Hormone replacement therapy: a study of women's knowledge and attitudes

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SUMMARY. Hormone replacement therapy can successfully treat menopausal symptoms. A postal questionnaire was used to investigate the knowledge of and attitudes to hormone replacement therapy of an age-stratified, computer-generated, representative sample of 1500 women living in the Grampian region of Scotland. A response rate of 78% was achieved. Comparisons were made between women of differing age, educational background and their current or past experience of hormone replacement therapy. The questionnaire also assessed their knowledge of osteoporosis, including the possible beneficial role of hormone replacement therapy. The results showed that women had a poor knowledge of the potential risks and benefits of oestrogen, lack of knowledge being greatest in the less educated and older women. The majority of women agreed with the view that because the menopause is brought on by diminished hormone levels, it should be viewed as a medical condition and treated as such, and also that a woman who experiences distressing menopausal symptoms should take hormone replacement therapy. Despite this, relatively few postmenopausal women were currently taking hormone replacement therapy (9%) or had taken the treatment in the past (7%), although many had experienced menopausal symptoms for over six months. The most common reason for postmenopausal women never having taken hormone replacement therapy was that they had never considered the treatment (70%) and had not discussed it with a doctor (79%).

Since it has been proposed that all women should be offered hormone replacement therapy, doctors must be made aware of their role in advising women about the problems associated with the menopause and the risks and benefits of hormone replacement therapy as they are currently understood, so that women can make an informed decision on whether to accept treatment. Hormone replacement therapy could greatly improve the quality of life of many women who are presently suffering in ignorance, by relieving menopausal symptoms and providing some protection against osteoporosis and cardiovascular disease.

Keywords: hormone replacement therapy; patients' attitude; patients' knowledge; women's health.

Introduction

HORMONE replacement therapy has been used successfully to treat menopausal symptoms.[1-3] There is also evidence that its use could treat other more serious conditions associated with the menopause. For example, osteoporosis is an important health problem in older women resulting in substantial social and economic costs: osteoporosis related problems cost the National Health Service £700 million per year.[4] By the time they reach the age of 70 years, nearly 50% of women will have sustained a fracture of the hip, of a vertebra, or of the wrist.[5] Fractures of the hip are associated with an excess mortality of up to 20% within the first year.[6,7] Oestrogens taken within two years of the menopause, and for at least five years, help to prevent osteoporosis and may halve the incidence of fractures.[3,5,8-11]

Recent studies have shown that the administration of unopposed oestrogen to postmenopausal women results in up to a 50% reduction in cardiovascular disease and mortality[3,12,13] owing to protection against coronary heart disease.[13,14] Evidence for protection against strokes is mixed, with recent data showing no beneficial effect.[15] As yet, there are no epidemiological data for the use of opposed oestrogen with respect to cardiovascular disease. The effect on lipid parameters is one of the biological mechanisms mediating an effect on cardiovascular disease. Despite some progestogens having an opposite effect to oestrogen on the lipid profile, combined preparations retain a beneficial effect on lipid parameters.[16-20]

In spite of these acknowledged benefits of hormone replacement therapy there is still some disquiet among British doctors about the introduction of widespread prophylactic treatment. Hormone replacement therapy is prescribed more frequently in the United States of America than in the United Kingdom.[21] One possible explanation could be that British women refuse treatment or alternatively that they are unaware of the availability and utility of hormone replacement therapy, and therefore do not consider consulting their doctor.

The aim of this study was to survey women's knowledge of and attitudes to hormone replacement therapy. Comparisons were made in order to determine whether factors such as age, educational background and whether they had ever taken hormone replacement therapy influenced the women's knowledge and attitudes. The study also looked at women's knowledge of osteoporosis.

Method

The menopausal health questionnaire, developed in 1988 for use in Iowa, USA,[21] using questions evaluating attitudes towards the menopause originating from a study reported by Lieblum and Swartzman,[22] was adapted for UK use. Women were asked about their own medical history, current or past experience of hormone replacement therapy, and attitudes towards the therapy, including perceived risks and benefits. The questionnaire also assessed knowledge of osteoporosis, symptoms and risk factors associated with osteoporosis, dietary and lifestyle changes that could reduce the risk of osteoporosis, and the possible beneficial role of hormone replacement therapy. The final set of questions evaluated attitudes towards the menopause. The modified questionnaire was initially piloted on 50 women, covering a range of ages and intellectual abilities. This resulted in only minor changes.

In August 1991 the questionnaire and an explanatory letter were sent to an age-stratified, random sample of 1500 women aged 20–69 years, selected by computer from Grampian Health Board lists to give 300 women from each of the five 10-year age bands (0.9% of the sampling frame of 165 000 women). Sixty

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questionnaires were returned by the post office (of whom 31 were addressed to women in the 20–29 years age band), three women had died and one was blind, leaving a sample of 1436 women. The initial response rate of 56.6% was raised to 78.1% (1122 respondents) following a postal reminder. One hundred and eighty six of the respondents (16.6%) were aged 20–29 years, 241 (21.5%) were aged 30–39 years, 232 (20.7%) 40–49 years, 243 (21.7%) 50–59 years and 220 (19.6%) were in the 60–69 years age group. The lower response rate of the youngest age group may be partly accounted for by the questionnaires returned by the post office.

Comparisons were made between women of differing educational backgrounds and between premenopausal and postmenopausal women who were currently taking hormone replacement therapy, those who had taken it in the past and those who had never taken it. Premenopausal women were included because they could help identify gaps in knowledge and information, and differences in attitude. Data storage, summary statistics and chi square tests (Yates correction applied where appropriate) were carried out using a standard statistical package.[23]

Results

Characteristics of respondents

Of the 1122 respondents, 630 (56.1%) were premenopausal and 492 (43.9%) postmenopausal (menopausal women were considered to be postmenopausal). Forty six of the postmenopausal women (9.3%) were currently taking hormone replacement therapy, 35 (7.1%) had taken it in the past but had stopped and 411 (83.5%) had never taken hormone replacement therapy. The mean age of the premenopausal women was 36 years (range 20–57 years). The postmenopausal women taking hormone replacement therapy had a mean age of 53 years (range 33–68 years), those who had taken it in the past, 56 years (range 41–67 years) and postmenopausal women who had never taken it, 58 years (range 40–69 years; this mean and range do not include two women who had had hysterectomies, aged 23 and 36 years at the time of the survey, who had never taken hormone replacement therapy).

Defining 'less educated' as those not educated beyond secondary school level, and 'more educated' as those educated beyond secondary school level, 780 respondents (69.5%) were less educated and 339 (30.2%) more educated (three non-respondents). Of those aged 20–29 years 62.9% were less educated, as were 58.3% in the 30–39 years age group, 64.9% of 40–49 year olds, 77.7% of 50–59 year olds and 84.1% in the 60–69 years age group. Of the postmenopausal women, 379 (77.0%) were less educated.

Of the 97 more educated postmenopausal women who responded to the question, 24.7% had taken hormone replacement therapy at some time (13.4% currently taking the therapy, 11.3% had taken it in the past but stopped and 75.3% had never taken it) while 16.3% of the 343 less educated postmenopausal women who responded to the question, had ever taken the therapy (9.3% currently taking therapy, 7.0% taken it in the past and 83.7% had never taken it). However, the chi square test showed no significant association between ever having taken hormone replacement therapy and level of education.

Of the 45 women currently taking hormone replacement therapy who responded to the question, 55.6% had previously taken the oral contraceptive pill but this applied to only 40.0% of the 35 women who had taken the therapy in the past and had since stopped and 29.4% of the 357 postmenopausal respondents who had never taken the therapy (chi square 13.22, $P<0.01$).

Menopausal symptoms

The postmenopausal women were given a list of symptoms and asked if they had experienced any of them for more than six months following their last menstrual period (Table 1). More of the women who had ever taken hormone replacement therapy experienced menopausal symptoms than those who had never taken the treatment, with the highest percentage for each symptom among women who had taken hormone replacement therapy in the past but had now stopped the treatment. Level of education had no effect on the reporting of any of the menopausal symptoms.

Attitudes to the menopause

The women were given a list of 10 statements reflecting attitudes to the menopause and asked to rate each on a scale from one, strongly agree, to seven, strongly disagree (Table 2). The majority of respondents agreed (score one to three) that because the menopause is brought on by diminished hormone levels it should be viewed as a medical condition and treated as such (93.0% of respondents currently taking hormone replacement therapy (n = 43), 84.4% who had taken it in the past (n = 32) , 74.5% of postmenopausal women who have never taken it (n = 329) and 79.7% of premenopausal respondents (n = 600)). The majority of respondents also agreed that women with distressing symptoms should take hormone replacement therapy (88.9% of respondents currently taking hormone replacement therapy (n = 45), 72.7% who had taken it in the past (n = 33), 58.4% of postmenopausal women who had never taken it (n = 317) and 64.4% of premenopausal respondents (n = 590)). Over 62% of the respondents in each of the subgroups agreed with statement three. The women tended to have no clear opinion on statements four, five and six, with similar proportions agreeing and disagreeing. A high proportion of women gave a neutral response (score four) to statement seven (44.4% of respondents currently taking hormone replacement therapy (n = 45), 40.1% of postmenopausal women who had never taken it (n = 319), 15.6% who had taken it in the past (n = 32) and 42.4% of premenopausal respondents (n = 595)). Only 26.7% of 45 respondents currently taking hormone replacement therapy agreed with statement seven, while 51.4% of 319 who had never taken the treatment felt natural approaches were better, as did 62.5% of the 32 who had taken hormone replacement therapy in the past and 41.5% of 595 premenopausal women. The majority of respondents in each of the subgroups (over 70%) did not agree with statements eight, nine and 10.

Factors influencing the use of hormone replacement therapy

The women were asked to rate 10 factors that might influence their use of hormone replacement therapy on a scale from one, 'would persuade me to take hormone replacement therapy' to

Table 1. Menopausal symptoms experienced by postmenopausal women for more than six months after last menstrual period.

Symptom experienced	% of postmenopausal women		
	Currently taking HRT (n = 46)	Taken HRT in past (n = 35)	Never taken HRT (n = 411)
Hot flushes	*58.7*	*77.1*	*60.1*
Depression	*34.8*	*40.0*	*19.7*
Insomnia	*41.3*	*51.4*	*22.6*
'Just didn't feel well'	*39.1*	*48.6*	*15.8*
Vaginal dryness	*34.8*	*51.4*	*27.0*

n = number of women in group. HRT = hormone replacement therapy.

five, 'would persuade me not to take hormone replacement therapy' (Table 3). The advice of a doctor on whether or not to take hormone replacement therapy played a large role in the postmenopausal women's decision to take the therapy with over two thirds of respondents in each of the subgroups responding positively (score one or two). Other factors which were rated positively were that the therapy would require annual checkups by the doctor, it could be given through a skin patch and would not cause cancer if taken properly, that it would stop hot flushes, that a friend was taking it without problems, and that a test could determine the risk of osteoporosis. That the hormones would have to be taken for the rest of life and that they might cause periodic bleeding were rated negatively by all the groups except those who were currently taking hormone replacement therapy — 48.5% of the 33 current taker respondents to factor eight responded one or two and 24.2% four or five, while 48.4% of the 31 current taker respondents to factor 10 responded one or two and 25.8% four or five. The fact that a friend was having problems in taking hormone replacement therapy would dissuade the majority of women in all the groups from taking the treatment.

Knowledge of hormone replacement therapy

The women were given the following information: hormone replacement therapy may contain either the hormone oestrogen alone or both oestrogen and progesterone. In order to determine the women's knowledge of hormone replacement therapy, they were asked to assess the validity of two statements relating to oestrogen. The results according to the women's educational background and age are shown in Table 4. The women had a poor knowledge of the potential risks and benefits of oestrogen, with the less educated women and those aged 60–69 years being least knowledgeable (up to 81% of the older women either not responding or choosing the 'don't know' option). The majority of women did not know that oestrogen alone may decrease the chance of a heart attack and may increase the risk of uterine cancer.

Consideration of hormone replacement therapy

Only 22.6% of the 492 postmenopausal women had considered taking hormone replacement therapy, and 16.5% had gone on to take the treatment. The majority (64.4%) had never considered taking it (13.0% did not respond to this question). When the 411 postmenopausal women who had never taken hormone replacement therapy were asked what best described the reason why they had not taken the treatment, 69.6% responded that they had never considered it, 5.1% were advised not to take it by their doctor, 10.0% considered it but decided not to and 15.3% did not respond to this question.

Only 11.9% of the 411 postmenopausal women who had never taken hormone replacement therapy had discussed the treatment with a doctor — 78.6% had never discussed it with a doctor and 9.5% did not respond to this question.

Table 2. Women's attitudes towards the menopause.

Statement	Mean score[a] for postmenopausal respondents: Currently taking HRT (*n* = 42–45)	Taken HRT in past (*n* = 31–35)	Never taken HRT (*n* = 311–330)	Mean score[a] for premenopausal respondents (*n* = 590–600)
1. Menopause should be viewed as a medical condition	1.7	2.3	2.4	2.3
2. Women with distressing symptoms should take HRT	1.9	2.9	3.0	2.9
3. Women cannot control menopausal changes inside their bodies	2.2	2.9	2.3	2.6
4. Sexual interest and comfort increase after the menopause	3.8	4.3	4.1	4.1
5. Psychological problems are due to life changes, not hormonal changes	3.9	3.9	3.7	4.0
6. Risks of taking HRT outweigh benefits	4.1	4.0	3.4	3.9
7. Natural approaches are better than HRT	4.1	3.3	3.1	3.6
8. A woman feels like less of a woman after the menopause	4.8	5.6	5.5	4.6
9. Male partners of postmenopausal women regard them as less sexually desirable	5.0	5.8	5.5	4.9
10. Women who have trouble are those who expect it	5.2	5.2	4.4	4.4

n = range of number of respondents in group. HRT = hormone replacement therapy. [a]Seven point scale: 1 = strongly agree, 4 = neither agree nor disagree (neutral response), 7 = strongly disagree.

Table 3. Influence of certain factors on the decision to use hormone replacement therapy.

Factor	Mean score[a] for postmenopausal respondents: Currently taking HRT (*n* = 29–35)	Taken HRT in past (*n* = 24–29)	Never taken HRT (*n* = 236–270)	Mean score[a] for premenopausal respondents (*n* = 570–586)
1. Recommended by doctor	2.0	1.8	2.0	2.3
2. Would stop hot flushes	1.9	1.5	2.3	2.3
3. Would not cause cancer if taken properly	1.9	2.2	2.2	2.1
4. Would require annual checkups	2.1	2.0	2.1	2.2
5. A test could determine the risk of osteoporosis	1.9	1.9	2.0	2.2
6. Could be given through a skin patch	1.9	2.1	2.3	2.5
7. Friend taking it without problems	2.3	2.1	2.3	2.2
8. Would have to be taken for rest of life	2.6	3.5	3.5	3.7
9. Friend taking it with problems	3.6	3.2	3.8	3.6
10. Might cause menstrual periods	2.7	4.0	4.0	3.5

n = range of number of respondents in group. HRT = hormone replacement therapy. [a]Five-point scale: 1 = 'would persuade me to take HRT', 5 = 'would persuade me not to take HRT'.

Table 4. Women's knowledge of hormone replacement therapy, by educational level and age.

	% of women			
	Correct answer	Incorrect answer	Do not know	Non-respondents
Oestrogen alone may decrease the chance of having a heart attack				
Educational level:[a]				
More (n = 339)	17.4	30.7	48.1	3.8
Less (n = 780)	10.4	19.5	61.0	9.1
Age (years)				
20–29 (n = 186)	11.8	25.8	59.7	2.7
30–39 (n = 241)	10.0	31.1	56.4	2.5
40–49 (n = 232)	18.1	25.8	53.9	2.2
50–59 (n = 243)	13.2	21.0	56.0	9.9
60–69 (n = 220)	9.5	10.0	59.5	20.9
Women who take only oestrogen are more likely to get cancer of the uterus				
Educational level:[a]				
More (n = 339)	25.1	26.5	45.7	2.7
Less (n = 780)	14.2	18.7	57.9	9.1
Age (years)				
20–29 (n = 186)	18.3	26.3	52.7	2.7
30–39 (n = 241)	19.9	26.1	52.3	1.7
40–49 (n = 232)	18.1	28.4	51.7	1.7
50–59 (n = 243)	21.4	16.0	52.7	9.9
60–69 (n = 220)	9.5	9.1	60.9	20.5

n = number of women in group. [a]More = those educated beyond secondary school level; less = those not educated beyond secondary school level.

Use among hysterectomized women

One hundred and sixteen women (10.3%) had had a hysterectomy (the questionnaire did not ask about oophorectomy); 67 during the past 16 years. Of these 67 women 22.4% were currently taking hormone replacement therapy, 11.9% had taken it in the past but had stopped and 65.7% had never taken the treatment; 31.3% had discussed hormone replacement therapy with their general practitioner and 7.5% had discussed it with a gynaecologist.

Osteoporosis

The questionnaire informed women that osteoporosis is thinning of the bones, resulting from a loss of calcium from the bones and is a problem in older women. The majority of women (60.4%) incorrectly thought that arthritis-like pain was a warning sign (62.7% of the premenopausal women, 53.1% of the women who had ever taken hormone replacement therapy and 58.4% of the postmenopausal women who had never taken it). Less than a third of the women (31.7%) recognized that there are no real warning signs (30.2% of the premenopausal women, 43.2% of those who had ever taken hormone replacement therapy and 31.9% of the postmenopausal women who had never taken it).

The women were given a list of 10 factors and asked to indicate any they thought would make osteoporosis more likely (Table 5). The majority of women recognized that a decrease in dietary calcium and a family history of osteoporosis are risk factors, while they were less aware of the increased risks from smoking (which results in an earlier menopause) and inactivity. More of the postmenopausal women who had ever taken hormone replacement therapy recognized lack of oestrogen as a risk factor than those who had never taken it. Over a third of the women thought vitamin C deficiency to be a risk factor, although there is no evidence to support this theory. More of the premenopausal and postmenopausal women believed that being overweight was a risk factor than believed that being underweight was a risk factor.

The premenopausal women showed a greater awareness than the postmenopausal groups of the increased risks of a decrease in dietary calcium ($\chi^2 = 8.27$, $P<0.01$), a family history of osteoporosis ($\chi^2 = 33.64$, $P<0.001$) and inactivity ($\chi^2 = 7.19$, $P<0.01$) — none of the other factors showed statistically significant differences between these groups. The more educated women had a much greater knowledge of predisposing factors to osteoporosis than the less educated (Table 5). In particular, they were more aware of the increased risk of a decrease in dietary calcium ($\chi^2 = 40.46$, $P<0.001$), a family history of osteoporosis ($\chi^2 = 34.58$, $P<0.001$), lack of oestrogen ($\chi^2 = 36.07$, $P<0.001$) and inactivity ($\chi^2 = 48.57$, $P<0.001$).

In a later question, when the term oestrogen hormone was replaced by hormone replacement therapy, significantly more of the women who had ever taken the therapy recognized that the treatment would be helpful in trying to prevent osteoporosis — 77.5% of the respondents who had ever taken the therapy (n = 80), 39.2% of postmenopausal respondents who had never taken it (n = 360) and 52.2% of premenopausal respondents (n = 613) acknowledged that hormone replacement therapy would be beneficial ($\chi^2 = 54.99$, $P<0.001$).

Discussion

Hormone replacement therapy may have a great deal to offer women who have reached the natural menopause, have a family history of osteoporosis or have had a hysterectomy. It could greatly improve the quality of life of many women who are currently suffering in ignorance. It has been found that most women taking hormone replacement therapy are doing so to alleviate menopausal symptoms.[2] This study showed that the women who had ever taken hormone replacement therapy reported a higher incidence of menopausal symptoms than those postmenopausal women who had never taken the treatment. However, the women who had taken the therapy represented only a small proportion of the postmenopausal women (16%). The majority of women had never taken the treatment despite experiencing menopausal

Table 5. Women's knowledge of predisposing factors to osteoporosis, by menopausal status and educational level.

	% of respondents					
	Postmenopausal				Educational level	
Predisposing factor	Currently taking HRT (n = 46)	Taken HRT in past (n = 35)	Never taken HRT (n = 411)	Premenopausal (n = 630)	Less[a] (n = 780)	More[b] (n = 339)
§Decrease in dietary calcium	60.9	80.0	59.6	74.3	65.8	84.7
§Family history of osteoporosis	58.7	65.7	46.0	69.8	57.4	76.1
§Lack of oestrogen	65.2	54.3	34.3	45.4	38.2	57.8
Vitamin C deficiency	39.1	54.3	33.3	45.9	44.1	39.8
§Smoking	28.3	48.6	36.5	41.7	39.6	46.6
§Inactivity	34.8	40.0	28.7	39.8	29.9	51.9
Being overweight	34.8	45.7	33.8	28.4	33.1	34.8
§Being underweight	26.1	25.7	18.0	26.5	24.1	26.0
§White race	6.5	11.4	5.8	5.7	4.2	10.3
Black race	0	2.9	1.0	1.6	1.5	0.9

n = number of respondents in group. §Factors for which there is evidence of risk. [a]Educated to secondary school level only. [b]Educated beyond secondary school level.

symptoms, although 58% of this group agreed that women with distressing symptoms should be taking hormone replacement therapy. Could it be that these women did not feel sufficiently troubled by their symptoms to consult their general practitioner? Could the confounding effects of older age and lack of availability of medication be the explanation? Or were these women let down by poor health education, leaving them unaware that medication may alleviate their symptoms and therefore they did not consult their general practitioner for advice?

Twenty per cent of postmenopausal women who had never taken hormone replacement therapy had suffered from depression for over six months after their last period. Did these women not consult their doctor? Or perhaps, as has been suggested,[24] they may have been treated inappropriately with tranquillizers, which could result in habituation or more depression.

Women who were currently taking hormone replacement therapy were more likely to have taken the oral contraceptive pill in the past than those women who had never taken hormone replacement therapy or had taken it in the past. This association may be partly explained by age effects, since the pill would not have been available for many of the older postmenopausal women, and access to hormone replacement therapy may well have been more restricted too. Another explanation may be that certain women are more disposed to taking medication, since women who had never taken hormone replacement therapy and those who had taken it in the past were more in favour of natural approaches for menopausal problems than the women currently taking the therapy.

Several shortfalls in knowledge were identified relating to osteoporosis and oestrogen. While the majority of women who had ever taken hormone replacement therapy recognized that oestrogen may help to prevent osteoporosis, only 34% of the postmenopausal women who had never taken it and 45% of the premenopausal women knew of this potential benefit. The postmenopausal women were less aware than the premenopausal women that a decrease in dietary calcium, a family history of osteoporosis and inactivity were all risk factors for the condition. Also, the less educated women had a poorer knowledge of osteoporosis than the more educated, with fewer recognizing the risk factors. The criterion for education level used here is of necessity crude, its utility being that it is an indirect indicator of intelligence, in the sense of being able to acquire and retain information. It might be expected that lack of opportunity would result in older women appearing to be less educated than the younger women, and a marked decrease in the level of education among women aged 50 years and over was found. Therefore the varying specificity of education level across the age bands should be borne in mind.

The women of both educational backgrounds experienced similar levels of menopausal symptoms, but those who were more highly educated were more likely to be taking or have taken hormone replacement therapy in the past. A study of those already taking hormone replacement therapy found that in 21% of the women, the treatment had been initiated in response to a direct request.[3] Thus, the reason for higher numbers of the more educated women taking hormone replacement therapy may be that, having learned of it, they made a direct request for this treatment.

In modifying the questionnaire used in Iowa[21] care was taken to keep as close to the original as possible. In Iowa a university community was used as the sampling frame, resulting in the respondents being more highly educated than the general population (73% were educated beyond high school; age range 19–90 years). A further difference between the two populations might result from the lack of a coordinated system of primary medical care through one general practitioner in the USA. However, some comparisons can still be made. The rate of use of hormone replacement therapy by postmenopausal women was lower among the more educated postmenopausal women in Scotland (13% currently taking and 11% had taken it in the past) than among the entire American postmenopausal sample (19% currently taking and 18% taken in the past), despite more of the Scottish women experiencing each of the menopausal symptoms than their American counterparts. The more educated postmenopausal Grampian women also showed a poorer awareness of most of the predisposing factors to osteoporosis than the American respondents. In particular, more Americans recognized the increased risks from a family history of osteoporosis, a lack of oestrogen, and inactivity. The recent raised profile in Scotland of the dangers of smoking may explain why the Scottish women were more aware than the American group that smoking is a risk factor for osteoporosis.

The reason for the low use of hormone replacement therapy in Grampian does not appear to be a problem of attitude among the women, since the majority agreed that because the menopause is brought on by diminished hormone levels, it should be viewed as a medical condition and treated as such, and also that women with distressing symptoms should take hormone replacement therapy. The most common reason for women never taking hormone replacement therapy was that they had never considered it, despite experiencing high levels of menopausal symptoms. Why

should this be so? The postmenopausal women held the view that the advice of a doctor on whether or not to take hormone replacement therapy plays an important part in their decision to use the treatment. But since only 12% of those postmenopausal women who had never taken hormone replacement therapy had ever discussed the treatment with a doctor, it may be that they had never heard of it. This lack of knowledge was emphasized by more than half of all the women having no idea about two of the effects of hormone replacement therapy on the body.

The situation is even more worrying when women who have had a hysterectomy are considered. This group is most at risk of osteoporosis[25] and cardiovascular problems[26] owing to oestrogen deficiency. Yet, of the 67 women who had had a hysterectomy within the last 16 years, 66% had never taken hormone replacement therapy, and only 31% had discussed the therapy with their general practitioner and 7% with a gynaecologist. A study in Glasgow showed that many of the women who had undergone a hysterectomy and oophorectomy before the age of 40 years were not offered treatment at a sufficiently early stage.[27] Similarly, a London study showed that fewer than one in three women who had had a hysterectomy had been offered hormone replacement therapy.[28]

Why are doctors not promoting hormone replacement therapy in spite of its benefits? Is this a cost cutting exercise or a natural disinclination to adopt a long term treatment which may later be found to be responsible for undesirable side effects? The general public is constantly being encouraged to be responsible for its own health, but this can only be a realistic objective if the necessary information is provided in a form accessible to the lay public. The Scottish Medicines Resource Centre, an independent drug information centre, has recently concluded: 'It has been proposed that all women should be offered the opportunity to receive hormone replacement therapy. The decision as to whether to accept hormone replacement therapy is one which should be taken by the patient herself, in consultation with her doctor and in the knowledge of all the risks and benefits of hormone replacement therapy as they are currently understood.'[29] This study has shown that before this ideal state can be achieved a specific health education campaign is required, using educational materials which are consumer friendly, to highlight the benefits of hormone replacement therapy. A suitable model of health education for use by the primary health care team has been described by Downie.[30] Only then will women be able to make an informed decision as to whether to accept the treatment.

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Corrigendum - health checks for long term non-attenders

The paper by Thomas and colleagues (Case against targeting long term non-attenders in general practice for a health check, *Br J Gen Pract* 1993; **43:** 285-290) should have included the following acknowledgement on the title page: © Crown Copyright Reserved 1993.