

# Results

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This study was done on 50 women who were using marvelon contraceptive pills (C.P. ) as an only method of contraception for 6 months.

75mg Oral glucose tolerance test was done before the study, 3 months and 6 months of use .

Blood samples are collected at fasting and at 30,60, 90,120,150, and 180 min. Intervals. The results reported and statistical analysis was done.

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**Table (2):**

Table (2) shows the range, mean, S.D. of O.G.T.T. in the study cases before using marvelon, after 3 months and after 6 months of its use.

		<b>Fasting Level</b>	<b>30 Min.</b>	<b>60 Min.</b>	<b>90 Min.</b>	<b>120 Min.</b>	<b>150 Min.</b>	<b>180 Min.</b>
<b>Before treatment values</b>	Range	58-93	88-136	86-140	74-125	62-118	63-102	60-98
	Mean ± S.D.	74.2 ±10.1	108.9 ±12.9	109.3 ±12.8	92.3 ±13.2	81.8 ±12.5	79.6 ±10.2	76.9 ±10.7
<b>3 months of use</b>	Range	59-100	80-136	89-140	77-130	58-108	64-107	60-99
	Mean ± S.D.	75.9 ±10.3	110 ±13	111.7 ±12.9	95.3 ±13.1	83.5 ±12.6	82.8 ±10.2	81.5 ±10.5
<b>6 months of use</b>	Range	62-100	66-141	87-142	72-144	68-130	69-116	69-112
	Mean ± S.D.	79.3 ±10.8	113.4 ±17.5	117.8 ±14.6	105.1 ±15.9	92.9 ±13.8	88.8 ±10.8	86.2 ±11.3

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**Table (3):** Shows fasting blood glucose levels (mg/dl) before treatment with marvelon and after 3 & 6 months of use marvelon.

<b>O.G.T.T. Fasting Value</b>	<b>Pretreatment Value</b>	<b>After 3 Months</b>	<b>After 6 Months</b>
Range .....	58-93	59-100	62-100
Mean .....	74.2 *	75.9 *	79.3 **
S.D. ±	10.1 *	10.3 *	10.8 **
P-value	P1> 0.05 *	P2 > 0.05 *	P3 < 0.05 **

S.D. Standard deviation.

\* No significant change.

\*\* Significant change.

P1 pretreatment value                      3 months value

P2        3 months value                      6 months value

P3 pretreatment value                      6 months value

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**Table (4) :** Shows blood glucose levels (mg/dl) after 30 min. Pretreatment and 3&6 months after marvelon.

<b>O.G.T.T. Fasting Value</b>	<b>Pretreatment Value</b>	<b>After 3 Months</b>	<b>After 6 Months</b>
Range .....	88-136	80-136	66-141
Mean .....	108.9 *	110 *	113.4 **
S.D. ±	12.9 *	13 *	17.5 **
P value	P1 > 0.05 *	P2 > 0.05 *	P3 < 0.001**

**Table (5):**

shows blood glucose levels (mg/dl) after 60 min. Pretreatment and after 3&6 months of marvelon

<b>O.G.T.T. Fasting Value</b>	<b>Pretreatment Value</b>	<b>After 3 Months</b>	<b>After 6 Months</b>
Range .....	86-140	89-140	87-142
Mean .....	109.3 *	111.7 *	117.8 **
S.D. ±	12.8 *	12.9 *	14 **
P value	P1 > 0.05 *	P2 > 0.05 *	P3 < 0.001**

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**Table (6):**

Shows blood glucose levels (mg/dl) after 90 min. Pretreatment and after 3&6 months of marvelon.

<b>O.G.T.T. Fasting Value</b>	<b>Pretreatment Value</b>	<b>After 3 Months</b>	<b>After 6 Months</b>
Range .....	74-125	77-130	72-144
Mean .....	92.3 *	95.3 *	105.1 **
S.D. $\pm$	13.2 *	13.1 *	15.9 **
P value	P1 > 0.05 *	P2 > 0.05 *	P3 < 0.001**

**Table (7):**

Shows blood glucose levels (mg/dl) after 120 min pretreatment and after 3&6 months of marvelon.

<b>O.G.T.T. Fasting Value</b>	<b>Pretreatment Value</b>	<b>After 3 Months</b>	<b>After 6 Months</b>
Range .....	62-118	58-108	68-130
Mean .....	81.8 *	83.5 *	92.9 **
S.D. $\pm$	13.2	12.6 *	13.8 **
P value	P1 > 0.05 *	P2 > 0.05 *	P3 < 0.001**

**Table (8):**

Shows blood glucose levels (mg/dl) after 150 min. pretreatment and after 3&6 months of marvelon.

<b>O.G.T.T. Fasting Value</b>	<b>Pretreatment Value</b>	<b>After 3 Months</b>	<b>After 6 Months</b>
Range .....	63-102	64-107	69-116
Mean .....	79.6	82.8	88.8
S.D. $\pm$	10.2	10.2	10.8
P value	P1 > 0.05 *	P2 > 0.05 *	P3 < 0.05 **

**Table (9):**

Shows blood glucose levels (mg/dl) after 180 min. pretreatment and after 3&6 months of marvelon.

<b>O.G.T.T. Fasting Value</b>	<b>Pretreatment Value</b>	<b>After 3 Months</b>	<b>After 6 Months</b>
Range .....	60-98	60-99	69-112
Mean .....	76.9	81.5	86.2
S.D. $\pm$	10.7	10.5	11.3
P value	P1 > 0.05 *	P2 > 0.05 *	P3 < 0.001**

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On comparing the fasting blood sugar values before the use of marvelon, and after 3 & 6 months of use: Table (3).

The mean fasting blood sugar value was  $74.2 \pm 10.0$ mg/dl, 3 months after use marvelon the mean fasting blood sugar became  $75.9 \pm 10.3$ mg/dl.

There were no statistical significant difference between before using marvelon and after 3 months of its use.

6 Months after use, the mean fasting blood sugar became  $79.3 \pm 10.8$  mg/dl.

There was significant change 6 months after marvelon use than the pretreatment value ( $P < 0.05$ ).

There was also significant difference between 3 months and 6 months values.

On comparing blood sugar values, at 30 min. Before the use of marvelon, and after 3 & 6 months of use (table 4).



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The mean blood sugar was  $108.9 \pm 12.9$  mg/dl, 3 months after use, the mean blood sugar became  $110 \pm 13$ mg/dl.

After 6 months of use, the mean blood sugar became  $113.4 \pm 17.5$  mg/dl.

There were no significant difference between blood sugar values at 30 min. before the use of marvelon and at 30 min. after 3 months of use. On the other hand, the blood sugar values show significant higher 6 months after marvelon use than the pretreatment values ( $P < 0.001$ ).

There was also significant difference between 3 months and 6 months values.

On comparing, blood sugar values at 60 min., before the use of marvelon, 3 and 6 months after use (table 5).

The mean blood sugar was  $109.3 \pm 12.8$  mg/dl , 3 months after use, the mean blood sugar became  $111.7 \pm 12.9$  mg/dl.

6 Months after use, the mean blood sugar became  $117.8 \pm 14.6$  mg/dl.

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There were no significant difference between blood sugar values at 60min. before the use of marvelon and at 60 min. After 3 months of use.

On the other hand, the blood sugar values show significant change 6 months after marvelon use than the pretreatment values (  $P < 0.05$  ).

There was also significant difference between 3 months and 6 months values.

On comparing, blood sugar values at 90 min., before the use of marvelon, 3 and 6 months after use (table 6).

The mean blood sugar was  $92.3 \pm 13.2$  mg/dl, 3 months after use, the mean blood sugar became  $95.3 \pm 13.1$  mg/dl.

6 Months after use, the mean blood sugar became  $105.1 \pm 15.9$  mg/dl.

There were no significant difference between blood sugar values at 90 min. before the use of marvelon and at 90 min. 3 months after use. On the other hand, the blood sugar values

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show significant higher 6 months after marvelon use than the pretreatment values ( $P<0.001$ ).

There was also significant difference between 3 months and 6 months values.

On comparing, blood sugar values at 120 min., before the use of marvelon, 3 and 6 months after use (table 7).

The mean blood sugar was  $81.8 \pm 12.5$  mg/dl. 3 months after use, the mean blood sugar became  $83.5 \pm 12.6$  mg/dl.

6 Months after use, the mean blood sugar, became  $92.9 \pm 13.8$  mg/dl.

There were no significant difference between blood sugar values at 120 min. before the use of marvelon and at 120 min. 3 months after use.

On the other hand, the blood sugar values show significant higher 6 months after marvelon use than the pretreatment values ( $P<0.001$ ).

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There was also significant difference between 3 months and 6 months values.

On comparing, blood sugar values at 150min. Before the use of marvelon, 3 and 6 months after use (table 8).

The mean blood sugar was  $79.6 \pm 10.2$  mg/dl 3 months after use, the mean blood sugar became  $82.8 \pm 10.2$  mg/dl.

6 Months after use, the mean blood sugar became  $88.8 \pm 10.8$  mg/dl.

There were no significant difference between blood sugar values at 150 min. before the use of marvelon and at 150 min. 3 months after use.

On the other hand, the blood sugar values show significant higher 6 months after marvelon use than the pretreatment values ( $P < 0.05$ ).

There was also significant difference between 3 months and 6 months values.

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On comparing, blood sugar values at 180 min. Before the use of marvelon, 3 and 6 months after use (table 9).

The mean blood sugar was  $76.2 \pm 10.7$  mg/dl, 3 months after use, the mean blood sugar became  $81.5 \pm 10.5$  mg/dl.

6 Months after use, the mean blood sugar became  $86.2 \pm 11.3$  mg/dl.

There were no significant difference between blood sugar values at 180 min. 3 months after use.

On the other hand, the blood sugar values show significant higher 6 months after marvelon use than the pretreatment values ( $P < 0.001$ ).

There was also significant difference between 3 months and 6 months values.

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**Fig (1):** Shows O.G.T curves before, 3 :6 months after treatment with marvelon which show an increase of all mean blood glucose values after 3:6 months of use, The increase in the mean blood glucose values was more after 6 months than after 3 months of use but all values remain within the normal range for glucose tolerance curve.

Figure 1. Blood glucose levels overtime.

