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CONTRACEPTION FOR WOMEN OVER FORTY

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There is a remarkable paucity of information on contraceptive practice by older women. We have only the sketchiest information on what contraceptive methods are chosen, and none at all on the reasons for particular choices. Surveys of contraceptive prevalence do not cover women 45 or older and, to this author's knowledge, only one clinical trial has ever been conducted to determine the safety of any contraceptive in older women. Nevertheless, there is a growing interest in this topic, perhaps in part because, as the baby boomers reach their forties, the number of women in this age group is increasing rapidly (Table 1). There are more than 27 million woman between the ages of 35 and 54 (National Center for Health Statistics, personal communication) and more than 20 million of these have an intact uterus (National Center for Health Statistics, DHHS Pub No (PHS)88-1753).

**Table 1. NUMBER OF WOMEN BETWEEN THE AGES OF 35-54
IN THE UNITED STATES (1985)**

Age Group	No. of Women in Thousands	Percent with Intact Uterus
35-39	8,967	86
40-44	7,167	78
45-49	5,968	69
50-54	5,661	67
35-54	27,763	76

SOURCE: National Center for Health Statistics, Statistical Resource Branch, personal communication.

Table 2. BIRTHS TO OLDER WOMEN - UNITED STATES (1985)

Age Group	Births	Birth Rate*
35-39	214,336	23.9
40-44	28,334	3.9
45-49	1,162	0.2

* per 1,000 women of that age

SOURCE: National Center for Health Statistics, Statistical Resource Branch, personal communication.

Women of 45 and over are excluded from the National Survey of Family Growth because, although they conceive, they do not contribute to family growth. Table 2 shows the distribution, by age of mother, of births to older women. Twenty-nine thousand births in 1985 were to women 40 and older, but only 1,000 were to women 45 and older (National Center for Health Statistics, personal communication). However, among these few births there were three maternal deaths, reminding us that the risk of maternal death is nearly 50 times greater for women 45 and older than it is for women aged 20-24, and it is 10 times greater for women 40-44 (Fig. 1) (National Center for Health Statistics, personal communication). In addition to the 29,000 births, there were 18,000 abortions by women 40 and older in 1979 (Center for Disease Control, 1987) (Table 3). Furthermore, the abortion ratio (the ratio of abortions to live births) is higher at this age than at any other except for girls under 15. Another interesting facet of childbearing among these older women is that their births

Table 3. ABORTIONS PER 1000 LIVE BIRTHS BY AGE - UNITED STATES, 1979

Age	AB/LB
<15	1196
15-19	676
20-24	380
25-29	221
30-34	228
35-39	407
40+	746

SOURCE: Personal communication from CDC/CHPE Pregnancy Epidemiology Branch.

- 21

Contraception for Women Over Forty / 43

Age	Maternal Deaths	MM Ratio	Relative	Births	Women
20	33	6.9	1.3	477,705	
20-24	62	5.4	1.0	1,141,320	
25-29	77	6.4	1.2	1,202,350	
30-34	62	8.9	1.6	696,354	
35-39	42	19.6	3.6	214,336	8,967
40-44	16	56.5	10.5	28,334	7,167
45+	3	258.2	47.8	1,162	5,968
50-54					5,661
TOTAL	295	7.8		3,760,561	

Figure 1. Maternal Mortality Ratios - United States, (1985)
 SOURCE: National Center for Health Statistics. Statistical Resource Branch. Personal Communication.

tend to follow a very long birth interval - often 10 years or more (Vital Statistics of the United States, 1980) (Table 4).

Two national surveys have provided data on contraceptive prevalence among women aged 40-44: the National Survey of Family Growth (NSFG) (Pratt, 1984), and a nationally representative market survey by a pharmaceutical firm (Forrest and Henshaw, 1983). There are discrepancies between the findings of these two surveys. Although there is no nationally representative survey of contraceptive prevalence that includes women of 45 and over, surveys conducted for other reasons provide us with some information on contraceptive practices (Tables 5 and 8). About 40% of couples in which the wife is between 40 and 44 have been contraceptively sterilized. It is assumed that sterilization was a positive choice rather than that couples chose this method because of the absence of alternatives.

About one quarter of women aged 40-44 are at risk of pregnancy in that they are sexually active, not pregnant or postpartum, not sterilized, and have intact uteri. It is not known what the proportion is for women aged 45-49, or for women aged 50-54.

**Table 4. MEAN INTERVAL SINCE LAST LIVE BIRTH
(MONTHS) WOMEN 40 AND OLDER - UNITED STATES, 1980**

Birth Progression	40-44	45-49
First to second	105	130
Second to third	125	159
3-4	118	164
4-5	109	149
5-6	95	127
6-7	82	124
7-8+	57	77

SOURCE: Vital Statistics of the United States, 1980. Vol.I Natality. US Dept. of Health and Human Service, Public Health Service, NCHS

**Table 5. PERCENTAGE DISTRIBUTION OF U.S. WOMEN AGED 40-54
NOT AT RISK OF UNINTENDED PREGNANCY, BY REASON, 1980-82**

Age N=	Market Survey	NSFG	Controls for CASH		
	40-44 (1102)	40-44 (794)	40-44 (956)	45-49 (1503)	50-54 (1876)
Contraceptive sterilization:					
Male	17.5	13.3			
Female	23.4	26.4			
Menopausal	18.0				
Natural		3.0	2.1	11.3	43.0
Surgical		21.8	20.1	30.9	28.3
Pregnant	<0.5	0.1			
Postpartum	-	0.2	0.3	0.0	0.0
Seeking pregnancy	1.0	1.4			
Not sexually active	7.0	8.6			
Total not at risk	74.2	74.8*			
Total at risk	25.8	25.2			

* Includes 6% "infertile" and rounding errors.

SOURCE: National Survey of Family Growth 1982. Special computer run. Controls from CASH Study (CDC).

Table 6. PERCENTAGE OF U.S. WOMEN EXPOSED TO THE RISK OF PREGNANCY WHO USE NO METHOD OF CONTRACEPTION, BY AGE, NATIONAL SURVEY OF FAMILY GROWTH

Age	Percent Using No Contraception
15-19	18
20-24	12
25-29	8
30-34	9
35-39	16
40-44	21

SOURCE: Pratt WF et al. Understanding US Fertility: findings from the National Survey of Family Growth, Cycle III. Population Bulletin, December 1984.

Contraceptive Choices

One in five women between the ages of 40 and 44, who are at risk of pregnancy, uses no method of contraception (Pratt et al., 1984) (Table 6). This proportion is larger than that found in any other age group including teenagers.

The reversible method chosen by the largest number of women of 40 and over is the condom, which is used by 30-40% of women. In 1982 and 1984, the next most popular method was the IUD (Table 7). It is not known what proportion of older women are currently using this method, nor what proportion will choose to use it when it becomes available again later in 1988. It seems likely that many women chose to continue the use of an IUD after its recommended removal date during the years when IUDs were not available. The effect of this probable practice (on unwanted pregnancies and complications) is not known. The most important question concerning contraceptive practice is what proportion of older women use oral contraceptives. Table 7 shows that the proportion varies between 3-15% in nationally representative samples of women aged 40-44 (Pratt et al., 1985; Forest and Henshaw, 1983). Among women 45 and over, 11% of California Medicaid patients used the pill, (Aved, 1985). The HANES survey (Russell-Briefel et al., 1985) and the Nurse Study (Lipick et al., 1986) found that a significant proportion of women over 50 were using the pill (Table 8). It must be remembered that these studies were not undertaken for the purpose of determining contraceptive prevalence. Nevertheless, they do

Table 7. REVERSIBLE CONTRACEPTIVE METHODS USED BY U.S. WOMEN AGED 40-44 - 1982 AND 1984

Study Year	NSFG 1982	Market Survey 1982	California Medicaid 1984	
Age	40-44	40-44	40-44	45-55
N	7969	?	3412	1692
Pill	3.4	15.6	6.2	11.4
IUD	19.4	12.5	40.4	31.3
Diaphragm	12.9	9.4	12.6	9.5
Condom	34.8	34.4	38.2	43.8
Rhythm	12.3	6.3	2.6	4.0
Other	16.9	21.9	-	-
Total	100.0	100.0	100.0	100.0

NOTES: Market Survey: "Other" = 15.6 spermicides, 6.3 withdrawal. NSFG "other" is not specified.
 SOURCES: NSFG: NCHS Pratt WF et al. Understanding US fertility: findings from the National Survey of Family Growth, Cycle III. Population Bulletin, December 1984. Market Survey: Forrest JD, Henshaw S. What U.S. women think and do about contraception. Fam Plan Persp 1983; 15:157-166. CA Medicaid: Aved B. Patterns of contraceptive method of use by California family planning clinic clients, 1976-84. Am J Public Health 1985; 75:1210-1212.

indicate that this practice may be more common than expected, and further emphasize our unsatisfactory level of knowledge.

Another study of Medicaid patients has shown that when older women do take the Pill they are more likely than younger women to be taking higher-dose formulations (Van de Carr et al., 1983) (Table 9).

Appropriate Contraception for Women of More than 40 Years of Age

Many authors have written on this subject, but all have presented clinical judgments rather than research data. Many potential risks and benefits of the several methods have been postulated. Virtually all of the comments that follow are not based on data. It should be kept in mind that most women in this age group are experienced contraceptors and they are likely to continue with a method that has already worked satisfactorily for them.

Barrier Contraception. The usual advantages of condoms bear repeating here: there are no side effects

associated with their use, they are available over the counter and they protect against sexually transmitted diseases (STDs). Some of the disadvantages which younger women find with condoms may be lesser problems for older women; failure rates will be lower with a less fecund population; and the fact they are coitus-dependent is less of a problem in a stable relationship than it might be for less stable couples. A potential drawback for older couples is that condom use may exacerbate problems of impotence which may increase with age.

Declining fecundity also reduces contraceptive failures with the diaphragm, although vaginal laxity or cervical deformity resulting from childbirth may increase the rate of failure (Beard, 1979; Bowen-Simpkins, 1984), but there is no hard evidence for this hypothesis. One writer has even speculated that arthritis may make insertion difficult (Boston Women's Health Book Collective, 1984).

IUD. IUD-related problems are far less likely to occur in older women than in younger ones, and the IUD appears to be an excellent contraceptive method. The main disadvantage of intrauterine contraception is the increased risk of pelvic inflammatory disease (PID) and subsequent infertility. If we assume that older women have a lower risk of contracting STDs, then the danger of PID is also reduced. While the importance of PID should not be understated, subsequent infertility is of less consequence to a woman who has completed her childbearing. Another hypothesized but undocumented disadvantage of the IUD is the bleeding and cramping

Table 8. PERCENTAGE OF ALL WOMEN AGED 40-54 WHO CURRENTLY TAKE ORAL CONTRACEPTIVES - UNITED STATES

Age	HANES II 1976-80		Nurse Study 1976	
	%	N	%	N
40-44	4.4 (± 1.3)	282	6.4	1085
45-49	6.2 (± 2.2)	201	5.1	640
50-54	2.5 (± 1.8)	79	3.8	188

SOURCE: Russell-Briefel R et al., Prevalence and trend in oral contraceptive use in premenopausal females ages 12-54 years, United States, 1971-80, *Am J PublicHealth* 1985; 75:1173-1176. Lipick RJ et al., Oral contraceptives and breast cancer, *JAMA* 1986; 255:58-61.

7

that may be exacerbated if fibroids are present, or if there is perimenopausal menorrhagia. Some writers [including those of the popular book, "Our Bodies, Ourselves" (Andrews 1987)], tend to dismiss IUDs because of these problems. However, if patients are adequately screened and IUDs are provided only to women without a history of bleeding problems, then no difficulties are anticipated, although there are no data to support this speculation. There may be insertion difficulties in women who have had previous cervical surgery, such as cone biopsy or prolapse repair, both of which are more common among older women, (Beard, 1979) but this, too, is speculation.

Natural Family Planning. The onset of menstrual irregularities as women approach menopause makes the rhythm method difficult to use. Nevertheless, decreased coital frequency and fecundity may make this method more acceptable and more effective. Again, there are no data. It is unlikely that women will continue to use this method unless they have been successful with it before. Given the risk of maternal mortality and birth defects, it cannot be recommended for women without previous successful experience with the method who are unwilling to consider abortion as a backup measure.

Oral Contraception. The appropriateness of oral contraception for older women is undergoing some reevaluation but remains controversial. Several writers have recently suggested that, with careful selection of patients (nonsmoker, not hypertensive, not hyperlipidemic, not diabetic and not

Table 9. PERCENTAGE OF WOMEN USING HIGHEST DOSE (60-150 µg ESTROGEN) ORAL CONTRACEPTIVES, BY AGE (81,968 MEDICAID PATIENTS) - MICHIGAN AND MINNESOTA, 1980

	Michigan	Minnesota
40-44	26	14
45-49	25	39
All ages	16	14
Percent of all users who are aged 40+	1.1	1.4

SOURCE: Van de Carr SW et al. Relationships of oral contraceptive estrogen dose to age. *Am J Epidemiol* 1983; 117: 153-159.

grossly obese), the Pill can be a satisfactory method of birth control (Andrews, 1987; Utian, 1987). Mishell (in press) has suggested that reexamination of data from the Walnut Creek Study suggests that the relative risk of various cardiovascular events associated with use of oral contraceptives is minimal if women with no other risk factors are considered. This suggestion is reassuring since the absolute risk is also low when no other risk factors are present.

A clinical trial in Israel evaluated triphasic oral contraceptives among women presenting with symptoms of menopause but who still required protection against unwanted pregnancy (Shargil, 1985). The control group was matched by age, health, presenting complaint, laboratory data and clinic criteria. The control group was treated for specific symptoms. Table 10 summarizes the results of the trial.

Measurements were made at the start of the trial and every 3 or 6 months thereafter for three years. Sixty percent

Table 10. SUMMARY OF DIFFERENCES BETWEEN 100 PERIMENOPAUSAL WOMEN TREATED FOR SYMPTOMS OF MENOPAUSE AND 100 AGE-MATCHED, UNTREATED WOMEN WITH THE SAME SYMPTOMS

	Treatment Group	Control Group
1. Menopausal index	No symptoms	Symptoms continued
2. Hot flashes & sweating	90% reduction	40% reduction
3. Psychofunctional disorders	No additional treatment necessary	Symptom-specific treatment required
4. Liver function tests	Normal	Normal
5. Blood glucose	No adverse influence on 17 diabetics	Group included 19 diabetics
6. Blood pressure	No change	27% increased
7. Coagulation factors	No significant fluctuations in Factors I, II, VII, X, antithrombin 3	
8. Bone mass	No bone loss	2% bone loss p.a.
9. Serum & urinary levels of Ca and phosphorus	No increased excretion	Increased blood and urine levels of Ca P
10. Plasma lipids	Decrease in cholesterol from 260 ± 15 to 230 ± 9	Increase in total cholesterol from 260 ± 10 to 300 ± 15

SOURCE: Shargil AA. Hormone replacement therapy in peri-menopausal women with a triphasic contraceptive compound: a three-year prospective study. Int J Fertil 1985, 30(1):15-28.

of women in the treatment group reported absence of menopausal symptoms within 3 months of starting treatment; all reported absence of symptoms within 6 months. Some women in the control group reported spontaneous improvement, others required treatment (e.g., tranquilizers, propranolol). The author concluded by recommending triphasics throughout menopause until contraception is no longer needed.

DISCUSSION

There is clearly a need for reassessment of appropriate methods of contraception for older women, and especially of oral contraceptives. The proscription of oral contraceptives for older women is based on old data, and generally on rather small numbers of older women. Today, not only are oral contraceptives substantially different from what they used to be when the guidelines were formulated, but women are too. The incidence of heart disease has declined as a result of improved diet and increased exercise. Several studies of newer pills have demonstrated their minimal impact on hypertension (Cairns et al., 1985; Wilson et al., 1984), while others have found no impact even among women with a history of elevated blood pressure (Tsai et al., 1985). One of these studies (Cairns et al., 1985) found that the increase in blood pressure was less in women over 40 than in younger women (1-2 points in both diastolic and systolic), but this difference was probably due to selection bias. The impact on lipids is complex; different estrogens and progestins affect different lipid fractions (Burkman et al., 1988). The clinical implications of these subtle changes are not clear. Furthermore, it is not entirely clear why estrogens in hormone-replacement therapy are considered beneficial with respect to heart disease while the estrogens in oral contraceptives are not, nor why progestin-only oral contraceptives are sometimes considered safer for older women while the progestin in hormone-replacement therapy is thought by some to negate the cardiovascular benefits of estrogen. This apparent paradox is not entirely explained by the difference in the hormones used in oral contraceptives as compared to those used in hormone-replacement therapy.

None of the reported studies of use of oral contraceptives and blood lipids include women over 40. Few of the studies of blood pressure include older women. At least one large-scale clinical trial is needed: it has to be large

because events of interest are rare. A replication of Shargill's Israeli study is also desirable. Physicians should begin to consider oral contraception for low-risk, carefully monitored patients.

Women over 40 have a limited choice of effective contraception. Customary clinical practice denies them oral contraception, the marketplace denies them intrauterine contraception. Their remaining options are permanent contraception (sterilization) and the less effective methods (chemical and mechanical barriers). The result is high rates of non-use, and high rates of abortion.

REFERENCES

- Andrews W (1987). Age 35 years or older. Planned Parenthood Federation of America, Inc. Consultation on Oral Contraceptives. Las Vegas NV, 25 April. Unpublished, draft minutes.
- Aved B (1985). Patterns of contraceptive method of use by California family planning clinic clients, 1976-84. *Am J Public Health* 75:1210-1212.
- Beard RJ (1979). Diseases affecting contraceptive practice in middle age. *J Biosoc Sci Suppl* 6:143-156.
- Boston Women's Health Book Collective. *The New Our Bodies, Ourselves*. 1984, New York, Simon & Schuster.
- Bowen-Simpkins P (1984). Contraception for the older woman. *Br J Obstet Gynaec* 91:513-515.
- Burkman RT, Robinson C, Kruszon-Moran D, Kimball AW, Kwitarcovich P, Burford RG (1988). Lipid and lipoprotein changes associated with oral contraceptive use: a randomized clinical trial. *Obstet Gynecol* 71:33-38.
- Cairns V, Keil U, Doering A, Koenig W, Stieber J, Kleinbaum DG (1985). Oral contraceptive use and blood pressure in a German metropolitan population. *Int J Epidemiol* 14(3):389-395.
- Centers for Disease Control. Abortion surveillance 1982-83. *MMWR* 1987; 36(1SS):11SS-42SS.
- Forrest JD, Henshaw S (1983). What U.S. women think and do about contraception. *Fam Plan Persp* 15:157-166.
- Lipick RJ et al (1986). Oral contraceptives and breast cancer. *JAMA* 255:58-61.
- Mishell DR. Oral contraceptive use in women of older reproductive age. *Am J Obstet Gynecol* (in press).

- National Center for Health Statistics. Hysterectomies in the United States 1965-84. Data from the National Health Survey Series 13, No. 92. DHHS Publication No. (PHS)88-1753. Hyattsville MD.
- National Center for Health Statistics. Statistical Resource Branch. Personal Communication.
- Pratt WF et al. (1984). Understanding U.S. Fertility: findings from the National Survey of Family Growth, Cycle III. Population Bulletin, December.
- Russell-Briefel R et al. (1985). Prevalence and trend in oral contraceptive use in premenopausal females ages 12-54 years, United States, 1971-80. Am J Public Health 75:1173-1176.
- Shargill AA (1985). Hormone replacement therapy in perimenopausal women with a triphasic contraceptive compound: a three-year prospective study. Int J Fertil 30(1):15-28.
- Tsai CC, Williamson HO, Kirkland BH, Braun JO, Lam CF (1985). Low-dose oral contraception and blood pressure in women with a past history of elevated blood pressure. Am J Obstet Gynecol 151:28-32.
- Utian WH (1987). OCs for women over 40. Contemporary Ob/Gyn 30(6):67-74.
- Van de Carr SW et al (1983). Relationships of oral contraceptive estrogen dose to age. Am J Epidemiol 117:153-159.
- Vital Statistics of the United States (1980). Vol.I Natality. US Dept. of HHS, PHS, NCHS.
- Wilson ESB, Cruikshank J, McMaster M, Weir RJ (1984). A prospective controlled study of the effect on blood pressure of contraceptive preparations containing different types and dosages of progestogen. Br J Obstet Gynaec 91:1254-1260.