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**HEALTH PROBLEMS OF WOMEN  
IN INDUSTRY**

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## STANDARDS FOR THE EMPLOYMENT OF WOMEN

An adequate wage, based on occupation and not on sex and covering the cost of living of dependents.

Time for recreation, self-development, leisure, by a workday of not more than 8 hours, including rest periods.

Not less than 1½ days off in the week.

No night work.

No industrial home work.

A clean, well-aired, well-lighted workroom, with adequate provision against excessive heat and cold.

A chair for each woman, built on posture lines and adjusted to both worker and job; elimination of constant standing and constant sitting.

Guarded machinery and other safety precautions.

Mechanical devices for the lifting of heavy weights and other operations abnormally fatiguing.

Protection against industrial poisons, dust, and fumes.

First-aid equipment.

No prohibition of women's employment, except in industries definitely proved by scientific investigation to be more injurious to women than to men.

Pure and accessible drinking water, with individual cups or sanitary fountains.

Convenient washing facilities, with hot and cold water, soap, and individual towels.

Standard toilet facilities, in the ratio of 1 installation for every 15 women.

Cloak rooms, rest rooms, lunch rooms, and the allowance of sufficient time for lunch.

A personnel department charged with responsibility for the selection, assignment, transfer, or withdrawal of workers and for the establishment of proper working conditions.

A woman employment executive, and women in supervisory positions in the departments employing women.

Employees to share in the control of the conditions of employment by means of chosen representatives, some of them women.

Cooperation with Federal and State agencies dealing with labor and employment conditions.

The opportunity for women workers to choose the occupations for which they are best adapted as a means of insuring success in their work.

## HEALTH PROBLEMS OF WOMEN IN INDUSTRY<sup>1</sup>

Practically speaking, the entire program for the regulation of hours, wages, and conditions of work for women in industry is based upon the power of the State to protect health. It is the recognition by the courts of the special significance to general welfare of the health of women, combined with the more serious effect on women than on men of long hours, low wages, and unhealthful working conditions, that has resulted in the upholding of laws regulating such conditions. With the legal sanction for regulation once given, legislation of one sort or another affecting conditions under which women may be employed has been put on the statute books of every State in the Union. These laws vary in the different States, of course, ranging all the way from a careful regulation of hours and wages and a very definite supervision and control of working conditions in States such as Oregon, California, Wisconsin, and Massachusetts, to the simple requirement of seats in Georgia and Iowa.

In spite of the fact that the theory justifying the power of the State to make these regulations has been so generally accepted, the regulations enforced have varied to such an extent that no two States have established the same standards. For this reason one of the earliest tasks undertaken by the Women's Bureau when it was organized was to formulate definite standards for the employment of women in industry that could serve as a guide to the many different groups working for the better protection of wage-earning women.

The standards thus formulated cover conditions in only a general way, but they are the fundamentals that apply to all industries and all occupations. Qualifications and elaborations must be instituted at times to meet special cases and peculiar conditions, but the fundamental standards necessary to insure health and efficiency remain unaltered. Briefly stated, the standards for the employment of women that constitute the creed of the Women's Bureau are these:

The 8-hour day; Saturday half holiday; one day's rest in seven.

No night work.

A living wage based on occupation and not on sex, the minimum to cover the cost of living for dependents.

Good working conditions, including the following: Adequate washing facilities; adequate and sanitary toilet accommodations; dressing rooms, rest rooms, and lunch rooms; clean work rooms with carefully adjusted lighting, ventilation,

<sup>1</sup> This article was prepared under the direction of Mary Anderson, Director of the Women's Bureau, by Mary N. Winslow.

and heating; plentiful and sanitary drinking facilities; chairs, machines, and work tables adjusted so that the workers can either stand or sit at their work; carefully guarded machinery; elimination of the necessity for constant standing or other posture causing physical strain, the repeated lifting of heavy weights or other abnormally fatiguing motions, and the operation of mechanical devices requiring undue strength; elimination of exposure to excessive heat or cold or to dust, fumes, or other poisons without adequate safeguards; provision of first-aid equipment.

Prohibition of employment of women in occupations involving the use of poisons proved to be more injurious to women than to men. No prohibition except where such proof is established.

Women to have opportunity to choose own occupations.

Prohibition of industrial home work.

Systems of employment management; women supervisors of women.

Cooperation of workers in establishing standards.

Cooperation with Federal and State agencies along same lines.

In this group of standards are found many recommendations that apply fully as strongly to men as to women. For example, there is no indication that bad ventilation in a workshop is a more serious menace to women's health than to that of men, nor that it has any distinctive effect on women. Insufficient ventilation will lower the efficiency and the ability to resist disease of both men and women, and it should be recognized as a problem for all employees in all industries under all conditions.

The prevention of glare by properly placing and shading lights is another working condition that is not particularly a woman's problem but instead is a problem for all in industry.

In fact, very few, if any, of these recommended standards can be said to apply only to women, and the Women's Bureau does not advocate that they should be considered as applying only to women. The important thing about them is that they apply *especially* to women. For all conditions in industry bear particularly heavily on women, and therefore good working conditions, hours, and wages have a more important relation to their health. Long hours in the factory are not so serious for the man, who is through work when he leaves his job at night, as they are for the woman, who in many cases has several hours' housework to do after she gets home. The married woman in industry, who is forced to work because of economic necessity brought about by her husband's death, incapacity, or inability to earn an adequate wage for himself and his family, usually must take whatever job she can get, without too much question of wages or hours. But she is the one worker in all the group who most needs the protection of the law, for the care of her children and household will take many hours and much strength, and her health will suffer if hours of work are not limited.

Perhaps the two most important health measures that industry can institute for all workers, but particularly for women who are

not organized so that they can make their own demands and who are massed in the low-paid industries, are the 8-hour day and the payment of a living wage. It has already been pointed out how the long hours are a special hardship for women, but the low wage paid to the average woman worker is an even greater menace to her health.

State surveys by the Women's Bureau in the 9 years 1920 to 1928 yielded wage figures for about 150,000 white women in 15 States.<sup>2</sup> The medians of the week's earnings—half the women receiving more and half receiving less—may be classified as follows: Under \$9, Alabama and Mississippi; \$9 and under \$11, Kentucky and South Carolina; \$11 and under \$13, Arkansas, Delaware, Georgia, Kansas, Missouri, and Tennessee; \$13 and under \$15, New Jersey, Ohio, and Oklahoma; \$15 and under \$17, Florida and Rhode Island. Conditions such as these exist throughout the industries where women are employed, and the standard of living that a wage of around \$12 a week must require certainly should be recognized as one that will sap the health and vitality of a large group of workers.

This is particularly true when the woman worker is recognized as a provider not only for herself but for dependents. The responsibilities of the wage-earning woman and her contribution to the support of others—mother, father, sisters, brothers, husband, children—have not yet received full recognition from industry or the general public. Yet every investigation that touches wage-earning women piles up the evidence that women are working more often than not to eke out a husband's or father's insufficient wage and make it adequate for the family needs or to earn the wage that formerly had been earned by a husband or father who has died or been incapacitated.

With this great necessity upon them for an adequate wage, women must struggle constantly against the old "pin-money" fallacy. A man feels that wife and children or other dependents are something of a burden, but he is recognized as the breadwinner, or the potential breadwinner, for a family group, his wages are based accordingly, and his burden is lightened. A woman may have and often has, an equally heavy burden of dependents, but this burden is not made lighter for her by the popular superstition that she is working to make a little extra money and will soon get married and be on "easy street" for the rest of her life. The Women's Bureau has figures from a number of surveys showing the extent of the responsibility for the support of others among wage-earning women. Even before this material was assembled, however, there was ample evidence that this responsibility was much greater

<sup>2</sup> In 1 midwestern and 3 northern States a very few negroes were included.

and more universal than was generally supposed. The figures may be summarized thus:

Of 8 studies by various agencies, covering about 17,000 women, 13.6 per cent of the women reported that they had total dependents. In 7 other studies, covering more than 13,000 women, 21.7 per cent of the women were contributing to the support of dependents. And of 19 other studies, covering about 55,000 women, 55.1 per cent contributed to their families all their earnings and 37.6 per cent contributed part of their earnings.

Aside from hours and wages and general working conditions there are certain conditions in industry that need to be especially studied for their effects on the health of women, so that proper regulations may be instituted for their control.

The very widespread use of the piecework system in industries where women are employed is a condition that is challenging much attention. Nearly every manufacturer will say that he employs women most successfully on the repetitive processes in his plant, the processes that require an infinite number of rapid repetitions of the same movement, such as placing small bits of metal under a press and releasing the press so that the metal is cut or hammered into shape; feeding machines that place the caps on tin cans, which means putting one tin can after another in the same place as fast as the hands can move; wrapping and packing cigarettes; or running an electrically driven sewing machine that makes two thousand or more stitches a minute. Such occupations, which are paid for by the number of finished articles turned out, naturally are carried on at full speed, in some cases under conditions of machinery or kind of work that require very careful attention. The pathological effect on a woman's nerves and health of this continued tension and activity has never been definitely determined. Any casual observer of women working at these processes can tell, however, that they must have pathological significance. Indeed, when girl after girl in a group of cigarette packers is found to be afflicted with a constant jerking or rhythmic motion of her body that follows the motions she makes while at work, resulting in extreme fatigue and nervousness, it would seem that the effect of the speeding up of pieceworkers in some occupations is so obvious as to need but little research to stamp it as a serious menace. There is great need for careful and full examination of the effects of this system in order that it may be properly controlled.

Posture at work is another subject that has received insufficient attention, although the need of some regulation has been more generally recognized. It is very common to find State laws requiring that seats be provided for women who are employed in industry, but as yet there has been no definite standard established of

the kind of seat that should be required. An old box with a plank nailed on it for a back, a high stool with no back and no foot rest, a barrel, a wooden kitchen chair, are seats commonly found where women are employed. Many requests are made to the Women's Bureau by managers of factories for descriptions of the best type of factory chair for women, but so far no investigation of the subject has been complete enough to warrant a definite recommendation. The fundamentals of proper seating, the need of a back, foot rest, rounded front to the seat, and individual adjustment, have been established, but there is still much that should be known from the medical end of the question before a complete seating "code" can be formulated.

Very little has been gathered of the effect on women's health of continued standing or sitting. Standing, of course, has received the greater attention as its effects are more quickly noticed, but that sitting for 8, 9, or 10 hours a day can in itself be harmful is a new idea to many employers as well as to the workers themselves. It is quite possible in the majority of cases to regulate the height of work table and chair so that a worker may either sit or stand conveniently at work, but before such a treatment of the problems of posture can become general the need for it must be very strikingly illustrated by a definite account of the effect on a woman's health of too much standing or sitting.

An attempt has been made in several States to fix a standard weight that a woman may lift without harm to herself, but as this has been done with apparently little medical knowledge or study of the subject, the legislation is haphazard and may result in unnecessarily restricting the employment of women.

In Ohio and Pennsylvania a woman may not lift a core and core box the combined weight of which is more than 15 pounds. In New York women in the core rooms of foundries are prohibited from lifting more than 25 pounds. There is a very great difference between 15 and 25 pounds, and it is obvious that if 15 pounds is all that a woman can safely lift in Ohio and Pennsylvania, the women of New York are being permitted to endanger their health; while if 25 pounds is safe for a woman in New York to lift, the women of Pennsylvania and Ohio are being unnecessarily restricted in their work.

There are so many ways in which a weight may be lifted—up or down, continuously or occasionally, by pushing or pulling—and the way of doing it, whether with the arms or back, with a sudden effort that may wrench or strain, or with a careful coordination of all the muscles that can be brought into play, may vary so with each individual that the standard weight that can be lifted safely will

be very difficult to arrive at. If any such restriction is to be imposed, it should be done only after a very careful examination of the effects of lifting and a very minute description of the surrounding conditions that would render the lifting of such a weight a menace to health. In this case, again, adequate testimony on the subject is totally lacking.

In addition to the more or less mechanical conditions, such as seating and lifting, that may affect the health of women, there is another and very broad field that research has hardly touched. This is the peculiar effect on women of certain chemicals used and fumes and gases produced in industrial processes. It has been established beyond a shadow of doubt that lead poisoning incident to exposure to lead in the form of dust or fumes has a much more serious effect on women than on men. It is known that lead poisoning in women may result in sterility or in children being born dead, or in more babies dying during the first year of their lives. Corresponding results have not been found in the case of men who have suffered from lead poisoning, and, because of this knowledge, in some States women are legitimately barred from employment in occupations where the danger of contracting lead poisoning is great.

It was only a careful study of a large number of cases of lead poisoning among men and women over a considerable period that produced the evidence establishing the fact of the heightened susceptibility of women and its definite effects upon them. Women are working in many other occupations in which they are exposed to poisonous fumes and dust, but little evidence is forthcoming to show to what extent these elements are particularly dangerous to them, and without such evidence there can be no just and wise regulation of their employment. Furthermore changes in industrial processes are bringing new hazards in their wake by the increased use of poisonous compounds.

The present day is hearing a great cry that women should be given equal opportunity with men for all occupations in all industries, but even the most ardent of the exponents of this creed will pause before a presentation of the case for better protection of working women based on a scientific study of the effect on their health, and that of future generations, of exploitation, long hours, low wages, and improper working conditions. The women of to-day, as well as their employers, "come from Missouri." No longer will sentimental or idealistic appeal be sufficient for either of them. They want facts, and if the facts are presented strongly and clearly they will get action. But the facts must be collected first, and the field is open and crying for attention from scientists and health experts as well as from industrial engineers.

