

# Disease Management Reporter in Japan

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## Mitsui Chemicals, Inc.'s Employee Health Building Program

An increasing number of companies in Japan are actively implementing measures designed to help their employees improve their health. New health-related terms, such as "strategic health management" and "healthy company," are also gaining currency today. Many companies are providing assistance to employees to improve the health of the workforce as part of their corporate social responsibility (CSR) activities. Some companies are seen cooperating closely with health insurance societies in educating their employees, following the introduction of The National Mandatory Chronic Disease Prevention Program<sup>1</sup> in April 2008.

Mitsui Chemicals, Inc. ("Mitsui Chemicals") is actively promoting good health among its employees. Specifically, the company follows a cycle of formulating and carrying out specific plans to promote good health on the basis of the analysis of medical check-up, absenteeism due to illness, and other data. The company evaluates these data each year and then uses the results to formulate wellness plans for the subsequent year. Comparison with nationwide statistical data available in Japan allows Mitsui Chemicals to identify health issues specific to the company. Time-series analysis also enables the company to detect health issues that need to be addressed at an early stage. These are examples of how Mitsui Chemicals takes advantage of sophisticated data analysis to design appropriate programs. In addition, the company was among the first to take measures to address mental health issues and to introduce lifestyle-related disease prevention efforts. It was the analysis of statistical data that led the company to realize that such diseases could pose a grave health risk to its workforce in the near future. Regular monitoring of statistical data pinpoint how far each program has progressed, and allows the company to clarify concrete issues to be dealt with in formulating and improving subsequent plans. Mitsui Chemicals uses the PDCA (plan, do, check act) cycle, based on statistical data and is continually developing activities designed to help employees improve their health. Each office also conducts comparisons with data for the entire company so they can customize activities for their own specific circumstances. The PDCA cycle for good health is carried out at all levels of the company such that appropriate and data-driven health activities span the entire organization.

Health-promoting activities based on statistical data may evoke an image of strict employee assessment and control. Far from it, Mitsui Chemicals offers a variety of unique and enjoyable health promoting activities, which are structured in such a way as to encourage high rates of participation. These include stretch and fitness courses offered in the head office, healthy food items developed jointly with caterers at staff cafeterias, and a Web-based diet program. These new activities and ideas are created along a classification method using two axes, one as event-driven or program-driven and the other as voluntary or mandatory. The company has come up with a number of different activities based on this matrix and successfully built foundations for good health involving many employees across the organization.

In this issue, we feature Mitsui Chemicals' health-promoting activities, based on an interview with Dr. Seitaro Dohi, head of the corporate health management department and its general occupational health physician.

<sup>1</sup> See Atsushi Kobayashi, "Launch of a National Mandatory Chronic Disease Prevention Program in Japan", *Disease Management & Health Outcomes*, 2008, Vol.16, No.4, pp. 217 - 225.

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## Overview of Mitsui Chemicals

Mitsui Chemicals was formed through the merger of Mitsui Petrochemical Industries, Ltd. and Mitsui Toatsu Chemical, Inc. in 1997. The company manufactures and sells advanced and basic chemicals, as well as performance materials. Its workforce totaled 12,814 on a consolidated basis as of March 31, 2008<sup>2</sup>. The company has a head office, three branches, six plants and a research center in Japan. It has 35 consolidated subsidiaries in Japan and 28 overseas<sup>3</sup>.

## Mitsui Chemicals' Health Promotion System

Mitsui Chemicals' activities to promote better health among its employees were begun as part of efforts to boost occupational health and safety. They are currently conducted as a major part of its CSR activities. Dr.Dohi, the company's general occupational health physician, is also head of the chief health management department. He is the line manager responsible for measures designed to promote better health.

### 1. Activities as part of industrial health and safety – the origin of Mitsui Chemicals' efforts to promote better health

Mitsui Chemicals has worked for a long time to raise awareness of the importance of good health among its employees. When Dr.Dohi joined Mitsui Chemicals in 1991, the expression "Promote better mental and physical health" was used on a daily basis. Dr.Dohi does not know for sure exactly when the movement was started. However, he says that the proposal in 1979 by the Labor Ministry (the current Ministry of Health, Labour and Welfare) to introduce the Silver Health Plan<sup>4</sup> marked the beginning of company efforts to meet the requirements set out under the Industrial Health and Safety Act with respect to promoting better health among employees.

### 2. Organizational structure – occupational health physician responsible for supervising health promotion activities

Under the Industrial Health and Safety Act, an occupational health physician may make necessary recommendations to the employer with respect to the health management of its workers when the need is recognized to ensure good health among workers<sup>5</sup>. Industrial Health and Safety Regulations stipulate that an occupational health physician, who is responsible for maintaining and improving workers' health, may make recommendations, offer guidance and give advice to the person in charge or manager of a company (such as an Industrial Health and Safety Supervisor)<sup>6</sup>. As such, an occupational health physician is regarded as an advisor or a member of the staff under the relevant law, rather than someone directly responsible for the health management of workers and promoting good health. In contrast, Dr.Dohi felt that it was necessary to adopt a PDCA cycle approach in order to effectively promote better health. In his opinion, an occupational health physician should be responsible as the line manager directly supervising corporate health promoting programs, rather than acting as one of the staff. He believed that health promotion activities along the PDCA cycle would become more effective if an occupational health physician draws up and carries out health-promoting activities and manages the budget and human

resources, instead of simply making recommendations or giving advice. Dr.Dohi, who was the occupational health physician for the Iwakuni plant in 1999, already had a mechanism of promoting better health based on the PDCA cycle in place at the Iwakuni plant. He was then put in charge of revising corporate rules and regulations regarding occupational health and safety. He decided to incorporate his own ideas into these rules in order to adopt the PDCA cycle across the organization. Up until then, industrial health and safety regulations had set out rules for both labor safety and labor health. He divided the rules into two categories, labor-safety rules and labor-health rules, and decided to include provisions designed to help promote better health among the employees into the labor-health rules (they came into effect in July 2000). Under this scheme, the general occupational health physician was also to serve as head of the health management department for the head office, while the occupational health physician at each work site was to act as head of its health management department (See Chart 1).

Although the health management department for the head office belongs to the HR and Labor Structure Department and has no direct organizational tie, the head of the health management department for the head office supervises the health management departments at each office (i.e. the plants and the research center). The company has successfully set up a system to promote good health across the organization, with the health management department for the head office playing a pivotal role<sup>7</sup>.

### 3. System to promote good health as part of CSR initiative

When Dr.Dohi set out the labor-health rules, as described above, he put forward his belief that employees' health will directly affect the health of the corporation. This idea is often quoted when the company explains to outsiders its philosophy behind promoting health and has taken root as the basic principle of health promotion at Mitsui Chemicals<sup>8</sup>. According to Dr.Dohi, good corporate health means that a company functions well. "A company with good financial results is not a good company unless its employees are healthy," Dr.Dohi adds.

Health-promoting activities for each fiscal year are formulated under the Annual Labor Health Plan, which forms part of the CSR promotion program. Mitsui Chemicals' CSR promotion system consists of three committees of Responsible Care, Risk and Compliance, and Social Activities under the CSR committee. Each committee draws up annual plans based on the companywide basic policies (See Chart 2). The Annual Labor Health Plan is part of the Annual Responsible Care Plan. Responsible care refers to activities in which a manufacturing and sales company of chemical products voluntarily works to protect the environment, health and safe-

<sup>2</sup> Mitsui Chemicals, Inc. "Annual Report 2008", 2008. Mitsui Chemicals was founded as Toyo Toatsu Industries, Inc. in 1933.

<sup>3</sup> Mitsui Chemicals, Inc. Website (visited March 7, 2009)

<<http://www.mitsuichem.com/corporate/overview/index.htm>>.

<sup>4</sup> The campaign to promote better health among middle-aged and senior people in a bid to address health issues of the aging working population in Japan. (Website of Healthy Japan 21 (visited March 7, 2009) <<http://www.kenkouinippon21.gr.jp/kenkouinippon21/katsudo/jirei/dantai/k1591.html>>)

<sup>5</sup> Industrial Safety and Health Act. Article 13, Paragraph 3.

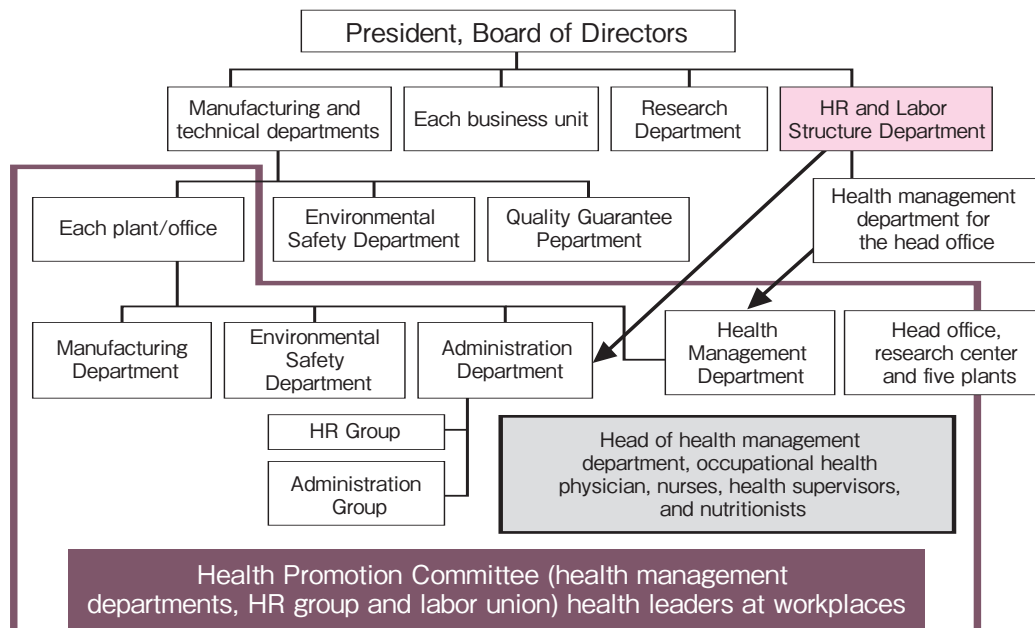
<sup>6</sup> Industrial Safety and Health Regulations Article 14, Paragraphs 1(5) and 3.

<sup>7</sup> It was announced that the HR and Labor Structure Dept. will be incorporated into the Social and Environment Headquarters, which will be newly established under the organizational reform to be carried out in April 2009. (Mitsui Chemicals, Inc. Website (visited March 15, 2009)

<[http://www.mitsuichem.com/release/2009/090227\\_02.htm](http://www.mitsuichem.com/release/2009/090227_02.htm)>)

<sup>8</sup> Mitsui Chemicals, Inc. "MITSUI CHEMICALS CSR Report 2008", 2008.

Chart 1 Mitsui Chemicals' labor-health structure



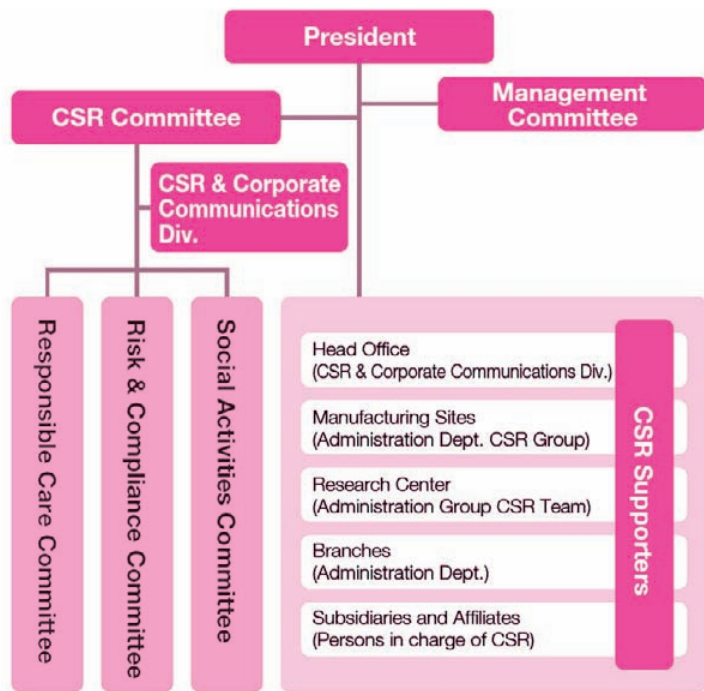
Source: materials provided by Dr.Dohi

uation of performance, followed by their inclusion in subsequent year's plans as shown in Chart 3.

**4. Company-wide health-promotion activities based on the PDCA cycle; Analysis and evaluation of statistical data driving the PDCA cycle**

As part of responsible care activities, the Annual Labor Health Plan also follows the process of planning, execution, evaluation of performance and inclusion in subsequent year's plans. Statistical data play an

Chart 2 Mitsui Chemicals CSR promotion system



Source : Mitsui Chemicals, Inc. "MITSUI CHEMICALS CSR Report 2008", 2008.

important role in driving this cycle. The company compiles statistical data for the entire company (companywide statistics) with regard to health check-ups and employee absenteeism due to illness. First of all, comparison of the companywide data with national statistics enables the company to identify issues specific to its employees and to draft health-promotion programs accordingly. Mitsui Chemicals stopped its partial subsidy for employees of the costs of outside comprehensive medical check-ups in FY2008. Instead, the company added cancer screening to the annual company medical exam, following the discovery of a rising number of cancer cases among its employees. The company felt that early detection of cancer would be ineffective unless a large number of employees would undergo screening, instead of just helping a small number of employees to undergo outside comprehensive health check-ups.

Similar statistical data are also compiled for each office. The company compares companywide statistics with office statistics and analyzes factors behind any discrepancies. The health management department of each office draws up its own plans based on this analysis. According to Dr. Dohi, showing statistical data helps clearly explain the plans to employees.

Chart 3 Responsible care activities scheme



Source: the same as Chart 2

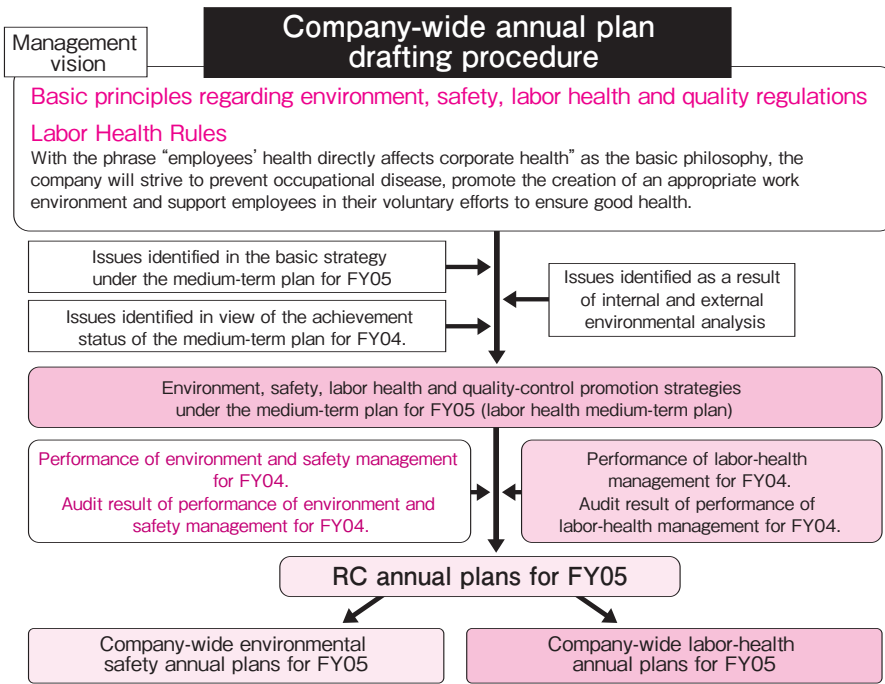
Annual plans are audited and evaluated each fiscal year. During the audit, the company analyzes the plans to see how far they have progressed and identify any problems. Additionally, internal and external environmental analysis is conducted before the subsequent year's plans are drafted (See Chart 4). A similar process is followed at each office, in addition to the entire company. In this manner, companywide health promotion activities are based on the PDCA cycle.

Statistical data for absenteeism due to illness is

ty, and commits to publicly announce the outcome of such activities as a way to engage in dialogue and communications with society.<sup>9</sup> It is an international initiative pursued by the chemical industry.<sup>10</sup> Mitsui Chemicals' responsible care activities follow the process of planning, execution and eval-

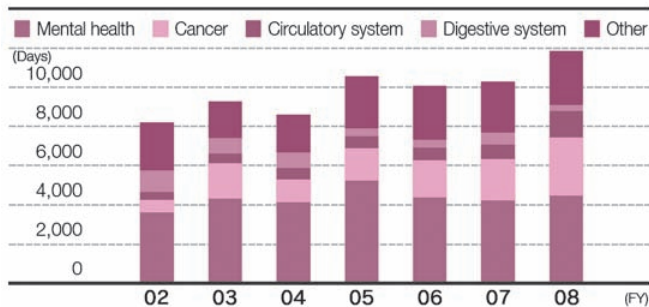
<sup>9</sup> Responsible Care Report 2008, by the Japan Responsible Care Council <<http://www.nikkakyo.org/organizations/jrcr/report/2008/index.html>>  
<sup>10</sup> Responsible care is an international initiative of the chemical industry, which was first started in Canada. In Japan, the Japan Responsible Care Council, which was established in 1995, is promoting relevant activities (See No. 8 above)

Chart 4 Procedure for drafting Annual Labor Health Plans



Source: materials provided by Dr. Dohi

Chart 5 Breakdown of absenteeism due to illness published in CSR report (2008)



Source: the same as Chart 2

published in Mitsui Chemicals' CSR reports.<sup>11</sup> A breakdown is shown over time and by type of ailment, quantifying the effects of health promotion activities (See Chart 5).

### Various Health-Promotion Activities

#### 1. Communication between the occupational health physician and the public health nurse, and employees forms the basis of health promotion

As described below, Mitsui Chemicals has a wide range of health promotion activities in place. However, Dr.Dohi says that communication between health workers, such as the occupational health physician and the public health nurse, and employees forms the basis of promoting better health. The occupational health physician and public health nurses of the health management department of each office make it a point of having an interview with each of the employees once a year. Public health nurses know the employees under their charge in person and are aware of their health conditions. For employees, the health management department is something of a "family doctor" they can consult with at any time. Dr.Dohi says that being familiar with the health management department and feeling supported by health

workers on a daily basis encourages employees to take actions that promote better health, making health-promotion activities more effective.

#### 2. Multiple measures function organically to bear fruit

Mitsui Chemicals has a wide range of health-promotion activities in place. Dr.Dohi argues that it is insufficient to implement a single measure to address one health issue, adding that it is vital to combine multiple measures. He stresses that workplaces and employees need to be approached in various ways through many options.

##### (1) Labor-health education at workplaces – mandatory education of 12 topics at all workplaces within five years

As described later, Mitsui Chemicals has attracted attention from the media, thanks to its unique and forward-looking activities. At the core of such health-

promotion activities is labor-health education conducted at all the workplaces. A staff member of the health management department, such as an occupational health physician or a public health nurse, gives 20 to 30-minute lectures on each of 12 topics (See Chart 6). All workplaces are required to attend the lectures on all 12 topics within five years.

##### (2) Perspective for drafting measures – think along two axes

Generally speaking, it is effective to combine a population-based approach, which targets the entire group to change the general climate, with high-risk approaches, which focus on high-risk groups, in order to promote overall better health.

Additionally, Dr.Dohi uses the two-axis matrix shown in Chart 7 when drafting measures. One axis refers to event-driven or program-driven activities. Event-driven refers to activities that can be completed in one session or in a short period of time. These include walking rallies, seminars, and short training sessions. In contrast, program-driven means the kind of activities that are carried out continuously for a certain period of time, such as multi-session education programs and programs to be implemented for a certain period of time to achieve a specific health target.

The other axis refers to voluntary or mandatory activities. Dr.Dohi does not mind if only a few people take part in voluntary activities. "It is more important to create a certain climate and motivate employees, by offering many options," Dr.Dohi says.

Activities classified as event-driven and voluntary are designed to let participants have a first-hand experience of the joy of promoting good health. The company can create a climate conducive to promoting good health by offering fun-filled events. Activities classified as program-driven and voluntary are targeted at a group of people highly interested in improving their health.

<sup>11</sup> Mitsui Chemicals, Inc. *supra* note 8.

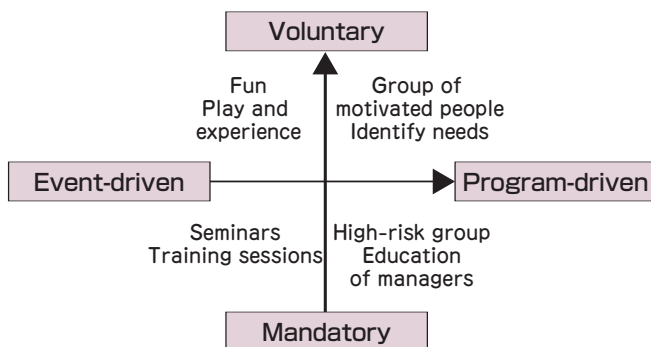
**Chart 6: 12 topics covered by labor-Health education at workplaces**

|           |   |
|-----------|---|
| Mandatory | Emergency resuscitation (lecture and practice)<br>First aid<br>Preventing lower backache<br>VDT work<br>Work involving toxic substances<br>Effective use of medical check-up results<br>Mental health 1 (how to relieve stress)<br>Mental health 2 (how to cope with and manage stress)<br>Why is it necessary to prevent lifestyle-related diseases?<br>Preventing lifestyle-related diseases (eating habits)<br>Preventing lifestyle-related diseases (exercise)<br>Keeping your weight under control |
| Optional  | How to enjoy alcohol wisely<br>Comprehensive medical check-up to keep cancer at bay<br>Quit smoking<br>Heart and cerebral vascular diseases   |

Source: Information provided by Dr. Dohi

**Chart 7: Two axes for program design**

**Balanced program drafting**



Source: materials provided by Dr. Dohi

Employees' preferences for programs become more apparent after several activities are tried out. Seminars and training sessions for different workplaces and different ranks can be classified as event-driven and mandatory. Program-driven and mandatory activities are effective for a group of people exposed to high risk in a specific health area.

It is easier to identify what kinds of activities are needed when one adopts pragmatic classifications, rather than conceptual classifications, such as the population approach and high-risk approach. For instance, one can plot activities implemented for a single health issue on this two-axis matrix and see if there are any insufficient areas. If a health-education program (mandatory and program-driven) at a workplace and a voluntary weight-control program (voluntary and program-driven) are the only two activities in place, an event-driven activity is also needed to fill the gap. In this manner, you become able to draft activities so that all the activities are well balanced across the two axes. By offering activities that fall under the four quadrants as evenly as possible, the company is able to give all its employees, who have varying needs, opportunities to motivate themselves to improve their health.

**(3) Measures for improving mental health**

Mitsui Chemicals has long been focusing its efforts on improving mental health, after discovering from the analysis of statistical data that absenteeism due to poor mental health was likely to increase in the future.

Specifically, the company offers seminars to employees, and is seeking to change the climate at workplaces,

as it considers it vital to provide on-site care. The company has incorporated sessions on mental health into new employee training, so that new hires will recognize the importance of good mental health from early on.

Mitsui Chemicals currently uses the Simple Questionnaire on Occupational Stress<sup>12</sup> at each workplace to assess stress levels. Each workplace is notified of the findings. These include changes in stress levels over time and the average data for the entire company, enabling managers to understand the difference between the company average and the stress levels in their workplaces, as well as the historical trends. Managers of workplaces reporting higher stress levels are told to draw up a "workplace stress-reduction worksheet."

Some offices hold meetings after receiving the results of the Simple Questionnaire on Occupational Stress. A staff member of the health management department explains how to interpret the findings, then all the employees of a workplace in question discuss measures designed to reduce stress.

In addition, the occupational health physician talks with employees whose individual mental health conditions have been found to exceed a certain threshold in a questionnaire at the time of the annual medical check-up. A wide range of measures are carried out to improve mental health.

**(4) Measures against metabolic syndrome**

A wide range of measures are also carried out to prevent metabolic syndrome. Let us introduce three unique attempts.

**1) Shape-up classes**

The head office conducts a stretching class, which comes with a healthy lunch box, during the lunch break and a fitness class after work. These two are categorized as voluntary and halfway between event-driven and program-driven activities, according to the two-axis model described earlier. Each class is subdivided into several different courses (See Charts 8 and 9). Participants range from 40 to 50 for each course.

**Chart 8: Courses offered in the stretch class with a healthy lunch box**

| Course name                        |
|------------------------------------|
| Stretch to relieve stiff shoulders |
| Refresh and relieve tired eyes     |
| Relaxation (autogenic training)    |
| Correct pelvic position            |

Source: information provided by Dr. Dohi

**Chart 9 Different courses in the fitness class**

| Course name   |
|---------------|
| Natural yoga  |
| Aroma stretch |
| Pilates       |
| Shape-up      |
| Boxercise     |
| Tai Chi       |

Source: information provided by Dr. Dohi

<sup>12</sup> The questionnaire developed to assess occupational stress by the research group on stress measurement under the research team on prevention of work-related diseases in the then Labor Ministry (the current Ministry of Health, Labour and Welfare) between FY1995 and FY1999. Four levels of answers are provided for 57 questions. The Website of the Ministry of Health, Labour and Welfare: [HYPERLINK "http://www.mhlw.go.jp/bunya/roudoukijun/anzeneisei12/index.html"](http://www.mhlw.go.jp/bunya/roudoukijun/anzeneisei12/index.html)  
<http://www.mhlw.go.jp/bunya/roudoukijun/anzeneisei12/index.html>, the Website of Tokyo Medical University: <http://www.tokyo-med.ac.jp/ph/ts/sutoresutyousahyou.htm>>)

## 2) Health Up Navi

The company has introduced Health Up Navi<sup>13</sup>, an Internet-based system offered by SECOM Medical System Co., Ltd., as one of the voluntary and program-driven activities. Participants set their own health targets and they receive a gift when they have successfully cleared all the targets over a certain period of time.

Mitsui Chemicals has many Japanese employees working overseas, as it has many facilities around the world. Those working overseas may have fewer opportunities to take part in health promotion activities. The Health Up Navi is an effective program for employees working overseas, as it can be accessed via the Internet from anywhere in the world.

## 3) Healthy food items offered at staff cafeterias

Healthy food items were introduced in staff cafeterias, after the company approached caterers. The health management department showed the requirements in terms of a calorie/nutrition balance to the caterers, who came up with the actual food items to offer. Although the costs of such items are higher than those for regular meals, the health management department bears the difference in costs in order to offer healthy food items at the same price as regular meals.

### 3. Continuous program development – people become bored with the same programs

Dr.Dohi argues that it is necessary to continually replace old health promotion programs with new ones. As internal and external environments change, and technological innovations emerge, the kind of programs that interest people

also change. Employees become bored with the same old routine. This tendency is especially apparent with system- or IT-based programs. It is unlikely that a program, which was effective at one time, will remain effective forever. A sense of novelty is vital to entice employees to take up new programs.

For this reason, Mitsui Chemicals avoids in-house system development, which also requires huge initial investment, as much as possible.. Such investment in a single program also ties the company to that program for a long time. Instead, the company prefers the flexibility of purchased programs from external vendors.

### Looking Ahead

There are a wide variety of activities that promote good health, and different people tend to take up different activities. Action goals set for organized programs do not necessarily cover all the activities that are beneficial for health. Many employees seek to improve their health on their own, without taking part in programs or events sponsored by the company. Dr.Dohi intends to formulate a new system to evaluate and incentivize a wide variety of health-promoting behaviors. Under his plan, employees will be able to voluntarily choose an activity, and then enter the information about the activity into a Web-based system, earning points according to the particular activity's level of health benefit. By combining this system with a personal incentive through a frequent flyer type mileage scheme, Dr.Dohi hopes to encourage more people to join health-promoting activities that suit their lifestyle, work pattern, and personal preferences.

<sup>13</sup> The Website of SECOM Medical System:  
<<http://medical.secom.co.jp/yobou/index.html>>

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