



## Health Status of Female Workers in Dairy Processing Production

1. Kh. O. Kasimov

Received 2<sup>nd</sup> Aug 2023,  
Accepted 19<sup>th</sup> Sep 2023,  
Online 28<sup>th</sup> Oct 2023

<sup>1</sup> Bukhara State Medical Institute

**Abstract:** In modern production of the milk processing industry, automatic and semi-automatic lines and installations are widely represented, which determines the nature of the work performed (automated or mechanized).

However, the qualitative and quantitative indicators of the lines and equipment used preserve the technological processes associated with the performance of mechanized and non-mechanized work with a high proportion of muscle loads. A comprehensive hygienic study of production allowed us to obtain a complete description of the worker's condition and the factors affecting him. The hypothesis of a cause-and-effect relationship between exposure to harmful production factors and the risk of disease is confirmed by the results of a study of the health status of the working population of dairy processing enterprises.

An important aspect of the general problem of maintaining health among workers of dairy processing enterprises is maintaining the health of women, who make up 65-85% of the total number of workers.

**Key words:** dairy processing production, female workers, reproductive health, working environment factors, morbidity, health risk prevention.

For this purpose, a study was conducted of the influence of production activities on the female body of workers at dairy processing enterprises.

**Material and methods.** The studies were carried out at milk processing enterprises in the Saratov region, where studies of production environmental factors were carried out. A medical examination with an in-depth gynecological examination was carried out on 112 workers of a milk processing enterprise (77 in the main group: machine operators, cottage cheese producers and others and 35 in the comparison group: administrative and economic service workers).

In terms of living conditions, medical care, and length of residence in the area, both groups were identical. Based on comprehensive studies of working conditions, a complete description of the state

of existing production factors at milk processing enterprises has been obtained. All subjects filled out a questionnaire about their specific functions, previous and existing gynecological diseases.

**Results.** The identified unfavorable production factors are industrial noise exceeding the permissible level by 4-20 dBA, micro and climatic discomfort, insufficient lighting, as well as intense and physical labor. The most expressive indicators of the severity of work are uncomfortable working posture, lifting and moving heavy objects manually, and bending the body [1.2].

The noted unfavorable hygienic factors can cause the development of diseases among workers in milk processing production. Medical examinations showed that the leading pathologies among female workers at the dairy processing plant are diseases of the respiratory and female genital organs, nervous and cardiovascular systems of the musculoskeletal system. There is a high incidence of diseases of the cardiac vascular system, both in general and individual pathological syndromes (hypertensive coronary heart disease). There are diseases of the respiratory system, as well as the peripheral nervous system (radiculitis, radiculoneuritis, and others). The frequency of pathology of the cardiac vascular system increases mainly due to vegetative-vascular dystonia of the hypertensive type, hypertension of 1-2 degrees.

Noteworthy is the increase in cases of chronic gastritis, mainly with reduced acid-forming function.

Gynecological pathology was detected in 54.5% of the examined women in the main group and in 28.4%.

In the comparison group. The structure was dominated by chronic inflammatory diseases of the uterine appendages and benign neoplasms.

To characterize reproductive function, the following indicators were taken into account: the course of pregnancy and its premature termination, the number of term and premature births, the number of abortions.

The survey revealed that 92.2% of workers in primary production and 88.5% of women in other professions were married. Those who were unmarried on the day of the survey were 7.8% in the main group and 11.5% in the comparison group.

The number of pregnancies per 71 workers was 228, and 139 per 34 women in the comparison group.

A significant portion of pregnancies in women of both groups ended in term births (38.2+3.2 and 40.3+4.1, respectively) and induced abortions (46.5+3.3 and 56.9+4.2) (Table 2).

It should be noted that among workers in the main group of the dairy processing enterprise, pregnancy was significantly more often interrupted by spontaneous miscarriages (11.8 + 2.8 and 1.4 + 0.9).

It is now known that the vagina has its own secretory immunity (3). This function is performed by cells of stratified squamous epithelium (lymphocytes of the submucosal layer).

Considering that women workers in the processing industry were diagnosed with chronic inflammatory diseases of the uterine appendages, a study was carried out on the secretory immunity of the vagina in women workers at a dairy processing plant, representing the main group and the comparison group (Table 3).

Studies have shown that female milk processing plant workers have a decrease in SigA, a statistically significant increase in IgA ( $p < 0.05$ ) and a statistically significant decrease in the SigA/IgA ratio below 1 ( $p < 0.001$ ), which indicates suppression of vaginal immunity. The described changes are one of the possible mechanisms of disruption of the barrier functions of the vagina and create conditions for the development of infection.

Thus, as a result of the conducted research, it was established that milk processing production is characterized by the presence of unfavorable hygienic factors (noise, microclimate, lighting, severity and intensity of work) that can affect the health of female workers with the predominant development of diseases of the respiratory system, musculoskeletal system and female genitalia organs.

**Table 1. Structure of gynecological morbidity among workers of a milk processing plant, %**

Diseases	Main group, n=77	Comparison group, n=35
Colpitis, endocervicitis	11,30	3,99
Inflammatory diseases of the uterine appendages	17,01	0,98
Benign neoplasms	5,31	2,97
Menstrual irregularities	0,92	0,11
Total	41,9	8,89

**Table 2. Pregnancy outcomes in workers of the compared groups**

Pregnancy outcomes	Main group, n=228	Comparison group, n=139
Urgent birth	38,2+3,2	40,3+4,1
Premature birth	3,5+1,2	1,4+0,9
Spontaneous miscarriages	11,8+2,18*	1,4+0,9
Medical abortions	46,5+3,3	56,9+4,1

\* p<0,001

To weaken the negative impact of these unfavorable factors on the body of female workers, it is necessary to implement a number of targeted therapeutic, preventive and organizational health measures aimed at increasing labor productivity while maintaining the health of workers.

### Conclusions.

1. The working conditions of women employed in milk processing production are characterized by the impact on the body of workers of a complex of harmful production factors (noise, microclimate, severity of work), which causes the occurrence of pathologies of the respiratory system, musculoskeletal system, female genital organs and other pathologies.
2. The complex impact of harmful production factors on the body of female workers can have a significant impact on the reproductive health of female workers, which is manifested, in particular, by an increased frequency of spontaneous miscarriages.
3. Measures to reduce occupational risks to the health of working women should include: measures to reduce exposure to harmful production factors and reduce the severity of work processes, early detection of gynecological diseases and the introduction of rehabilitation measures.

### REFERENCES

1. Izmerov N.F. Medical works-1991-No. 11.- p-1-9.
2. Kuraeva N.G., Spirin I.F. In the book. Current problems of occupational medicine and industrial ecology.-M. 2004. P.31.
3. Serov V.N. Modern problems of diagnosing women's reproductive health. - Rostov-on-Don. 2010.