ENUMERATION OF THE "CRAVINGS" OF SOME PREGNANT WOMEN

BY

J. M. HARRIES AND T. F. HUGHES

*Scientific Adviser's Division (Food), Ministry of Agriculture,
Fisheries, and Food, London*

The strong desires experienced by pregnant women for various items of food, and even for inedible substances, seem to be a matter of common knowledge, but there is considerable disagreement about the reasons for, and the significance of, these "cravings." It is sometimes stated—for example, by Drummond and Wilbraham (1939)—that a pregnant woman's increased requirement of vitamin C and calcium leads her to crave foods which are rich in these substances; but it is also thought that her desires may be purely psychological in origin. Thus Yudkin (1956) suggests that "the pregnant woman may well demand not oranges but peaches out of season." A search of the literature has revealed only meagre factual information on the subject, and the object of this paper is to describe a collection of such "cravings"—an inadequate record from many points of view, but one which may serve as a stimulus to a more systematic inquiry.

The Records

Early in 1956, during one of a series of broadcasts under the title "Is There a Doctor in the House?" given in the Light Programme of the B.B.C., pregnancy was discussed briefly, and the phenomenon of strong desires for, and aversions from, certain items of food was mentioned. Listeners were invited to write to the B.B.C. on this subject, and the letters received in response to this request have been made available through the kindness of Miss I. D. Benzie, who produced the series.

The nature of the records is such that they do not provide a statistically adequate sample. In the first place, it seems likely to be biased on the side of the unusual, since correspondents to the B.B.C. may tend to write only when there is something remarkable to write about. Secondly, the sample cannot be assumed to be random or representative, since it might be biased both geographically and by the broadcast which gave rise to the letters. Conclusions may therefore be drawn only with caution, and cannot be applied to pregnant women in general; but where a number of women, however unrepresentative they may be, agree in "craving" the same substances to the exclusion of others, some explanation is necessary, though it may of course be psychological rather than physiological.

Results

There were 514 letters, of which 509, reporting 820 pregnancies, have been used in the present report. The remaining five described likes and dislikes for colours, types of music, etc. Most of the letters came from the Home Counties, 102 of the cases reported being in London. There were 36 from Yorkshire, 36 from Lancashire, 23 from Scotland, 20 from Wales, and 1 from Northern Ireland. Most of the reported cases were in 1955 and 1956, but there were many recollected from earlier years, the earliest being in 1894.

The 991 cases of "cravings" have been classified in Table I, which shows the frequency with which various groups of substances were desired. The grouping of substances was decided on as convenient, and it was also considered advisable to separate the records of demands for vegetables and cereal products, according to whether they

TABLE I.—*Reported Frequency of Cravings Among 991 Cases*

Fruit (see Table II)	261	Alcoholic drinks	17
Vegetables (raw 72, cooked 33)	105	Ice-cream and iced lollies	17
Confectionery	79	Spices and condiments (eaten neat)	17
Pickled foods	66	Milk and milk products	15
Cereal products (prepared 17, dry raw 48)	65	Sugar and preserves	12
Fish (including shellfish)	49	Eggs	10
Nuts	35	Other food products*	17
Mineral waters	20	Non-food substances (see Table III)	187
Meat and meat products	19		

*Coffee grounds (5); fat (unspecified) (3); tea leaves (2); aspirin, coconut milk, custard powder, dog biscuits, "health salts," jelly, and "stomach powder" (one each).

were eaten raw or cooked, because of the high frequency of the former. By cooked (prepared) cereal products is meant bread, biscuits, cakes, and breakfast foods, whereas a considerable number of the demands were specifically for such foods as macaroni, Indian corn, rice, oatmeal, and maize, eaten dry and raw.

In view of the large number of cases of cravings for fruit, these are shown in greater detail in Table II. It is noteworthy that most of those craving apples wanted green sour ones.

TABLE II.—*Details of 261 Cravings for Fruit*

Apples	76	Tomatoes	31	Pineapples	4
Oranges	68	Soft fruit	25	Bananas	3
Other citrus fruits	24	Stone fruit	16	Dates	3
		Pears	5	Other fruit*	6

*Melon (2), plantains, pomegranates, raisins, and rhubarb.

The frequency of desires for substances normally considered inedible is shown in Table III, and the 193 reports of substances normally liked, but disliked during pregnancy, are detailed in Table IV.

TABLE III.—*Details of 187 Cravings for Substances Other Than Food*

Coal	35	Petrol	10	Soil	7
Soap	17	Polish (metal)	10	Chalk	4
Disinfectant	15	Tar	10	Charcoal	4
Toothpaste	14	Paraffin	9	Cinders	4
Mothballs	10	Wood	8	Others	30

TABLE IV.—*Details of 193 Reports of Substances Normally Liked, But Disliked During Pregnancy*

Tea	78	Bacon	7	Beer	4
Tobacco (smoking)	24	Chocolate	6	Fish	4
Coffee	22	Eggs	5	Oranges	4
Marmalade	8	Sweet foods	5	Others	26

There are also certain features common to a sufficient number of the letters to make them worthy of note, though in each case the writer volunteered the information, so that their number is no indication of incidence.

Many correspondents stated that, though they were able to joke about a "craving" after the baby was born, at the time it was overpowering. There are many statements of the specificity of the desire, and there are several descriptions of the temptation to steal in order to satisfy a particular appetite. Though the tone of many letters is amused as well as amusing, written after the event, there is general agreement about the seriousness of these "cravings" during pregnancy.

Also mentioned on numerous occasions is the sense of secrecy which surrounds the phenomenon. Many women state that they went to great lengths to keep their "cravings" secret even from their husbands. Several experienced a sense of shame.

There is no mention in any of the letters of a "craving" not being satisfied. Though there are many descriptions of how the required substance was obtained there are no reports of failure to obtain it. A few state that the satisfaction of their particular demands was capable of unbalancing the family budget.

The stage of pregnancy at which the "craving" was experienced is mentioned in 135 of the letters. Only six state that it was experienced for the full term; 59 report that it was experienced from the first to the fourth month of pregnancy; and generally it seems that the desire is usually felt fairly early.

"Cravings" for two or more substances during the same pregnancy are mentioned in 76 of the reported instances. These have been examined separately for the food items but exhibit no pattern, either of similar or of contrasted substances being craved at the same time. Apart from following the general pattern of Table I they are fairly randomly distributed.

There are 57 cases of the same substance being craved in each of several pregnancies by the same person. Of these, 15 are for fruit and 11 for inedible substances, the others being scattered amongst various foods in too random a fashion to exhibit a pattern or to be reported in detail.

Discussion

The word "craving" commonly applied to this phenomenon may be an unfortunate one. It indicates desire of the strongest possible intensity, and it can be argued that ordinary preferences or likings for various foodstuffs have been called "cravings" in retrospect, the phenomenon being dismissed as due largely to this effect. On the evidence of the present letters there can, however, be little doubt that these desires are real, though it is possible that on occasion they are complicated by the intrusion of ordinary likes and dislikes.

Dietary surveys of groups of pregnant women—for example, People's League of Health (1942) and Burke *et al.* (1943)—make no mention of such large quantities of certain items of food as must have been consumed if these letters are any guide. Whether this is because of infrequent occurrence it is hard to say, but the impression left by the letters is that the women themselves surround their desires with such an aura of secrecy that they may well be more common than the evidence from ordinary dietary surveys would lead one to expect. Also relevant in this connexion, though by no means conclusive, is the total number of letters received. It is, of course, impossible to estimate the proportion of pregnant women who experience these "cravings," but we understand from the B.B.C. that the response rate was striking in view of the casual nature of the request for information, made at a time when the Light Programme is faced with the massive competition of Children's Hour.

In assessing the results of the present inquiry the large number of "cravings" for inedible substances must be largely discounted because of the possibility of bias in favour of the unusual, though many of the items shown in Table III lend support to psychopathic explanations. The preponderance of coal may be due to its having been mentioned by one of the speakers in the broadcast that gave rise to the letters. It was also apparent in many cases that it was the smell of such substances as disinfectant and petrol that appealed during pregnancy; but so many letters were vague on this point that separate results for eating and smelling have not been quoted.

So far as food items are concerned there is no doubt about the preponderance of fruit. Further, some 70% of the recorded cases are for varieties of fruit available virtually all the year round—apples, oranges, tomatoes, and lemons. Availability seems to be a more reasonable explanation of the order of popularity shown in Table II than vitamin C content, though with the exception of apples the more popular fruits are reasonably good sources of this vitamin. Such substances as wall-plaster and chalk are also said to be common objects of "cravings" during pregnancy because of increased requirements of calcium, but the number of such cases recorded in this series is very small.

A more probable explanation is that the expectant mother takes light refreshing snacks of those substances which "go down well" in order to counter the sickness and nausea which often accompany pregnancy, and fruit may be an ideal substance from this point of view. Another is that the snacks may be occasioned by the need for more calories during pregnancy—a general hunger which would hardly justify the use of the term "craving." But why in this case are the "cravings" so specific?

A theory advanced by one correspondent who had gathered considerable information on her own account was that the desire is for something to crunch. The texture of the food, she states, is more important than the flavour. This theory, which was also mentioned in the original broadcast, certainly finds some support in the present data in the high frequency of pickled foods, confectionery, nuts, such unusual foods as dry raw cereals, and the preference for uncooked vegetables.

Clearly, the data are inadequate to prove or disprove any of these hypotheses. They indicate, however, that these "cravings" are real, that they are kept secret so far as is possible, and that there seems to be a preponderance of "cravings" for fruit. Few solutions have been obtained to the many problems which arise in this connexion, but these results may help to pose them in such a way that they could be unravelled by a more systematic inquiry.

Summary

A series of 991 cases of "cravings," and 193 cases of aversions during pregnancy is reported from a collection of letters received by the B.B.C.

A preponderance of the "cravings" for food items was for available fruit, with a relatively high incidence of desires for raw vegetables, confectionery, pickles, and raw cereals. In addition, 187 cases of desires for inedible substances are detailed, the most popular item being coal.

It was clear from the letters that genuine cases of serious "cravings" did occur, and that there was a compulsion on the part of the women themselves to keep their desires secret, which may explain the lack of evidence in published reports of dietary surveys among pregnant women.

ADDENDUM.—Since these findings were reported to the Nutrition Society in May, 1957, our attention has been drawn to a paper by L. B. Posner, C. M. McCottry, and A. C. Posner (*Obstet. and Gynec.*, 1957, 9, 270) which describes a more systematic inquiry carried out at the Harlem Hospital, New York, where 600 patients in the third trimester of pregnancy were asked, "Is there some special food you crave during this pregnancy?" 394 answered "Yes," 196 answered "No," and 10 admitted "pica." The most common of the 30 items craved were Argo starch (106 cases), sweets (68 cases), and fruit (47 cases). Also noticed were a desire for secrecy and a predominance of "foods commonly found in the average home kitchen." The paper also gives further references.

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WORLD CONGRESS OF GASTRO-ENTEROLOGY

[FROM A SPECIAL CORRESPONDENT]

A World Congress of Gastroenterology was held in Washington during the last week of May. It represented the third international congress of gastroenterology, the first having been held in Brussels in 1935, the second in Paris in 1937, while the third was to have been held in London in 1940 but was prevented by other international events. This first World Congress amply demonstrated the growth of gastroenterology as a special field in medicine, for it was attended by more than 1,100 delegates from fifty different countries. The American Gastroenterological Association was the official host organization.