						
	Elementary school	90 43.5	91 39.1		1.050	0.592
	High school	77 37.2	90 38.6			
	Graduate school	40 19.3	52 22.3			
Occupation						
	Household	86 41.3	107 45.9			
	General	30 14.4	22 9.4		45.643	0.001
	Professional	6 2.9	9 3.9			
	Business	16 7.7	12 5.1			
	Out of work	70 33.7	83 35.6			
Income(1 month)						
	Less than 1,000,000 won	112 61.6	120 59.7		0.833	0.659
	1,000,000 - 3,000,000 won	57 31.3	70 34.8			
	3,000,000won or more	13 7.1	11 5.5			
Smoking status						
	Smoking	41 19.7	32 13.7		4.174	0.124
	Quit smoking	27 13.0	42 18.0			
	Non-smoking	140 67.3	159 68.3			
Drinking status						
	Drinking	114 55.1	118 50.9		0.782	0.676
	Quit drinking	16 7.7	20 8.6			
	Non-drinking	77 37.2	94 40.5			
Body Mass Index(kg/ m ²)	24.9 ± 3.1*		25.3 ± 2.8		440.0	0.1854 [†]
Prefered medical facilities						
	General hospitals	10 4.8	41 18.0			
	Hospitals & clinics	77 37.4	77 33.8		27.447	0.001
	Public health center	36 17.5	55 24.1			
	Pharmacy & others	83 40.3	55 24.1			

* Mean ± Standard deviation

[†] p-value was obtained from t-test

1.2.

가
 87.5% 가
 75.2%
 (p<0.05).
 가 56.2% (32.0%)
 (p<0.05). 가
 , , , ,
 (48.3%)
 가 40%
 (p<0.05).
 29.3%, 44.6%
 가 .

Table 2. Difference in health concern between uncontrolled and controlled hypertension group

	Uncontrolled hypertension		Controlled hypertension		x ² value	p value
	n	%	n	%		
Health examination						
Yes	155	75.2	204	87.5	11.119	0.001
No	51	24.8	29	12.5		
Result of health examination						
Abnormal	66	32.0	131	56.2	93.874	0.001
Normal	88	42.7	72	30.9		
Health awareness						
Healthy	99	48.3	84	36.4	11.107	0.004
Normal	46	22.4	44	19.0		
Not well	60	29.3	103	44.6		

1.3.



($p < 0.05$).

Table 3. Difference in behavior toward hypertension treatment between uncontrolled and controlled hypertension group

	Uncontrolled hypertension Mean ± SD	Controlled hypertension Mean ± SD	t value	p value
Self awareness of hypertension treatment	3.7 ± 1.3	3.1 ± 1.3	434.0	0.0001
Necessary of hypertension treatment	1.8 ± 0.9	1.6 ± 0.8	387.3	0.0392
Belief of hypertension control	2.4 ± 0.9	2.6 ± 0.9	434.0	0.0484

SD : Standard deviation

1.4.

가
 51.1%, 44.0%
 (p<0.05), 34.9%, 26.1%
 (p<0.05) 가 32.4%, 45.3%
 (p<0.05)

Table 4. Difference in healthy lifestyles between uncontrolled and controlled hypertension group

	Uncontrolled hypertension		Controlled hypertension		x ² value	p value
	n	%	n	%		
Exercise						
Yes	91	44.0	119	51.1	2.222	0.014
No	116	56.0	114	48.9		
Weight control						
Yes	54	26.1	81	34.9	4.002	0.045
No	153	73.9	151	65.1		
Dietary salt intake						
Yes	67	32.4	105	45.3	7.629	0.006
No	140	67.6	127	54.7		
No smoking						
Yes	138	66.7	162	70.1	0.607	0.436
No	69	33.3	69	29.9		
Temperance						
Yes	142	68.9	163	70.3	0.091	0.763
No	64	31.1	69	29.7		

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가

가

가

가

가

가

(WHO,

1999).

65.6%가

가

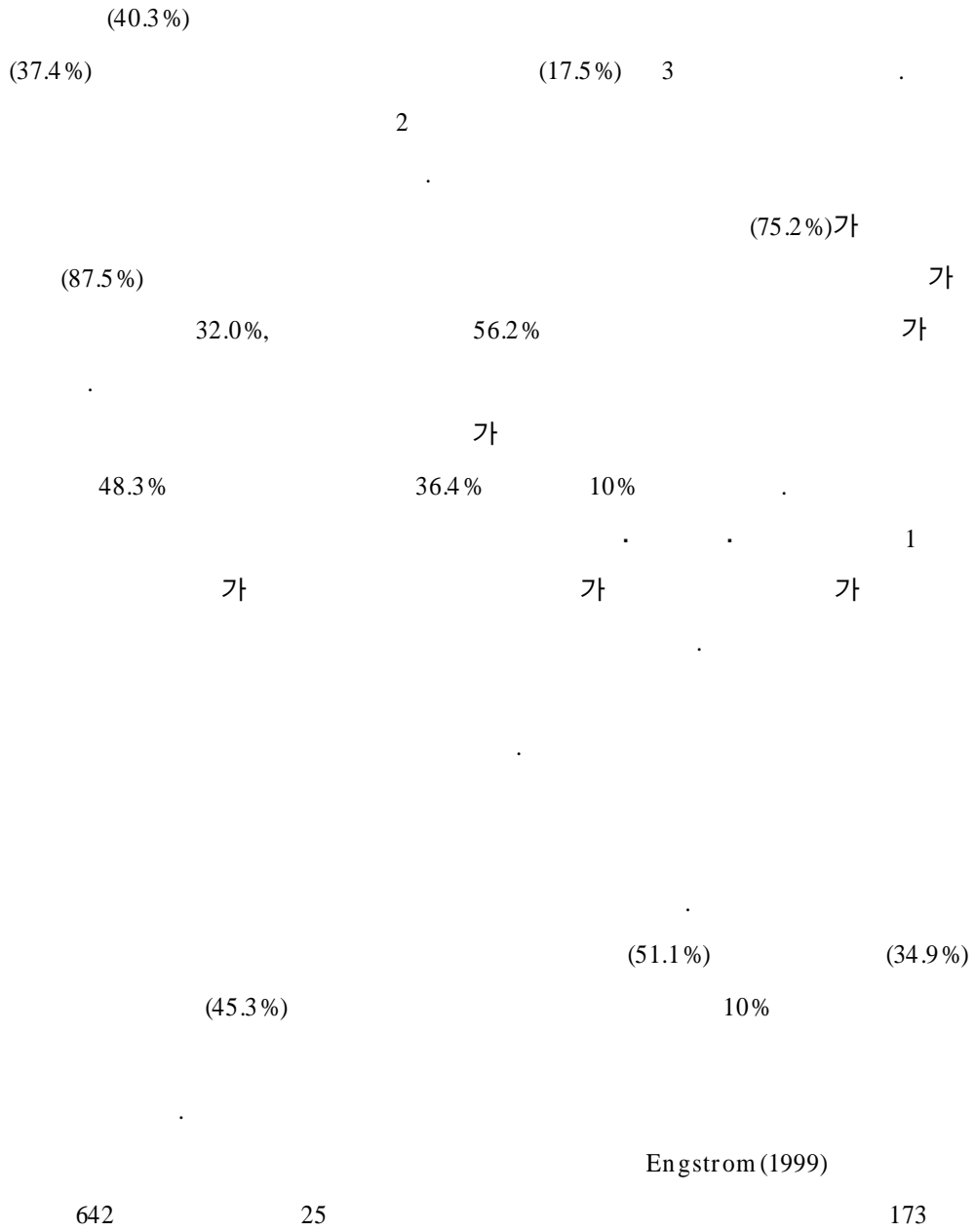
(18.0%)

(24.1%)

(24.1%)

가

(4.8%)



Paffenbarger(2000)

Ehsani(2001)

1

2

가

Hagberg(2000)

review

75% 가

가

8-11mmHg 가

가

24

가

가

가

Whelton(1998)

60-80

975

가

가

He(2000)

(Imbs, 2001; Kotchen 1997). 가
 1800 (Dibona, 1983), 가
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 (Freedman, 2001; Imbs, 2001). 1904 Ambard Beaujard가
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 (Dahl, 1972; Elliott, 1991; Frost et
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 population study randimized study 가
 24
 가
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 Schlierf(1980) (Heidelberg) 20 - 40 800
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 . Moore (2001) , ,
 DASH diet

DASH

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Appel(2000)

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가

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(233)

(209)

가

가

가

10%가

1.4 ,

1.6 ,

가

1.7

1.4 , 1.5 , 1.6

가

가

1991;24(2):221-231

1999;16(1):83-100

1997;36(3):78-89

1983;5(1):67-100

가
1996;23(1):541-551

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1990;11:1-8

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1994;15:344-352

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1998;23(2):157-174

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1997;30(2):308-326

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1999;11(4):651-62

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1995;28(1):187-205

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1999;16(2):157-171

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1996:6:25-38

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2000;17:115-130

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24

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Fat(%)		()
Fat(kg)		()
L.B.M.(kg)		()
T.B.W(l)		()

2 (20)		() /20
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2		()mmHg

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?	1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. _____
?	1. 2. 3. 4. 5. 6.
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?	1. 2. 3. 4. 5. 6.
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() ?	1. (). 2. () 3. . ()

ABSTRACT

Lifestyle modification and hypertension control in hypertensives

Hur, Nam wook

Dept. of Public Health

The Graduate school

Yonsei university

(supervised by Associate Professor Il Suh, M.D., Ph.D.)

Life-related diseases account for the biggest portion of death causes in today's society. Thus they can be prevented and managed enough by giving some changes to everyday healthy lifestyles.

There have been many researches saying that hypertension can be prevented and managed through non-pharmacologic therapies such as improving healthy lifestyles. Improving healthy lifestyles are, indeed, the very first step of hypertension treatment. But the effects of improvement in healthy lifestyles on dropping high blood pressure are still controversial, and this kind of non-pharmacologic therapy can often be neglected by the patient once a pharmacologic therapy begins.

The subject of the study were drawn from the residents of Gwachoen City. Those residents who had been diagnosed as hypertension and were under medication were divided into two groups of the controlled hypertension group(233 persons) and uncontrolled hypertension group(209 persons). They were investigated to see if there were differences among them in terms of health concern, attitude toward hypertension treatment, and practice of healthy

lifestyles. The research efforts were aimed to examine if healthy lifestyles could influence blood pressure dropping even during medication.

The research results were as follows in terms of health concern and attitude toward hypertension treatment; in the aspect of interest in health, the uncontrolled hypertension group turned out to conduct less health-related behaviors such as getting a check-up but be in a greater tendency to think they were healthy. As for the attitude toward hypertension treatment, the same group answered they knew more of hypertension treatment but had less faith in it. It was concluded that awareness in one's health and attitude toward treatment can affect a patient's practicing health behaviors.

Practices of healthy life habits including exercising, weight control, dietary salt intake, no smoking, and temperance were applied to both the groups to find out if there were any differences between them. The controlled hypertension group showed about average 10 percent higher rate in practicing the healthy lifestyles of exercising, weight control, dietary salt intake than the uncontrolled hypertension group. The logistic regression analysis was applied to the result. Adjusted for age, the possibility that the group still made the controlled hypertension group was 1.4 times higher than the other group in terms of exercising, 1.6 times in weight control, and 1.7 times in dietary salt intake. And adjusted for age, sex, occupation, and preferred medical facility, the group showed 1.4 times higher possibility to still belong to the controlled hypertension group than the other group in terms of exercising, 1.5 times in weight control, and 1.6 times in dietary salt intake. Results were statistically significant.

In short, the controlled hypertension group had a higher rate, which was statistically significant, in practicing healthy lifestyles such as exercising, weight control, dietary salt intake, meaning that changes in lifestyles have something to do with blood pressure dropping even during medication.

The study extracted proper samples from the whole group of residents in a city and thus can be assessed to be representative. The significance of the study can be found in this representation.

Key words : lifestyles, hypertension control, hypertensive