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# Evaluation of Effectiveness of Combined Oral and Dental Therapy in Tobacco Growers

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## ABSTRACT

*The goal of this review is to analyze research that is aimed at evaluation of the effectiveness of combined dental therapy in tobacco cultivation specialists as compared to the control group.*
*Research on the oral cavity and tissues has demonstrated high effectiveness of the newly developed individual care tactics in the treatment group compared to standard therapy methods.*
*Therefore, it should be noted that direct addressing of the main pathogenic mechanisms of oral disease progression in the treatment group has resulted in a more pronounced effect throughout the given research data categories.*

**KEY WORDS** State of the oral mucous membrane, Hard dental tissue and parodontium, Taste analyzer, Adverse work environment

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## INTRODUCTION

Tobacco cultivation is a major branch in Uzbekistan Republic's agricultural sector. Along with smoking items, tobacco is widely used in pharmaceutics, chemistry, food industry, perfume manufacturing, sunflower oil production, and paper industry [1-4]. The most important elements of the national tobacco production and processing line are tobacco plantations, tobacco curing, fermenting facilities and tobacco factories.

A combination of adverse factors, which occur in tobacco cultivation and curing, plays a major role in the spreading of oral diseases among tobacco industry personnel.

The most common harmful factors that typically occur at the cultivation stage include adverse microclimatic conditions, physical and mental/psychological stress, as well as high ambient air pollution with tobacco dust and its components.

Tobacco growers show high occurrence of periodontal disorders, higher Caries/Filling/Extraction and dental abnormality indices resulting from harmful industrial factors. Addressing dental care directly to tobacco industry personnel can effectively reduce the occurrence of oral diseases in tobacco growers [5-12].

The goal of this study is to check how effective is combined treatment of oral and dental disorders in tobacco industry specialists as compared to the control group of examined subjects.

## MATERIAL AND RESEARCH METHODS

When the influence of the tobacco production process on the health of tobacco growers' mouth organs and tissues was fully evaluated, a group of 92 tobacco specialists has been divided into age- and employment-length-specific subgroups.

All control group subjects have the same length of employment and age, which makes it easier to compare the results of treatment and draw valid conclusions.

Group 1: The treatment group–comprises 46 subjects, who have undergone a combined therapy developed by us.

Group 2: The control group–comprises 46 subjects, who have undergone oral and dental care in keeping with the existing oral and dental care standard.

The obtained data has been subject to statistical treatment with the help of the applied Microsoft Excel software package. The statistical significance of parameters was determined through the Student t-test.

## RESULTS AND DISCUSSION

When planning preventive and treatment procedures against oral and dental disorders that affect tobacco growers, it is necessary to take into account the nature of pathologies that result from the influence on the oral cavity of adverse industrial factors. This helps determine

the line and specifics of mandatory health care and preventive measures.

Research on the oral cavity and its tissues has demonstrated high effectiveness of the newly developed health care procedures in the treatment group as compared to the standard therapy.

It should be noted that the positive effect has been visible in all organs and tissues of the mouth, which are vulnerable to the adverse influences of the tobacco industry. The use of the newly developed treatment pattern would result in a significantly (P<0.01) lower number of caries-affected teeth (Element C), higher number of fillings (Element F); higher quality of the filling process and better tooth brushing has contributed to a fair decrease (P<0.01) in the occurrence of dental abrasion, tooth discoloration and dental plaque (Table 1).

**Table 1: Morbidity and occurrence of caries and non-caries tooth damage across peer groups prior to and following treatment.**

| Indicators | Prior to treatment, group type | | | Following treatment, group type | | |
|---|---|---|---|---|---|---|
| | Treatment group, n=46 | Control group, n=46 | P | Treatment group, n=46 | Control group, n=46 | P |
| Element C | 3.56 ± 0.02 | 3.50 ± 0.14 | >0.05 | 1.92* ± 0.02 | 3.19* ± 0.14 | <0.01 |
| Element F | 2.31 ± 0.14 | 2.42 ± 0.13 | >0.05 | 3.81* ± 0.14 | 3.02* ± 0.13 | <0.01 |
| Element E | 3.44 ± 0.18 | 3.50 ± 0.18 | >0.05 | 3.71* ± 0.18 | 3.60* ± 0.18 | <0.01 |
| CFE index | 9.31 ± 0.35 | 9.42 ± 0.40 | >0.05 | 9.44* ± 0.35 | 9.81* ± 0.40 | <0.01 |
| Dental abrasion | 12.31 ± 0.35 | 12.28 ± 0.63 | >0.05 | 9.02* ± 0.32 | 10.04* ± 0.63 | <0.01 |
| Discoloration and plaque | 10.02 ± 0.25 | 10.11 ± 0.51 | >0.05 | 6.52* ± 0.25 | 8.03* ± 0.51 | <0.01 |

Note: * P<0.05 relative to the prior-to-treatment value

The total average effectiveness of treatment of caries and non-caries damage is more than 34.95% higher in the treatment group than in the control group.

Particularly, following the treatment, the treatment group has shown 3.5 ± 0.16 healthy sextants versus 2.7 ± .4 (P<0.05) in the control group; likewise, bleeding sextant ratios have been 1.40 ± 0.05 as compared to 1.20 ± .05 (P<0,05); tobacco growers with sextants affected by tartar (GP ≥ 4-5 mm and GP ≥ 6.0 mm), vice versa, showed a lower occurrence, showing a proportion of 0.6± 0.013 vs. 0.9 ± 0.034 (P<0.01); 0.3 ± 0.018 vs. 0.5 ± 0.020 (P<0.05); 0.3 ± 0.013 vs. 0.5 ± 0.022 (P<0.01)(Table 2).

**Table 2: Effectiveness of treatment (%) based on CFE elements and non-caries dental tissue state requirements.**

| Indicator | Control group | Treatment group | | |
|---|---|---|---|---|
| | Prior-to-treatment effectiveness (%) | Prior-to-treatment effectiveness | | Effectiveness relative to the control group |
| C | 8.56 | 46.07 | > | 68.66 |
| F | 30.74 | 64.94 | > | 35.74 |
| E | 4.65 | 7.85 | > | 25.6 |
| Pathological abrasion | 18.24 | 26.73 | > | 18.89 |
| Dental plaque | 20.57 | 34.93 | > | 25.87 |
| | | ≤ av. | | 174.76>34.95 |

Meanwhile, the new therapy measures have exerted a positive effect on periodontium, which is virtually more observable in tobacco specialists (P<0.05).

In tobacco growers, the mean total effectiveness of periodontal care was more than 28.95% higher than in vegetable growers.

A follow-up research has revealed a significantly lower occurrence of oral mucosal disorders, and an even more significant decrease has been observed in tobacco growers (Table 3).

As follows from Table 3, allergic stomatitis has been diagnosed in five (10.87 ± 4.57%) treatment group subjects and in ten (21.14 ± 6.08%) control group subjects (P<0.05); the occurrence ratio for chronic recurrent aphthous stomatitis is: 3 (6.52 ± 3.64%) versus 6 (13.04 ± 4.97%) (P>0.05); for oral candidiasis - 2 (4.37 ± 3.006) versus 3 (6.52 ± 3.64%) (P>0.05); for leukoplakia-2 (4.34 ± 3.00%) versus 3 (6.52 ± 3.64%) (P>0.05); for hyperkeratosis leukoplakia-1 (2.17 ± 2.15%) versus 2 (4.34 ± 3.00%) (P>0.05); the occurrence of erosive ulcerative glossitis in the treatment group has

been 2 (4.34 ± 3.00%) versus 3 (6.52 ± 3.64%) (P>0.05); the occurrence ratio for desquamative glossitis, respectively, is 1 (2.17 ± 2.15%) versus 2 (4.34 ± 3.00%)(P>0.05).

**Table 3: Prior-to-treatment and follow-up CPITN indexes in the treatment and control groups (M ± m).**

| Sextant count | Group type (prior to treatment) | | | Group type (follow-up) | | |
|---|---|---|---|---|---|---|
| | Treatment gr., n=46 | Control gr., n=46 | P | Treatment gr., n=46 | Control group n=46 | P |
| 0 - healthy | 2.10 ± 0.09 | 2.28 ± 0.09 | >0.05 | 3.5* ± 0.16 | 2.7 ± *0.11 | 0.05< |
| 1 - bleeding | 1.502 ± 0.06 | 1.40 ± 0.06 | >0.05 | 1.40* ± 0.05 | 1.20 ± *0.05 | 0.05< |
| 2 - tartar | 0.9 ± 0.04 | 1.0 ± 0.04 | >0.05 | 0.6* ± 0.013 | 0.8 ± *0.034 | 0.01< |
| 3 - GP ≥4-5 mm | 0.8 ± 0.03 | | >0.05 | 0.2* ± 0.018 | 0.5 ± *0.080 | >0.05 |
| 4 - GP≥6.0 mm | 0.6 ± 0.02 | 0.7 ± 0.03 | >0.05 | 0.3* ± 0.013 | 0.5 ± *0.022 | 0.01< |
| X - excluded | 0.10 ± 0.004 | 0.1 ± 0.003 | >0.05 | 0.2 ± 0.008 | 0.3 ± 0.0013 | 0.05< |

Note: * P<0.05 relative to the prior-to-treatment value.

The combined treatment has resulted in lower occurrence of lip disorders. For example, the post-treatment intensity of lip allergies in tobacco growers is 2 (4.34 ± 3.00%) versus the respective intensity value observed in the control group 5 (10.87 ± 4.59%) (P>0.05); the occurrence of eczematous lip damage is 1 (2.16 ± 2.15%) versus 2 (4.34 ± 3.00%) (P>0.05), and the occurrence of non-healing chapped lips is 1 (2.16 ± 2.15%) versus 2 (4.34 ± 3.00%) (P>0.05) (Table 4).

Mean total effectiveness of the decline in the oral mucosa and lip disease occurrence was more than 25.3% higher in the treatment group than in the control group.

Combined treatment has had a positive effect on the studied clinical and functional characteristics of the oral cavity (Table 4).

Combined treatment has contributed to much higher oral care indexes; following the treatment, OHI-S index in the treatment group reaches 2.31 ± 0.09 versus 3.82 ± 0.14 (P<0.01) in the control group. The optimal health care activities have resulted in higher tooth enamel mineral density.

In the treatment group, tooth enamel's acid resistance has reached 32.5 ± 1.48% versus 48.5 ± 2.31% (P<0.01) in the control group; electrical conductivity is down by 1.02 ± 0.04 μA in the treatment group versus 1.8 ± 0.07 μA (P<0.01) in the control group.

Treatment has helped gum capillaries regain strength to a greater extent in the treatment group, and a Schiller–Pisarev index is 50.25 ± 2.42 in the treatment group versus 66.32 ± 3.03 in the control group; the proportion of Kulazhenko test results is 40.21 ± 1.65 versus 33.75 ± 1.33 (P<0.01) respectively.

Mean total effectiveness of normalization of follow-up clinical and functional indexes of oral health was 40.77% higher in the treatment group than in the control group.

**Table 4: Occurrence of oral mucosal diseases in both groups prior to and after treatment (M ± m).**

| Occurrence of oral and mucosal diseases | Prior to treatment, group type | | | After treatment, group type | | |
|---|---|---|---|---|---|---|
| | Treatment gr., n=46 | Control gr., n=46 | P | Treatment gr., n=46 | Control gr., n=46 | P |
| Stomatitis total | 20/43.48 ± 7.31 | 21/45.65 ± 7.34 | >0.05 | 5/10.87 ± 4.59* | | 0.05< |
| Including: allergic | 8/16.70 ± 5.50 | 9/19.56 ± 5.85 | >0.05 | 3/6.52 ± 3.64* | 6/13.04 ± 4.97* | 0.05< |
| Chronic recurrent aphthous stomatitis | 4/8.70 ± 4.16 | 4/8.70 ± 4.16 | >0.05 | 1/2.17 ± 2.15* | 2/4.34 ± 3.00* | 0.05< |
| Oral candidosis | 5/10.87 ± 4.59 | 5/10.87 ± 4.59 | >0.05 | 2/4.34 ± 3.00* | 3/6.52 ± 3.64* | 0.05< |
| Leikoplakia total | 6/13.04 ± 4.97 | 5/10.87 ± 4.59 | >0.05 | 2/4.34 ± 3.00* | 3/6.52 ± 3.64* | 0.05< |
| Including: common | 2/4.35 | 1/2.17 ± 2.15 | >0.05 | 1 | - | 0.05< |
| Hyperkeratosis | 4/8.70 ± 4.16 | 4/8.70 ± 4.16 | >0.05 | 1/2.17 ± 2.15* | 2/4.34 ± 3.00* | 0.05< |
| Erosive/ulcerative | - | - | >0.05 | - | - | 0.05< |
| Allergic glossitis | 5/10.87 ± 4.59 | 4/8.70 ± 4.16 | >0.05 | 2/4.34 ± 3.00* | 3/6.52 ± 3.64* | 0.05< |
| Desquamative glossitis | 4/8.70 ± 4.16 | 4/8.70 ± 4.16 | >0.05 | 1/2.17 ± 2.15* | 2/4.34 ± 3.00* | 0.05< |
| Lip damage total | 12/26.09 | 11/23.91 ± 6.28 | >0.05 | 3/6.52 ± 3.64* | 6/19.04 ± 4.97* | 0.05< |

| | | | | | | |
|---|---|---|---|---|---|---|
| Allergic | 8/17.40 ± 5.50 | 8/17.40 ± 5.50 | >0.05 | 2/4.34 ± 3.00* | 5/10.87 ± 4.59* | 0.05< |
| Eczematous | 4/8.70 ± 4.16 | 3/6.52 ± 3.64 | >0.05 | 1/2.17 ± 2.15* | 2/4.34 ± 3.00* | 0.05< |
| Chronic chapped lips | 3/6.52 ± 3.64 | 3/6.52 ± 3.64 | >0.05 | 1/2.17 ± 2.15* | 2/4.34 ± 3.00* | 0.05< |

Note: the numerator is the absolute value; the denominator is the percentage of the num-ber of subjects per group; P>0.05 relative to the prior-to-treatment value.

Recovery of oral organs' and tissues' functions is accompanied by recovery of the taste analyzer's performance, and it has been observed through a positive taste analyzing dynamics, which is statistically more pronounced (P<0.05) in the treatment group. For example, the severity of disorders resulting in poor perception of the sweet taste is 15 (32.61 ± 6.91) in the treatment group versus 24 (52.17 ± 7.37) (P<0.05) in the control group; for the salty taste, it is 14 (30.43 ± 6.78) versus 20 (43.48 ± 7.31) (P<0.05) respectively; for the sour taste it is 17 (36.96 ± 7.11) versus 26 (56.52 ± 7.31) (P<0.05); for the bitter taste it is 16 (34.78 ± 7.02) versus 23 (50.00 ± 7.37) (P<0.05) (Table 5).

**Table 5: Effectiveness (%) of treatment based on the occurrence of oral mucosa disorders.**

| Indicators | Control group, prior-to-treatment effectiveness | Treatment group | |
|---|---|---|---|
| | | Prior-to-treatment effectiveness | Effectiveness relative to control group |
| Stomatitis, total | 52.38 | 75 | >17.76 |
| Allergic | 33.33 | 60.96 | >29.30 |
| CRAS | 50.12 | 75.06 | >19.92 |
| Oral candidiasis | 40 | 60.07 | >20.46 |
| Leukoplakia, total | 40 | 66.71 | >20.46 |
| Including: common | 100 | 100 | >0 |
| Hyperkeratosis | 40 | 75.06 | >30.47 |
| Allergic glossitis | 25.06 | 60.07 | >41.12 |
| Desquamative glossitis | 50.11 | 75.06 | >19.43 |
| Lip damage, total | 45.46 | 75.01 | >24.53 |
| Including: allergies | 37.53 | 74.94 | >33.26 |
| Eczematous | 33.44 | 75.06 | >38.36 |
| Chronic chapped lips | 33.44 | 66.72 | >33.23 |
| ≤ total | | | >328.80 |
| MCP | | | >25.30 |

In the treatment group, total median effectiveness of the taste analyzer's recovery is 25.93% higher than in the control group.

Inclusion of sensibilizing therapy in the combination therapy administered to the treatment group was followed by a decreasing regularity of morphological endonasal tests, which was more significant in the treatment group.

Particularly, in a follow-up endonasal examination, 15 (32.6 ± 6.91%) subjects in the treatment group tested positive for allergen M versus 25 (54.35 ± 7.34%) subjects in the control group; the respective allergen 2 ratio is 16 (34.78 ± 7.02%) versus 27 (58.70 ± 7.25%) (P<0.05).

Positive dynamics has been observed when checking the results of the sublingual test. So, in the treatment group, following the treatment, the intensity of positive response to Allergen 1 has been 12 (26.09 ± 6.47%), while in the control group - 28 (60.87 ± 7.21%) (P<0.05); the respective Allergen 2 ratio is 13 (28.26 ± 6.64%) versus 22 (47.83 ± 7.36%) (P<0.05).

Following the treatment, a dramatic decrease in the number of Hoigne-positive patients has been observed, and the respective ratio in the treatment group is 14 (30.43 ± 6.28%) versus 21 (45.65 ± 7.34%) (P<0.05) in the control group.

Mean total effectiveness of allergy test improvement procedures was more than 21.07% higher in the treatment group than in the control group.

The treatment has resulted in normalization of nonspecific resistance, which is more pronounced in the treatment group (Table 6).

**Table 6: Effectiveness (%) of the treatment of the gustatory analyzer.**

| Tests | Control group, prior-to-treatment effectiveness | Treatment group | |
|---|---|---|---|
| | | Prior-to-treatment effectiveness | Effectiveness relative to the control group |
| Endonasal | | | |
| Allergen 1 | 44.44 | 65.91 | >19.46 |
| Allergen 2 | 41.3 | 65.22 | >22.45 |
| Sublingual | | | |
| Allergen 1 | 39.13 | 73.33 | >30.41 |
| Allergen 2 | 51.11 | 70.45 | >15.92 |
| Hoigne's test | | | |
| Allergen 1 | 43.24 | 61.12 | >7.13 |
| ≤total | | 105.37 | |
| TME | | >21.07 | |

Note: the numerator is the absolute value; the denominator is the percentage of the num-ber of subjects per group; P>0.05 relative to the prior-to-treatment value.

Following the treatment, the salivary lysozyme concentrations in the treatment group is 2.22 ± 0.09 μg/ml, which is statistically much higher than in the control group (1.63 ± 0.07 μg/ml (P<0.05)); likewise, ratios of neutrophils' phagocytic activity are 40.35 ± 1.71% versus 30.61 ± 1.42% (P<0.01); and the sIgA concentration proportion is 0.44 ± 0.02 IU/ml versus 0.31 ± 0.01 IU/ml (P<0.01) (P<0.01).

Also, the treatment has contributed to a fair reduction of the oral pathogenic bacteria titer. However, following the treatment, staphylococcus titers in the treatment group are 1.65 ± 0.07 lg CFU/ml, while in the control group it is 2.20 ± 0.10 07 lg CFU/ml (P<0.01); respective streptococcus concentrations are 2.31 ± 0.11 lg CFU/ml versus 3.42 ± 0.13 lg CFU/ml (P<0.01); a respective mold concentration is 1.27 ± 0.05 lg CFU/ml versus 2.00 ± 0.08 lg CFU/ml (P<0.05) (Table 7). The total median effectiveness of normalization of nonspecific resistance indexes was 37.98% higher in the treatment group than in the control group (Table 8). A comparative analysis of clinical effectiveness of the treatment is presented in Table 9.

**Table 7: Nonspecific resistance of the oral cavity across the study groups prior to and after treatment (M ± m).**

| Indicators | | Prior to treatment, group type | | | After treatment, group type | | |
|---|---|---|---|---|---|---|---|
| | | Treatment gr., n=46 | Control gr., n=46 | P | Treatment gr., n=46 | Control gr., n=46 | P |
| Salivary lysozyme, μg/ml | | 1.26 ± 0.05 | 1.27 ± 0.05 | >0.05 | 2.22 ± 0.09* | 1.63 ± 0.07* | <0.01 |
| Phagocytosis by neutrophils | | 23.65 ± 1.02 | 24.31 ± 1.08 | >0.05 >0.05 | 40.35 ± 1.71* | 30.61 ± 1.42* | <0.01 |
| IgA, IU/ml | | 0.26 ± 0.01 | 0.27 ± 0.01 | >0.05 | 0.44 ± 0.02* | 0.31 ± 0.01* | <0.01 |
| Oral microflora | Staphylococcus | 3.6 ± 0.12 | 3.57 ± 0.16 | | 1.65 ± 0.07* | 2.20 ± 0.10* | <0.01 |
| | Streptococcus | 4.20 ± 0.17 | 4.11 ± 0.19 | | 2.31 ± 0.11* | 3.42 ± 0.13* | <0.01 |
| | Mold | 2.7 ± 0.11 | 2.9 ± 0.13 | | 1.27 ± 0.05* | 2.00 ± 0.08* | <0.01 |

Note: * - P>0.05 relative to the prior-to-treatment value.

**Table 8: Effectiveness (%) in regaining nonspecific resistance characteristics of the oral cavity.**

| Oral resistance characteristics | Control group, prior-to-treatment effectiveness | Treatment group | |
|---|---|---|---|
| | | Prior to treatment effectiveness | Effectiveness relative to the control groiup |
| Lysozyme | 44.09 | 60.32 | >15.54 |
| Phagocytosis by neutrophils | 18.36 | 70.61 | >58.73 |
| sIgA | 14.81 | 69.23 | >64.78 |
| Staphylococcus | 38.37 | 54.17 | >17.05 |
| Streptococcus | 16.79 | 45 | >45.65 |
| Mold | 31.03 | 52.96 | >26.11 |
| ≤total | | 227.86 | |
| TME | | >37.98 | |

**Table 9: Clinical effectiveness (%) in the study groups.**

| Number of subjects | Outcome | | | |
|---|---|---|---|---|
| | Recovered | Significantly improved | Improved | No result |
| Treatment group (1), n=46 | 20 (43.48) ± 7.31 | 18 (39.13) ± 7.20 | 8 (17.39) ± 5.58 | - |
| Control group (2), n=46 | - | 21 (45.6) ± 7.34 | 19 (41.3) ± 7.26 | 6 (13.1) ± 4.97 |

The effectiveness of treatment has been deemed as recovery in 20 subjects 43.48 ± 7.31% of the treatment group; no subject from the control group has recovered; respectively, the number of outcomes deemed as significantly improved totaled 18 (39.13 ± 7.20%) versus 21 (45.6 ± 7.34%); there have been no subjects with no results in the treatment group versus the control group with six subjects showing no results (13.1 ± 4.97%). It should be noted that intended influence on basic pathogenic mechanisms of oral and dental diseases in the treatment group has had a more pronounced effect in all research data groups.

The results of the study show that combined therapy with general (Opefera + Alcetra) and local (applying Hepolor to the oral mucosa) treatment has proved effective and can be applied to treat dental and oral diseases in tobacco growers.B The combined study has demonstrated that the new method is more effective than the standard therapy.

## ETHICAL CLEARANCE

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N/A.


## CONFLICT OF INTEREST

Authors declare no conflict of interests.

## REFERENCES


1. Abdazimov AD. Prevention and treatment of oral and dental diseases in personnel after combined exposure to metal dust and toxic agents: Dissertation Habil Degree in Medicine 1989; 347.
2. https://cis-legislation.com/document.fwx?rgn=14209
3. Aralov NR, Ziyadullayev S, Dushanova GA. Hla-copd and bronchial asthma markers: Commonalities and differences. Int J Pharm Res 2020; 12:1233-7.
4. Obolsky DM, Sokolskaya TA, Denisov AA. Natural tobacco: chemical composition, pharmacological properties and uses in medicine. Pharmacol 2007; 5:44-48.
5. Antonov NS, Sakharova GM. Comparative analysis of bronchopulmonary risk factors in teenagers. Pulmonology 2011; 4:44-48.
6. Mamutov R., Mahkamov N. Tobacco is the enemy of your health. Folk Saying 2005; 103:3.
7. Muminov H. Kandai kilib, WHO ketchardim. Health care of Uzbekistan. 2005; 21:5.
8. Nazarova NSH. Zhumatov UZH, Kasimov MM. Tobacco grower's gustation. Oral Dent Care 2011; 3:18-20.
9. Ballard T, Ehlers J, Freund E, et al. Green tobacco sickness: Occupational nicotine poisoning in tobacco workers. Arch Environ Health 1995; 50:284-289.
10. Bardin-Mikolajczak A, Lissowska J, Zaridze D, et al. Occupation and risk of lung cancer in central and eastern Europe: The IARC multi-center case-control study. Cancer Causes Control 2007; 18:645-54.
11. Bozhkov IA, Luchkevich VS, Sevastianov MA, et al. Impact of working conditions on morbidity accompanied by temporary disability in workers at the present-day tobacco plants. Gig Sanit 2005; 1:25-7.
12. Brown VJ. Tobacco's profit, workers' loss?. Environ Health Perspect 2003; 111:284-7.