

The Self-Reliant System for Alternative Care of Diabetes Mellitus Patients – Experience Macrobiotic Management in Trad Province

Jakkriss Bhumisawasdi MD, MPH*
Opas Vanna MD**, Nuanchan Surinpang BSc***

* Bureau of Inspector, Office of Permanent Secretary, Ministry of Public Health
** Department of Anesthesiology, Sappasitthiprasong Hospital, Ubon Ratchatani
*** Health Education Section, Trad Hospital, Trad

Background and Objective: Diabetes mellitus is a costly and growing health issue for the individual as well as the nation with much concern needed to change the way of life globally, Thailand included. Conventional medical care comprises of lifestyle modifications and the use of diabetic drugs but even with the development of new drugs, little achievement has been noted in relation to reducing the disease's complications.

Macrobiotic is a holistic, alternative health care method. In macrobiotic principle, humans should live, drink and eat in conjunction with the laws of nature that will lead to good health, freedom and wisdom in understanding the laws of nature. The macrobiotic way of living is therefore the caring of body, mind, spirit and the environment in an independent manner based on adequacy and symbiotic support.

Material and Method: The present study consists of forty-four type 2 diabetes mellitus patients from the DM clinic, Trad Provincial Hospital. 4 subjects were insulin treated, observing the macrobiotic ways of living together at the Wanakaset Research Facility of Kasetsart University, Trad Province which lies in a natural forest area approximately 45 kilometers away from the city for a period of between 2 to 14 weeks. The volunteers were required to refrain from using all kind of drugs or chemicals and eating Formula 2 food as set forth by the International Un Punto Macrobiotico Foundation, Italy while participating in all camp activities.

Results: The findings at the end of the program together with QOL assessment questionnaires noted a statistically significant reduction in blood sugar levels, weight, blood pressure and heart beat ratios. Subjects were in significantly better health, more vibrant, more peaceful, and more energetic. The 4 insulin treated volunteers managed to maintain their blood sugar level within the range of 110-171 mg.% without any insulin injection and all volunteers are free of any adverse events.

Conclusion: The results of the present study can be a guideline in the modification of health care policies that can lead to the development of effective, and alternative care of diabetes mellitus patients.

Keywords: Macrobiotic, Alternative care, Diabetic mellitus

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Type 2 diabetes is the most common form of diabetes affecting 95% of all diabetic patients. The disease situation is on the rise globally, including developing countries, due to changes in the way of life and becoming more westernized⁽¹⁾.

Correspondence to : Bhumisawasdi J, Bureau of inspector, Office of Permanent Secretary, Ministry of Public Health, Nonthaburi 11000, Thailand. E-mail: jakkriss@health.moph.go.th

In Thailand, type 2 diabetes contributes to increasing morbidity and mortality, especially from chronic complications affecting the cardiovascular system. Meanwhile, the cost of treatment is also increasing^(2,3) resulting in added burden to the individual as well as to the society. Conventional medicine suggests that the disease could be successfully managed through the integration of lifestyle modification as well as using diabetic drugs.

On the other hand, part of the population has turned towards alternative care and treatment. Macrobiotic being a popular choice, a philosophy of oriental medicine which is a holistic way of living and being in harmony with nature.

The Macrobiotic philosophy and ways of living

Macrobiotic is a way of life based on the Oriental philosophy started by a Japanese gentleman, *George Ohsawa* as an integrated concept based on the following theories:

- 1) The *Yin-Yang* Theory of Chinese Medicine.
- 2) The Five Elemental Transformation Theory of Chinese Medicine.
- 3) Biological Atomic Transmutation Theory by *Mr. L Kervan* and *Mr. George Ohsawa* that suggests that: "Elements transmuted to other elements in the biological body..." and that "Atom is not stable once it changes"⁽⁴⁾.

The 8 Principles in Macrobiotic⁽⁵⁻⁸⁾

1) Faith, one that's based on sound logic and wisdom in realizing the laws of nature that humans are subject to the cycle of changes from nothingness to *Yin-Yang*, atom to sub-atom, to elements, to plants, to animals, to human beings which is a continuing transmutation of conditions, a dynamic transformation of energy. Therefore, if humans sought good health, being free of diseases, human must nurture good thoughts and bear the 4 virtues of heart always.

2) Appreciation and gratitude, that must be shown toward nature and all things without exception - the air, the sunlight, water, food, father, mother, even sickness and to live happily in accordance with the circumstance as seen in birth-defected handicaps or the poor that can still be happy and contented with life over others.

3) Knowing how to live, macrobiotic ways of living

4) Realizing the laws and sequences of Nature, being aware of the natural truth that birth, aging, sickness, and death are inevitable to all lives with no exception and to be happy in enjoying life within these truths.

5) Living in accordance to your ecological environment, eating natural, local, seasonal produce as well as using local products.

- 6) Integrating economics to the way of life.
 - Lesser food wastage means more food available for others.
 - Eat food that's as much whole as possible,

such as brown rice.

- Natural, unrefined sea salt has not just Sodium and Calcium but is rich in Iodine and other minerals as well.

- Use the natural resources wisely and effectively, while creating as little pollution as possible.

7) Integrating the principle of *Yin-Yang* to the way of life.

All things are ever-changing in the endless universe and are all in relation; such that the "*Yin*" light of higher spectrum - purple, blue, green, yellow, brown, orange, red to the "*Yang*" light of lower spectrum are constantly changing in relation to the *Yin-Yang*.

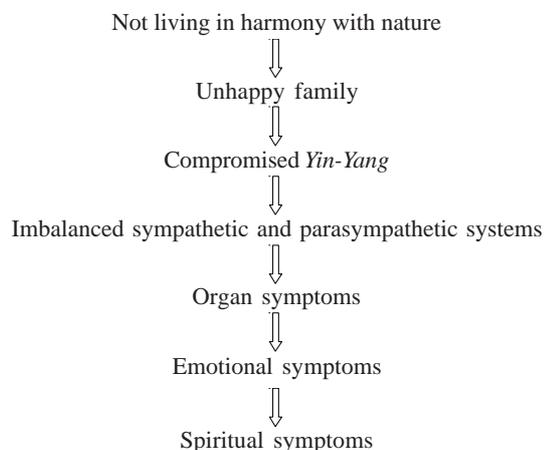
Eating "*Yin*" would provide a "*Yin*" emotion and thoughts, such as fear, anxiety, deception, etc. Therefore "You are what you eat".

8) Integrating the principle of dynamics to the way of life.

Our bodies are constantly subject to the process of changes. Food's digested to protein, amino acids, fats, or sugar. Sugar changes into glycogen and changes back into sugar again when blood-sugar level becomes low. Organics change into cells and final changes are to stabilize body temperature, pH balance, mineral concentration level, sugar level, oxygen and carbon dioxide level, body fluid and blood level.

Without these dynamics, there can be no universal constancy and there can be no life. Thus, the dynamic and constancy are two very important aspects of the universe.

It is, therefore, in the philosophy of macrobiotics that illness and symptoms are not diseases but rather a notion of organs excreting excesses in the process of achieving homeostasis based on the following hypothesis^(5,9).



From not living in harmony with nature, such as Thais becoming more Westernized in their ways of life, consuming more meat, milk and dairy products, sugar, processed foods, polished grains and chemicals while reducing body movements affect the quality of blood making it acidic (*Yin*). The Sympathetic and Para-sympathetic nervous systems have to adjust blood pH to 7.4 (*Yang*) at all time. When blood becomes acidic (*Yin*) the body will excrete glucagons (*Yin*) that will change glycogens in the liver and muscles into sugar and so blood sugar level will increase.

Objectives

- 1) To study the effect of the macrobiotic ways of living on blood sugar level, weight, pulse rate, and blood pressure, prior and after lifestyle modification.
- 2) To study the effect of the macrobiotic ways of living on quality of life, body, mind and spirit prior and after lifestyle modification.

Material and Method

A descriptive study done by bringing all DM volunteers who were being treated by a GP at the DM Clinic of Trad Provincial Hospital to live together at the Wanakaset Research Facility of Kasetsart University, Trad Province, which lies in a natural rehabilitated forest area.

The study program has received approval by the Board of Directors of Trad Provincial Hospital and in cooperation with the International Un Punto Macrobiotico Foundation, Italy, supported with human

resources of no less than 7 years of experience in macrobiotics to prepare food for volunteers throughout the program duration.

One medical doctor and one nurse were always available for the patients at the camp. One specialist, who is an internist, visited the camp once a week for evaluation of the patients' condition and to consider the dosage of the medication.

Formula 2 food used in the present study Program are macrobiotics as suggested by the International Un Punto Macrobiotico Foundation, Italy consist of:

Brown rice (Doi, Ocha, Jasmine), Millet, Barley (unpolished and polished).

Vegetables- Cabbage, Chinese Kale, Chinese Spinach, Green Oat, Coriander, Carrot, Onion, Radish.

Beans-Small red beans (Asuki), Chick pea, Lentils, Muszuri.

Seasonings-Unrefined sea salt, vegetarian kapi paste, vegetarian bean curd paste, soy sauce, crushed white sesame with salt, plum in brine.

Beverages- buncha Tea, Rice milk.

Kitchen Utensils- Pressurized Stainless steel pots, Stainless steel spoons and forks, ceramic plates and bowls, and avoiding chemical washing agents.

Eating sequence and portion as follows; (Diagram exhibits broad formulation for normal health people).

Cooking water used in this study is self-produced mineral water with pH = 7.2-7.3 (litmus paper tested)

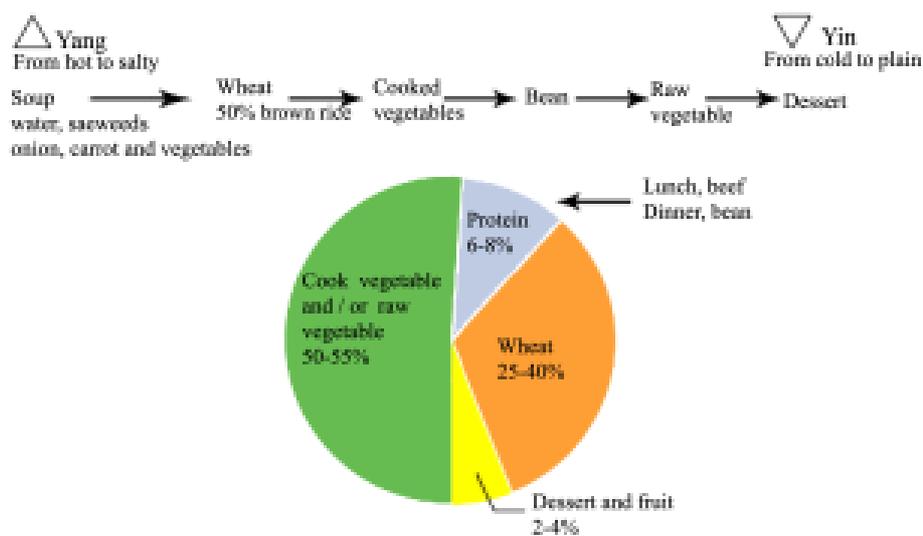


Fig. 1 Thai people eating portion

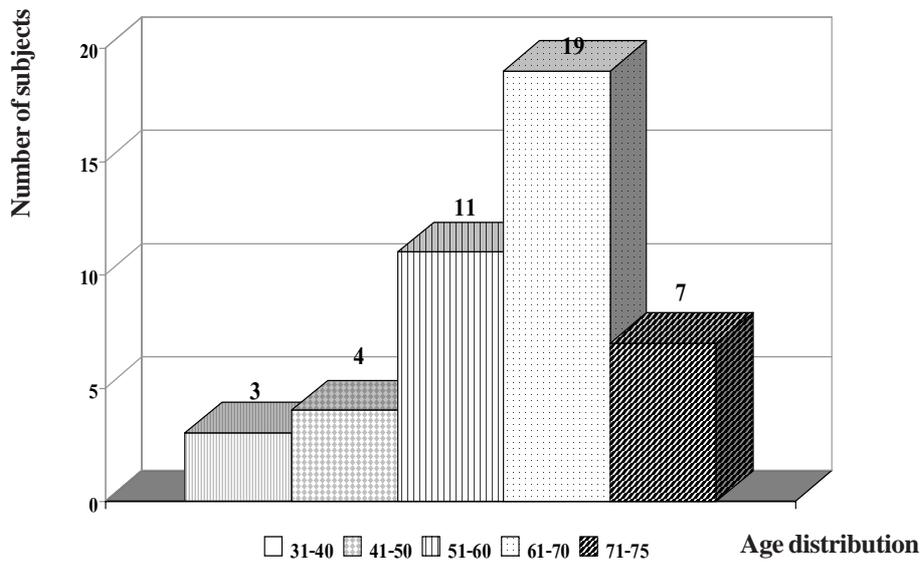


Fig. 2 Age group range of the volunteers

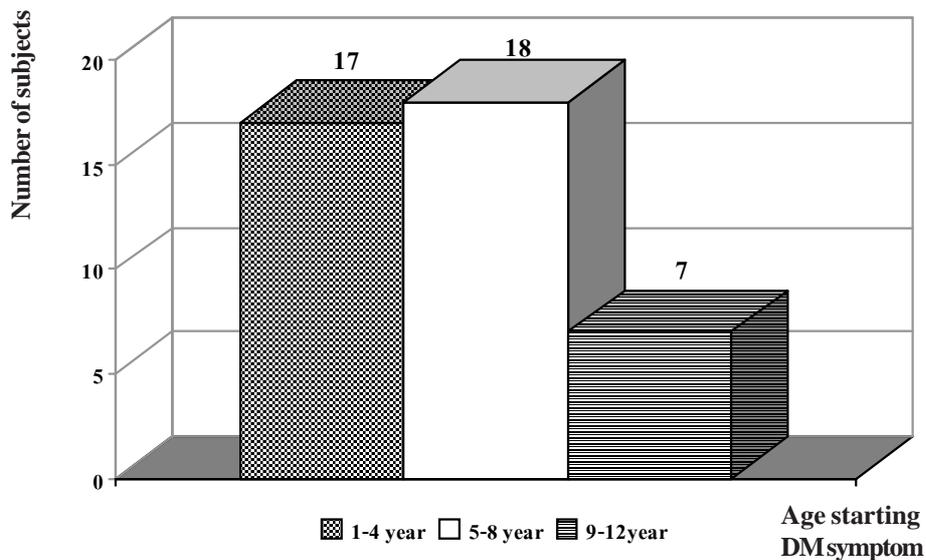


Fig. 3 Period in starting of DM symptom

The authors give them Macrobiotic ways of living and lifestyle that they should practice the following:

- Cooking in a peaceful state of mind with compassion, focus, good thoughts and well wishes.
- Eating in a comfortable and peaceful manner, being aware that we are building ourselves, blood, cells, and our biological components, in the process and should, therefore, be relaxed.
- Chewing food long and thorough (50-100 times) “Eat your drink and drink your food” In period of illness, chewing should not be less than a 100 times per spoon.
- Consuming food in an appropriate amount of about 70% of your hunger.
- Drink water after food or when thirsty only

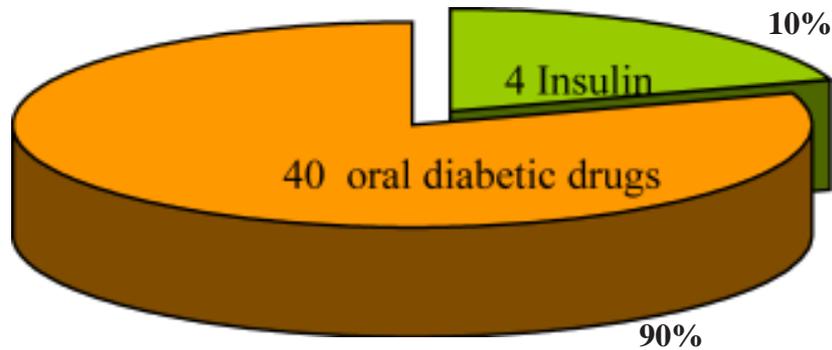


Fig. 4 Treatment method received by 44 volunteers

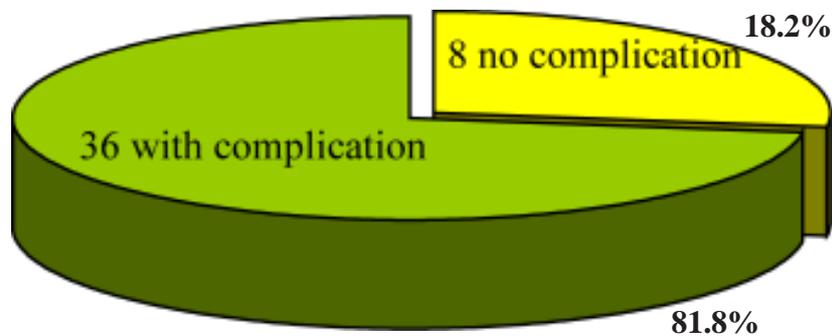


Fig. 5 Number of 44 volunteers with complications

(If the food is balanced, there should not be frequent thirst).

- Avoid late dinner and to go to bed 3 hours after dinner.
- Be alert and active always and do plenty of walking as walking is a good and suitable form of exercise for human beings.
- The best air is 2 hours after sunrise, walk bare footed to receive energy from nature.
- Keep the bathroom, living room and bedroom tidy and cozy at all times (a good form of exercise as well).
- Wipe yourself clean with a natural cotton towel in either cool or warm water every morning and evening before going to bed. Give a thorough wiping till skin reddens and strong massages to the fingers and toes. Avoid a long shower.
- Avoid the use of chemical substances as much as possible. Use only when it is vital to saving

life and to stop using immediately upon recovery.

- Massage yourself at least 10-15 minutes every morning and evening.
- Wear simple natural fiber clothing such as cotton or silk.

Criteria in choosing volunteers

1. Being a diagnosed patient at the DM Clinic and receiving treatment. Volunteer into the study program with consent.
2. Able to live on the facility for at least 2 weeks or as voluntarily but not exceeding 14 weeks.
3. Refrain from all medication and using the least possible chemicals. Wearing and using only natural fiber clothing and cloths.
4. Consuming only macrobiotic food Formula 2 as prepared by the Foundation staff. (See appendix for food formulation 1-5).
5. Must be able to read and write.

Exclusion criteria

1. Having severe disease complication and is not self reliant.
2. Unable to remain in the program for at least 2 weeks.

All volunteers must fill out a QOL assessment form (SF36 as modified by WHO assessment form) personally on the day of entering into program and on the day of leaving the program and participating in the daily activities as described in the appendix.

On every Wednesday, all volunteers must refrain from food as of midnight so that a blood sample can be drawn by the hospital's lab technicians for laboratory assessment on fasting blood sugar level.

Statistical analysis

Assessment questionnaire form has been verified for validity by Cronback's Alfa method, data presented by counting number, Mean \pm SD and percentage, Linear regression with ANOVA and sample paired t-test and or Wilcoxon Singed Ranks Test where appropriated with $p \leq 0.05$ was considered statistically significant. Statistic analysis was used by SPSS version 12.0 software program.

Results

All volunteers are of type 2 DM and are not reliant on insulin with the exception of 4 volunteers

being reliant on insulin injection due to hyporesponsiveness to oral diabetic drugs, allergic to diabetic drugs and having infection on left leg as shown in Fig. 3.

The majority of volunteers had DM complications (such as numbness of the feet hypertension, renal failure, heart disease etc.) as shown in Fig. 4.

There's a total of 44 volunteer subjects of type 2 DM in the present study program, 10 males (22.73%) and 34 females (77.27%), 7 persons between the age of 31-50 years old (15.91%) and 37 persons between the age of 51-75 years old (84.09%). 40 patients (90.01%) were on oral medication, and 4 (9.09%) were on insulin injections due to hyporesponsivity and allergy to medication, or with infection. 37 persons (79.55%) are of disease's manifestation period between 1-8 years and 7 patients (15.91%) are of disease's manifestation period between 9-12 years.

The majority of volunteers, 36 persons (81.82%) had symptoms; 8 (18.18%) with hypertension, 2 (4.55%) with high cholesterol, 2 (4.55%) with obesity.

Upon completion of the program, a significant reduction ($p \leq 0.000$) in weight, 6-hours fasting blood sugar level, pulse rate, and blood pressure of all volunteer subjects without the use of drug is found.

Before the start of the program, health evaluation questionnaires revealed that most subjects experienced health problems being; feeling of being

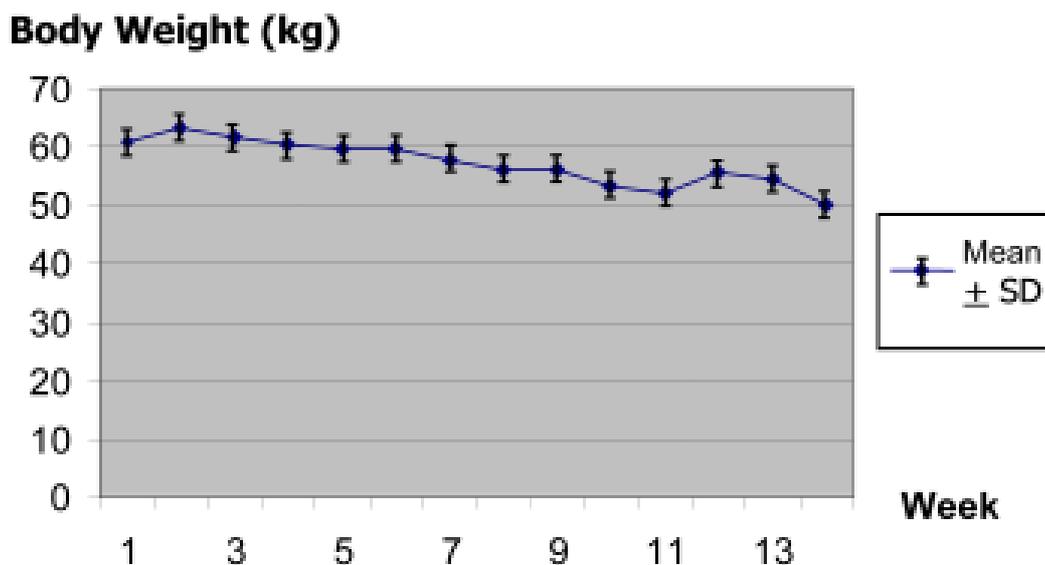


Fig. 6 Volunteer's body weight declining in each week till end of program $p \leq 0.000$

Blood sugar (mg%)

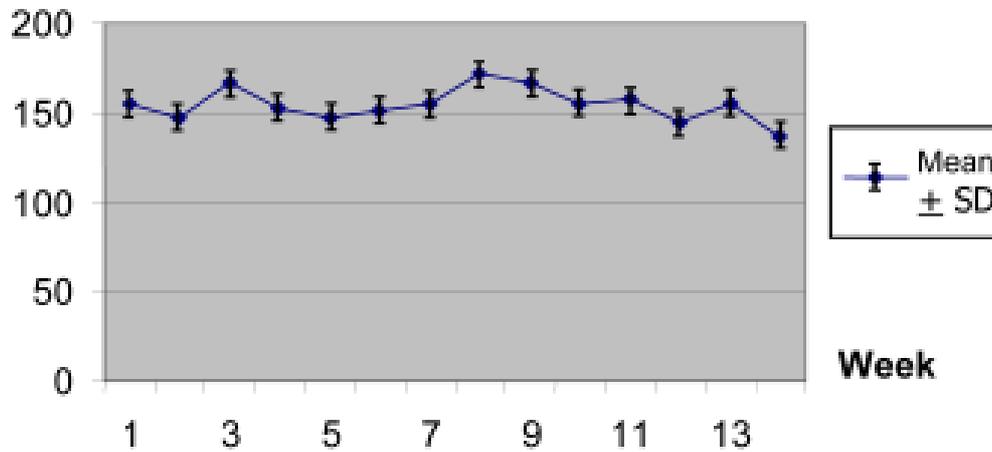


Fig. 7 Reduction in fasting blood sugar level in each week till end of program $p \leq 0.000$

Blood Pressure

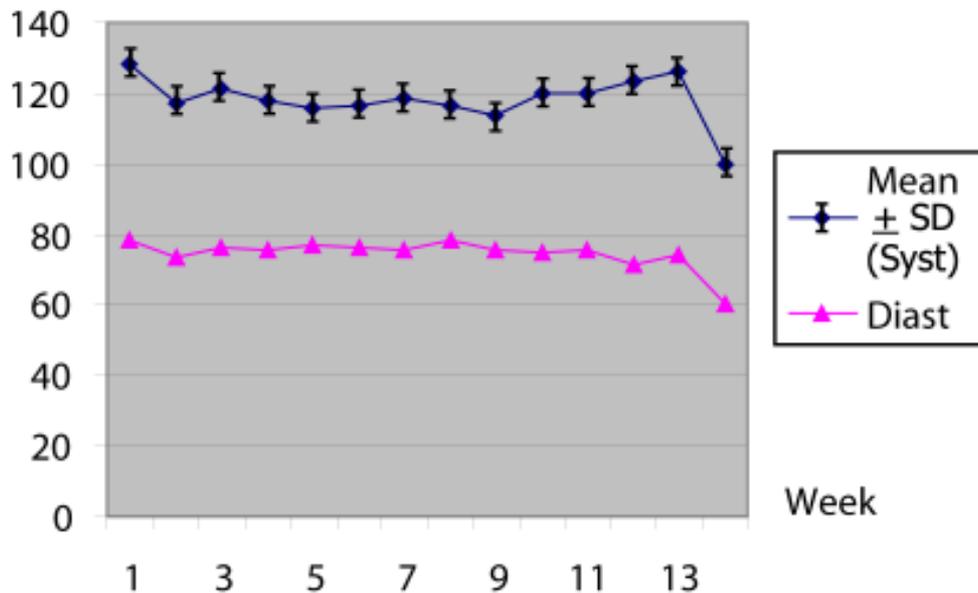


Fig. 8 Weekly blood pressure in $p \leq 0.000$

unhealthy 83.3%, reduction in the ability to bend over picking up object, kneeling, and bending over 66.7%, reduction in the ability to walk for more than 1 km 71.4%, body aches 85.6%, difficulty in accomplishing chores 80.9%, and feeling of degenerating health 76.1%. At

the end of the program, health assessment questionnaires revealed a significant ($p \leq 0.000$) reduction in all the above points.

Emotional assessments on feeling lively, anxiety, depression, feeling well and peaceful, feeling

Pulse rate

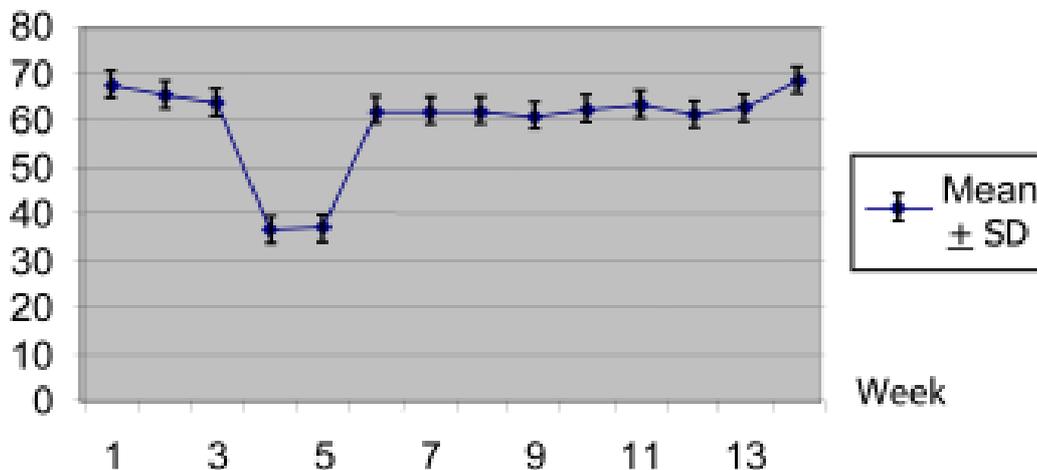


Fig. 9 Reduction in pulse in each week till end of program $p \leq 0.000$

energetic upon completion of program also revealed significant ($p \leq 0.000$) improvements.

85.7% reports better health compared to a year earlier ($p \leq 0.000$) and 81% reports better emotional status compared to a year earlier ($p \leq 0.000$).

All volunteer subjects were able to stop using diabetic drugs and control blood sugar level through lifestyle modification and most importantly, everyone felt lively, fresh, energetic with improved quality of life.

Discussion

Data deriving from statistical analysis demonstrates that Type 2 DM patients, living the macrobiotic way of life were able to manage their health holistically as clinical data have shown that during their participation the study program, blood sugar level, weight, pulse, and blood pressure can be managed without the need of drugs or medication. Apart from this, overall well-being - body, mind, and spirit have also improved; such as the feeling of liveliness, energetic and better emotions.

The 4 volunteer subjects that were dependant on insulin injection have been able to maintain their blood sugar level to be between 110-171 mg% and as with all volunteer subjects experienced no complications.

Therefore, if the authors sought good health, recovery, and being in a blissful stage of mind, the authors must start by living in tune and harmony with

the laws of nature. The authors must uphold the 4 great virtues of mercy, compassion, gratitude, and appreciation. The authors must appreciate and be grateful to all things in connection with the authors' lives including the air, the water, the sunlight, brown rice, beans, vegetables, microbes etc. For these things are, even in the tinniest of ways, affecting our lives. And when the authors have obtained the wisdom, good health, and happiness we should share them with all our friends and fellow human beings on this earth^(5,9).

Acknowledgements

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Appendix 1

Macrobiotic food formulas by Mr. Mario Pianesi as modified from Mr. George Ohsawa's concept.

Mr. George Ohsawa has classified food into 3 categories:

1. Food that can be taken regularly with healing properties

Table 1. Health assessment through QOL questionnaire reveals health improvement after finishing program*

| 1) Overall Health | | Before (%) | After (%) | p-value |
|---|------------------------|------------|-----------|---------|
| | Very bad | 71.1 | 0 | |
| | Moderate | 76.2 | 21.5 | |
| | Good | 16.7 | 78.6 | <0.000 |
| <hr/> | | | | |
| 2) Daily activity | | | | |
| 2.1 Bending to pick up things | | Before (%) | After (%) | |
| | Limitation of movement | 14.3 | 7.1 | |
| | Better movement | 52.4 | 14.3 | |
| | Much better | 33.3 | 78.6 | |
| 2.2 Walking for more than 1 km | | | | |
| | Much less | 4.8 | 2.4 | |
| | Moderately less | 50.0 | 7.1 | |
| | No less | 76.2 | 97.6 | |
| 2.3 Showering and dressing | | | | |
| | Much less | 4.8 | 0 | |
| | Moderately less | 19.0 | 2.4 | |
| | No less | 76.2 | 97.6 | <0.000 |
| <hr/> | | | | |
| 3) Health problems affecting work | | | | |
| 3.1 Reduce working hour | | Before (%) | After (%) | |
| | Often | 33.3 | 7.1 | |
| | Sometimes | 52.4 | 26.2 | |
| | Never | 14.3 | 66.7 | <0.000 |
| 3.2 Difficulty in working and requiring more efforts | | | | |
| | Often | 23.8 | 7.1 | |
| | Sometimes | 57.1 | 19.0 | |
| | Never | 19.0 | 73.2 | <0.000 |
| <hr/> | | | | |
| 4) Body aches | | Before (%) | After (%) | |
| | Much aching | 28.6 | 0 | |
| | Moderate aching | 57.0 | 54.2 | |
| | No aching | 14.3 | 35.7 | <0.000 |
| <hr/> | | | | |
| 5) Psychological problems affecting social activities | | | | |
| | Greatly affected | 19.0 | 0 | |
| | Moderately affected | 28.1 | 11.3 | |
| | Not affected | 52.4 | 88.1 | <0.000 |
| <hr/> | | | | |
| 6) Emotions and feelings | | | | |
| 6.1 Feeling lively | | Before (%) | After (%) | |
| | Always | 26.2 | 71.5 | |
| | Sometimes | 59.4 | 48.6 | |
| | Never | 14.3 | 0 | |
| 6.2 Feeling of anxiety | | | | |
| | Always | 16.7 | 2.4 | |
| | Sometimes | 42.8 | 33.4 | |
| | Never | 40.5 | 64.3 | <0.000 |
| 6.3 Feeling depressed | | | | |
| | Always | 9.5 | 2.4 | |
| | Sometimes | 28.6 | 16.7 | |
| | Never | 61.9 | 81.0 | <0.000 |

(cont.)

Table 1. (cont.)

| | | | |
|---|------------|-----------|---------|
| 6.4 Feeling well and peaceful | Before (%) | After (%) | p-value |
| Always | 42.8 | 88.1 | |
| Sometimes | 42.3 | 11.9 | |
| Never | 4.8 | 0 | <0.000 |
| 6.5 Feeling energetic | | | |
| Always | 31.0 | 78.5 | |
| Sometimes | 52.4 | 16.7 | |
| Never | 16.7 | 4.8 | <0.000 |
| <hr/> | | | |
| 7) Feelings on health condition | | | |
| 7.1 Feeling more vulnerable than others | Before (%) | After (%) | |
| Certainly | 52.4 | 16.7 | |
| Unsure | 26.2 | 23.8 | |
| Not | 21.4 | 59.5 | <0.000 |
| 7.2 Anticipating worsening of conditions | | | |
| Certainly | 50.0 | 7.2 | |
| Unsure | 26.1 | 21.4 | |
| Not | 23.8 | 71.4 | <0.000 |
| <hr/> | | | |
| 8) Health comparison to 1 year before | Before (%) | After (%) | |
| Better than before | 21.5 | 85.7 | |
| Same as before | 28.6 | 9.5 | |
| Worse than before | 50.0 | 4.8 | <0.000 |
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| 9) Emotional condition comparing to 1 year before | Before (%) | After (%) | |
| Better than before | 30.9 | 81.0 | |
| Same as before | 47.6 | 16.7 | |
| Worse than before | 21.4 | 0 | <0.000 |

* Comparison in mind, body, and spirit evaluations before and after program. Health conditions at the end of program show significant improvements in all areas compared $p \leq 0.000$ with Wilcoxon Sign rank test

2. Food that can be taken occasionally for health enrichment

3. Food that is harmful

Mr. Mario Pianesi has been studying for over 30 years into the Yin-Yang Theory and the Five Elemental Transformation Theory and has developed 5 food formulations for healing and health enrichment purposes.

Formula 1: Use for healing, consists of:

- 1) Wheat: brown rice (glong doi), rice milk
- 2) Seasoning: Sea salt
- 3) Beverage: Buncha tea

Formula 2: Use for healing, consists of:

- 1) Wheat: all brown rice, millet, fragrance brown rice, barley (polished and unpolished)
- 2) Vegetable: cabbage,
- 3) Beans:

4) Seaweeds: Wagabe, Kombu, Nori

5) Seasoning: Sea salt, Miso, Tamari,

6) Beverage: Buncha tea

Formula 3: Use in health promotion and disease prevention in minor health conditions such as headache, muscle soreness. (without use of oil)

- 1) Wheat:
- 2) Vegetable:
- 3) Protein:
- 4) Seasoning:
- 5) Seaweeds:
- 6) Beverage:
- 7) Desert:

Formula 4: Use in health enrichment and disease prevention.

- 1) Wheat:
- 2) Vegetable:

| | |
|---------------|--|
| 3) Protein: | |
| 4) Seasoning: | 19.00-21.00 hr Macrobiotic class and discussion or Q & A |
| 5) Fruit: | |
| 6) Desert: | |
| 7) Beverage: | 21.00-22.00 hr Prayers and Meditation |

Formula 5: Broad spectrum formula for general health promotion and disease prevention.

- 1) Wheat:
- 2) Vegetable:
- 3) Seasoning:
- 4) Desert:
- 5) Beverage:

22.00 hr Rest

Appendix 2. Volunteers' activities

| | |
|----------------|--|
| 05.00 hr | Wake up, take body weight, measure blood pressure, take pulse rate by well trained public health volunteer |
| 05.00-06.30 hr | Tidy living quarter, cleanse body with water and cotton towel |
| 06.30-08.00 hr | Self massage, Tai Ji, or Yoga |
| 08.00-09.00 hr | Breakfast (chewing slow, easy and relaxed) |
| 09.00-10.00 hr | Strolling through the woods |
| 10.00-12.00 hr | Macrobiotic food preparation demonstration, making vegetarian paste, soy sauce, and probiotics |
| 12.00-13.00 hr | Lunch (compound soup) |
| 13.00-14.00 hr | Strolling through the woods |
| 14.00-16.00 hr | Resting at leisure or weaving activity |
| 16.00-17.00 hr | Self massage or Yoga |
| 17.00-18.00 hr | Dinner |
| 18.00-19.00 hr | Strolling around the premises or group discussion |

References

1. Benjasuratwong Y, Suthijumroon A, Nitiyanant W. Diabetes Study Group of Thailand. Diabetes management in Thailand and the outcome. 9th Annual Asia-Pacific Military Medicine Conference, 7-12 March 1999, Bangkok, Thailand. (Abstract).
2. Nitiyanant W. Diabetes mellitus in Thailand. J Asean Fed Endocr Soc 1999; 17(Suppl 2): 18-25.
3. World Health Organization. Fact sheet No. 138. Diabetes mellitus. Revised April 2002. Available at: www.who.int/inf-fs/en/fact138.html.
4. Ohsawa G. Zen Macrobiotics: the art of rejuvenation and longevity. 4th ed. Oroville, CA: George Ohsawa Macrobiotic Foundation; 1995: 34-119.
5. Aihara H. Seven basic macrobiotic principles. Oroville, CA: George Ohsawa Macrobiotic Foundation; 1984: 12-109.
6. Muramoto N. Natural immunity. Oroville, CA: George Ohsawa Macrobiotic Foundation; 1988: 34-156.
7. Kushi M. Macrobiotic way. 3rd ed. Oroville, CA: George Ohsawa Macrobiotic Foundation; 1985: 1-163.
8. Ohsawa G. Macrobiotic guidebook for living. Oroville, CA: George Ohsawa Macrobiotic Foundation; 1985: 1-124.
9. Kervran CL. Biological transmutations. Oroville, CA: George Ohsawa Macrobiotic Foundation; 1976: 1-52.
10. Bursell K. The end of medicine. Hooksett, NH: Discount Natural Foods; 2000: 1-191.
11. Aihara H. Acid and alkaline. Oroville, CA: George Ohsawa Macrobiotic Foundation; 1986: 1-117.
12. Ohsawa G. Book of judgement. Oroville, CA: George Ohsawa Macrobiotic Foundation; 1984: 1-114.

การดูแลรักษาผู้ป่วยเบาหวาน โดยระบบพึ่งพาตนเองตามแนวทางแมคโครไบโอติกส์ กรณีศึกษาที่จังหวัดตราด

จักรกฤษณ์ ภูมิสวัสดิ์, โอบาส หว่านนา, นวลจันทร์ สุรินทร์แปง

เบาหวานเป็นปัญหาสุขภาพที่ต้องสูญเสียค่าใช้จ่ายในการดูแลรักษาสูง และเป็นปัญหาเรื้อรังและสิ้นเปลืองค่าใช้จ่ายมหาศาลทั้งในระดับบุคคลและระดับประเทศ ด้วยวิถีชีวิตที่เปลี่ยนไปทำให้อุบัติการณ์เพิ่มขึ้นทั่วโลกอย่างน่าเป็นห่วงไม่เว้นแม้แต่ในประเทศไทย การรักษาโดยแพทย์แผนปัจจุบันได้แก่ การปรับเปลี่ยนวิถีชีวิตและใช้ยาลดน้ำตาลซึ่งแม้จะมียาใหม่ ๆ ก็ดูเหมือนไม่ได้ ช่วยควบคุมระดับน้ำตาลในเลือดได้ดี

แมคโครไบโอติกส์เป็นอีกทางเลือกของการดูแลสุขภาพอย่างครบองค์รวม เพราะตามหลักการของแมคโครไบโอติกส์มนุษย์ต้องใช้ชีวิต ต็มกิน เป็นอยู่ให้สอดคล้องกับกฎของธรรมชาติ นำไปสู่การมีสุขภาพดี มีอิสระเสรี มีปัญญาแจ่มในกฎของธรรมชาติ นั่นคือการใช้ชีวิตที่สอดคล้องกับแนวทางแมคโครไบโอติกส์จึงเป็นการดูแลทั้งสุขภาพของกาย อารมณ์ จิตใจ และสิ่งแวดล้อมแบบพึ่งพาตนเองบนพื้นฐานของความพอเพียง การช่วยเหลือเกื้อกูลกัน

งานวิจัยนี้มีอาสาสมัครที่เป็นเบาหวานชนิดที่ 2 จากคลินิกโรคเบาหวานโรงพยาบาลจังหวัดตราด 44 คน ซึ่งรักษาด้วยยาเบาหวานชนิดกิน และมีผู้ป่วยฉีดอินซูลิน 4 คน มาใช้ชีวิตที่สอดคล้องกับแนวทางแมคโครไบโอติกส์ร่วมกัน ณ ศูนย์วิจัยวนเกษตร มหาวิทยาลัยเกษตรศาสตร์ จังหวัดตราด ซึ่งเป็นพื้นที่ป่าธรรมชาติห่างจากตัวจังหวัดตราดประมาณ 45 กิโลเมตร เป็นเวลาอย่างน้อย 2-14 สัปดาห์ โดยอาสาสมัครทุกคนงดยาทุกชนิด งดสารเคมี กินอาหารสูตร 2 โดยมูลนิธิธัญชาติ อุณพรุณโตแมคโครไบโอติกโก ประเทศอิตาลี และมีกิจกรรมร่วมต่าง ๆ ตามที่ค้ายกำหนด พบว่าหลังเสร็จสิ้นโครงการ ระดับน้ำตาลในเลือด น้ำหนัก ความดันโลหิต อัตราการเต้นของหัวใจลดลงอย่างมีนัยสำคัญทางสถิติ ($p \leq 0.000$) และ จากการตอบแบบสอบถามประเมินภาวะสุขภาพทั้งทางกาย อารมณ์ จิตใจ พบว่าหลังเสร็จสิ้นโครงการอาสาสมัครมีสุขภาพโดยรวมดีขึ้น มีความกระปรี้กระเปร่า มีความสุขสงบ รู้สึกมีพลังกำลังเพิ่มขึ้นอย่างมีนัยสำคัญทางสถิติ ($p \leq 0.000$) รวมทั้งอาสาสมัคร 4 คนที่ต้องฉีดอินซูลินก็สามารถควบคุมระดับน้ำตาลในเลือดได้ระหว่าง 110-171 มก.% โดยไม่ต้องฉีดอินซูลิน และไม่มีภาวะแทรกซ้อนใด ๆ ในอาสาสมัครทั้งหมด

ผลการศึกษาดังกล่าวอาจนำไปใช้เป็นแนวทางแนะนำในการปรับนโยบาย เพื่อนำไปสู่การพัฒนาการดูแลสุขภาพทางเลือกที่ได้ผลในการดูแลผู้ป่วยเบาหวานที่ประหยัดงบประมาณของประเทศทั้งในทางตรงและทางอ้อมเป็นอย่างดี
