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22. COMPLEMENTARY PERSPECTIVES ON THE ENIGMA OF DIABETES MELLITUS

ABSTRACT

In this chapter we describe what we learned from a two-year, ongoing study of Diabetes Type 2 and its potential treatment using Jin Shin Jyutsu as a complement to Western medicine. We investigated physiological changes as Jin Shin Jyutsu was administered and directly after. In particular, we identified Jin Shin Jyutsu flows that consistently reduced blood sugar concentration and we studied associated changes in blood oxygen saturation and pulse rate. Consistent with Jin Shin Jyutsu being an art rather than a system of techniques, we learned that the most appropriate flows used in a session were based on what was observed in a pre-treatment reading of the pulses and the signs of the body (e.g., blockages of universal energy, torques in the body, and visible regions of excess and deficiency of energy in the body).

We learned that the flows we used often were associated with reduction of blood sugar concentration, frequently between 20% and 30%. We learned that “less is more” in that it is preferable to use fewer flows in a shorter time than to complete more flows or increase treatment time. We also learned that when Jin Shin Jyutsu flows are used in a treatment of Diabetes Type 2, blood oxygen concentration drops into the low 90% region – that is, Jin Shin Jyutsu flows seem to put oxygen to work and thereby to reduce blood oxygen concentrations.

Keywords: Diabetes Type 2, Jin Shin Jyutsu, complementary medicine, blood sugar, Qi, pancreas, liver

Diabetes Mellitus Type 2 is an international problem that proves costly in terms of economic and human suffering. The International Diabetes Foundation (2015) noted that 415 million people had Diabetes, an enormous figure that is accelerating toward a projected 642 million, or 1 in 10 adults, by 2040. The economic costs are huge, estimated to be \$673 billion per year – equivalent to 12% of global expenditure on healthcare. Although 75% of those with Diabetes are from countries classified as low and middle income, almost 30 million Americans have Diabetes and nearly 3 times that many are prediabetic. Two additional concerns are that approximately 25% of seniors are diabetic and among those aged 65 years and over, there are diagnoses of an additional 1.4 million cases a year. In the United States, Diabetes is the seventh leading cause of death. Alarming, among the population that is older than 20 years, approximately 60% of lower-limb amputations occur in those diagnosed with Diabetes.

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Statistics and trends like these raise questions regarding the role of science education in educating the public about wellness, as it relates to Diabetes Type 2. It seems desirable for people across the age spectrum to be aware of Diabetes Type 2 and its relationship to lifestyle – especially maintaining appropriate practices relating to diet and exercise. Also, in terms of preventative medicine, it is likely there are practices that can be taught and learned so that causes and symptoms associated with the onset of Diabetes Type 2 can be successfully addressed and ameliorated before prediabetic conditions are even diagnosed. In this chapter, we address becoming aware of Diabetes Type 2 and monitoring and adjusting lifestyles to avoid Diabetes Type 2 entirely or to diminish its harmful effects.

We regard it as a goal to identify knowledge, including practices, that can be adopted by those who are already diagnosed as prediabetic or diabetic. We embrace the hope expressed by Anja Bettina Hell that Diabetes Type 2 can be decelerated, stopped, and reversed, “as long as there are pancreatic cells delivering insulin” (2014, p. 9). Accordingly, in 2014 Ken and Nick commenced research associated with the use of Jin Shin Jyutsu to ascertain whether it could assist a body diagnosed with Diabetes Type 2 to heal and diminish the symptoms while addressing the causes of Diabetes Type 2. Readers who have not done so already can read more about the history and applications of Jin Shin Jyutsu in chapters 17–21 – authored by Maria Miniello, Pamela Proscia, Jed Schwartz, Małgorzata Powietrzyńska, and Ferzileta Gjika.

Nick: My Diabetes Type 2 started 20 years ago in Townsville, when I was eating breakfast. I had swelling on my face – like bumps. I went to the doctor but he could not diagnose the problem. Then, one day I went to see another doctor who was doing whole body bloodwork. On this occasion the doctor found out I had high morning sugar levels. So, that was when I was diagnosed – in the year 2000. I was in my 40 s.

Since the initial diagnosis of Diabetes Type 2, Nick’s treatment by Western doctors has involved office visits during which the doctors reviewed medication dosages in relation to physiological indicators. As is evident in Nick’s descriptions of his history with Diabetes Type 2, the doctors appear to accept that the disease will continue with little or no possibility of freeing the body of Diabetes Type 2 and assuming medication-free, good health. The pancreas, liver, other organs, glands, and neural networks are considered to be beyond repair and wellness can be sustained pharmaceutically, supported by changes in lifestyle.

Diabetes Type 1 occurs when the body’s defense system attacks the cells that produce insulin – it is an auto-immune reaction. Unlike Diabetes Type 2 which tends to develop in mature aged adults (i.e., 40 plus years of age), Diabetes Type 1 usually develops in children or younger adults. Although conventional wisdom in Western medicine considers Diabetes Type 1 as beyond cure, recent advances in stem cell research offer some hope of a cure. Hell (2014), reviewed some interesting developments in the treatment of Diabetes Type 1, involving pre-programming of

stem cells to produce insulin. She suggests that Jin Shin Jyutsu may have a promising role in harmonizing the immune system through the use of flows such as the Spleen Flow. In this chapter, we do not address treatments of Diabetes Type 1.

Comments on the Remainder of this Chapter

Nick, who has reviewed, edited, and contributed to the entire text, approached Ken in December 2014 with the idea of doing a study on the uses of Jin Shin Jyutsu to treat Diabetes Type 2. As a person diagnosed with Diabetes Type 2, who has lived with the disease for almost two decades, Nick was highly committed to the research and has received treatment from and continuously interacted with Ken face-to-face, as well as through the use of text messaging, telephone, and email. In writing this text, personal pronouns, I and me, are reserved for Ken, who wrote the manuscript. The text is unambiguously labeled when Nick presents information.

In terms of using Jin Shin Jyutsu to address Nick's wellness, there are advantages and disadvantages in knowing and using labels associated with a diagnosed health project. Basically, the Jin Shin Jyutsu philosophy is to focus on Qi flow, identifying disharmonies and irregularities in flow – associated with misdirection, accumulation, deficiency, etc. For these reasons, rather than labeling on the basis of symptoms or a prescribed disease, the Jin Shin Jyutsu approach is to consider disharmonies as projects, where treatments address energy blockages and flows in an in-the-moment manner. The chief advantage of the Diabetes Type 2 label is that it affords me preparing thoroughly, compiling a list of approaches that have been used by Jin Shin Jyutsu practitioners to successfully treat Diabetes Type 2, including faculty from the Mary Burmeister Jin Shin Jyutsu Institute. Similarly, the Diabetes Type 2 label allows for computer searches for others who have published what they learned about uses of Jin Shin Jyutsu in relation to Diabetes Type 2 projects. In this vein, a significant contribution to the literature is Hell (2014) – a review paper that addresses Diabetes Type 2 from the perspectives of Western medicine and Jin Shin Jyutsu.

In the remainder of this chapter we address: complementary medical practices; polyvagal theory, Diabetes Type 2; Diabetes Type 1; uses of Jin Shin Jyutsu; self-help; and research and practice for the road ahead. Since education, change, and beneficence are central to this research, our ongoing work continues to embrace multilogicality and includes different medical knowledge systems that can be used to change lifestyles, increase harmony, and improve wellness.

DIABETES TYPE 2

In this section, we address polyvagal theory as a potential framework for understanding and treating Diabetes Type 2, disharmonies that lead to Diabetes Type 2, and prescription drugs used to control Nick's Diabetes Type 2.

The Polyvagal Theory

When we eat food, digestion breaks down carbohydrates into glucose molecules and proteins into amino acids, which are absorbed into the bloodstream. The body needs to store nutrients and release energy as necessary throughout the day. The pancreas and liver are central organs in the control of blood sugar concentration and Diabetes Type 2, controlling metabolic functions that supply energy to the cells. The vagus nerve connects to the pancreas and liver, controlling these organs autonomically.

Two major categories of nerves are the central nervous system (brain and spinal cord) and the peripheral nervous system, the latter connecting the brain and spinal cord with sensory receptors, muscles, and glands. The autonomic nervous system (ANS), which is considered involuntary (i.e., without conscious effort), conducts impulses from the brain and spinal cord to smooth muscle tissue, cardiac muscle, and glands. The ANS affords the human body dealing with emergencies, emotions, and physical activities. There are two parts – sympathetic and parasympathetic.

The fibers for the sympathetic nervous system (SNS) arise from the thoracic and lumbar regions of the spinal cord. The SNS addresses fight or flight situations, stressful times when the body requires energy. The response will usually increase heartbeat and breathing rate. Physiological indicators include dilation of respiratory pathways, and increases in blood pressure, heartbeat rate, and sweating. In contrast, the parasympathetic nervous system (PNS) operates under normal, non-stressful conditions. PNS can restore the body to a restful state after a stressful experience. To some degree the PNS is a counterbalance to the SNS. The nerve fibers for the PNS arise in the brainstem (e.g., the cranial nerves, especially the vagus) and the sacral region of the spine. The PNS stimulates processes such as digestion, urination, and defecation. Physiological indicators of the PNS functioning are slower heartbeat, lower blood pressure, and slower breathing rate.

Although both branches of the vagus nerve are part of the parasympathetic nervous system (PNS), the left and right branches of the vagus nerve are asymmetrical in terms of structure and function. According to polyvagal theory (Porges, 2011) the left vagus is much older and slower in an evolutionary sense and is often referred to as the reptilian vagus. In mammals, the left vagus is primitive, non-myelinated, and slow compared to the right vagus, which is myelinated.

Neuroception is a feedback system from the organs to a monitoring system controlled by the vagus. Neuroception monitors levels of social and physical risk, changing levels of activity to afford appropriate bodily responses to stress, altering the activity of the branches of the vagus nerve and its homeostasis with the splanchnic nerve, which is part of the SNS. Two modes of risk involve different physiological responses. When neuroception assesses less extreme situations, (right) vagal activity diminishes and the splanchnic nerve mobilizes muscles and glands for flight or fight actions. When this occurs, social communication functions of the body are shut down – that is, the right vagus is suppressed in relation to the left vagus and there is a limitation in the functioning of the voice, facial expression of emotions,

and differentiating different types of sound (e.g., human voices from other sources of noise). If heightened danger is perceived, the left vagus is activated in a shutdown process – feigning death, conserving energy by shutting down many of the body’s functions. Humans might associate this condition with a giddy sensation, fainting, and in extreme cases, death. Vagal control of organs is direct, and pulse rate and oxygenation can be directly changed based on the assessment of risk (Porges, 2009).

Central to our work in this chapter is the role of the vagus nerve in relation to concentrations of glucose in the blood. Our work is consistent with a conclusion offered by Karen Teff that, “the vagus nerve ... plays a critical role in the regulation of blood glucose levels and is an often overlooked factor contributing to glucose homeostasis” (2008, p. 569). The pancreas functions as two glands in one, each modulated by a separate vagal circuit – a digestive gland and a hormone producing endocrine gland. Enzymes released by the digestive gland break down proteins, lipids, carbohydrates, and nucleic acids in foods. The endocrine functions produce insulin and glucagon, which are necessary for the control of blood sugar. Electrical stimulations of the pancreatic and gastric branches of the vagus are solely responsible for insulin and glucagon secretion, which regulate blood glucose levels.

Kathy Abascal (2011) provides a clear description of an insulin/glucagon seesaw. As the concentration of glucose in the blood rises above normal, the pancreas secretes insulin. In a context of increasing insulin concentrations, the liver then begins to remove excess blood sugar, which is converted to glycogen and stored in the liver. This process harmonizes blood sugar levels in the normal range and insulin release ceases.

The liver is the organ that controls storage and release of nutrients. As the body burns fuel or glucose to make energy available, blood sugar levels drop and the pancreas secretes glucagon, a signal to the liver to convert glycogen to glucose, which is released into the bloodstream. M. Clement Hall (2011, p. 96) notes:

When the glycogen in the liver is completely converted to glucose, glucagon continues as the hyperglycemic hormone by setting in process mechanisms to convert amino acids to glucose.

As blood sugar levels rise, glucagon secretion decreases. When the body is functioning normally, glucose levels in blood plasma are relatively constant (i.e., harmonized in the range from 70–100 mg/dL).

Disharmonies Lead to Diabetes Type 2

Diabetes Type 2 is characterized by high blood sugar levels and possibly sugar in the urine. Abascal (2011) notes that, “due to sugar spikes, over eating, and eating too often, our muscles and liver cells become saturated with glycogen ... liver and muscle cells quit responding to insulin and do not absorb glucose from the blood” (p. 133). When this condition (i.e., insulin resistance) occurs, fat cells absorb excess glucose and store it as fat. Diabetes Type 2 can occur when the pancreas does not provide sufficient insulin to prevent an increase in the concentration of glucose in the blood or

insulin is no longer effective in this role because cells that need energy become insulin resistant – i.e., when cells that normally take in glucose for further transformation cease doing so. Accordingly, only some glucose gets into cells, leaving most of the glucose and insulin in the blood, a disharmony that can lead to health projects associated with the heart and kidneys. With high levels of blood sugar, the pancreas endeavors to produce more insulin, which is ineffective in reducing glucose levels. As concentrations of insulin in the blood increase the potential for insulin resistance increases. If the blood sugar levels are too low, cells shut down their function. If the levels are too high, some organs can suffer long-term damage.

Prescription Drugs to Control Nick's Diabetes Type 2

Nick: Initially my Diabetes Type 2 was controlled by the food I was eating, then slowly medication was introduced during the first five years. The medication encouraged the pancreas to produce more insulin. That went on for four or five years and then I asked my doctor to prescribe insulin to assist the pancreas to sustain appropriate insulin levels – to allow the pancreas to get some rest. The doctor hoped this would permit the pancreas to recover. Since then I have taken two medications – insulin and metformin. My dosages are as follows:

Metformin 1000 mg (breakfast) + 1000 mg (dinner)

Insulin short acting (Novolog) 12 units: Breakfast, lunch and dinner. Holds me for three hours in the sense that any sugar in the blood is handled by this insulin as if the pancreas was making it.

Insulin long acting (Lantus) 12 units: before going to bed; holds me for 24 hours.

Metformin combined with insulin provides greater glycemic control than insulin therapy alone. Metformin lowers glucose production in the liver and assists in making better use of the insulin in the body. Metformin also increases the sensitivity of cells to insulin, thereby increasing the amount of glucose taken into the cells. In addition, metformin reduces the amount of sugar absorbed by the intestines.

JIN SHIN JYUTSU AS A COMPLEMENTARY MEDICAL PRACTICE

Jin Shin Jyutsu originated in Japan and was built from a foundation of ancient Asian practices, including mudras documented by Tantric Buddhists, acupuncture, and intensive and extensive empirical research undertaken by Jiro Murai in the early 20th century (Burmeister, 2016a, 2016b). Jiro Murai undertook clinical research involving longitudinal self-study, case studies of people who were referred to him and others he sought, and research on human corpses in morgues and slaughtered animals in abattoirs. Master Murai entrusted what he learned to only a few selected

apprentices, one of whom was Mary (Burmeister), who agreed to disseminate Jin Shin Jyutsu to the United States and beyond.

Shoshana Katzman (2003, p. 137) describes Qi as vital energy – the force that animates life and all biological processes. Qi flows through every cell and body tissue. Importantly, Katzman notes that the source of Qi, after birth, is digestion of food, water, herbs, and inhalation of air. Jin Shin Jyutsu provides insights into the entry, flow, and exit of Qi from the body – especially focusing on the cycles that occur as Qi flows to the cells and tissues to sustain life. In [Figure 22.1](#) there is a depiction of the positions of 26 paired Safety Energy Locks in the human body. Qi flows through these regions of the body in the Trinity flows and organ flows. The diameter of the sphere representing each of the Safety Energy Locks is defined by the width of the palm of the person receiving Jin Shin Jyutsu treatment. When the body is in harmony, Qi flows through the Safety Energy Locks, in the correct direction, without blockages. However, damage to cells, tissues, nerves, and organs can catalyze blockages and/or divert Qi flow. Due to the empirical work of Mary Burmeister, Master Murai, and others, procedures have been developed and validated to remove blockages, correct divergences, and restore harmony to Qi flow. Chapters 16–20 in this book are resources for expanding knowledge of Jin Shin Jyutsu and the three introductory texts written by Mary Burmeister (1981, 1985, 1994) are excellent primers for building understandings of Jin Shin Jyutsu.

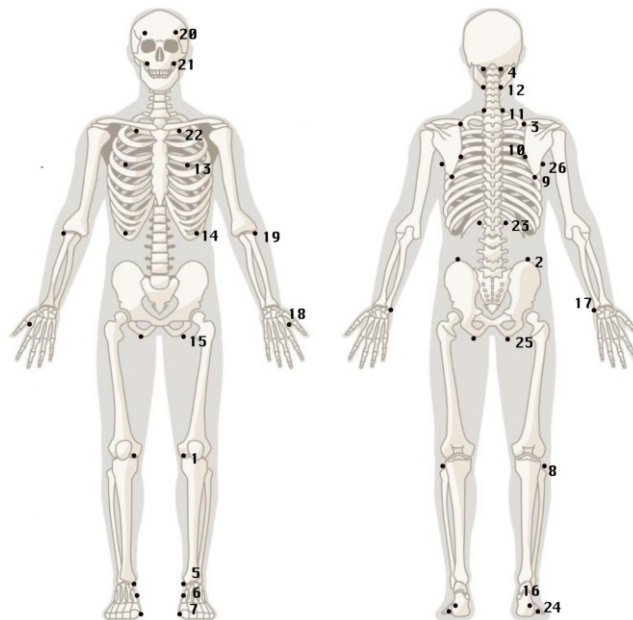


Figure 22.1. Jin Shin Jyutsu's 26 safety energy locks copyright for skeletal sketches:
https://www.123rf.com/profile_elenabsl (elenabsl/123RF Stock Photo)

The art of Jin Shin Jyutsu embraces a holistic vision of well-being – poor health initiating when there is disharmony in the body. Mary noted that:

... perfect harmony within and without the body ... may be interrupted by daily eating habits, working habits, hereditary characteristics, too dry or too damp living environments, weather conditions, mental and emotional anxieties, accidents causing bodily injuries, or by injection of poisonous matter into the body. (Burmeister, 2016b, p. 2)

Mary's stance is consistent with the theory and practice of Chinese medicine (Kaptchuk, 2000). Harriet Beinfield and Efraim Korngold (1991, p. 38) noted that:

Doctors as gardeners protect the Qi at the same time as they attack the disease. Simultaneous with the struggle to fight the disease, the doctor of Chinese medicine strives to restore the resilience and strength of the body. This adaptability and fortitude constitutes the condition of health. If in the process of attacking the disease the Qi is dissipated, this undermines our person's capacity to recover health.

Mary, the faculty of the Mary Burmeister Institute (<https://www.jsjinc.net/>), and numerous others around the world have used Jin Shin Jyutsu to successfully treat health projects of various types. When a health project becomes apparent, an individual can seek help from a qualified Jin Shin Jyutsu practitioner, and she can administer self-help practices she has learned. Ken has written about Jin Shin Jyutsu in a context of educating the public to address wellness proactively and agentically to avoid causes and symptoms, and to re-harmonize the body when disharmonies arise (Tobin, 2016). It is our hope that what we learn from this study can be packaged as a curriculum to teach others how to address Diabetes Type 2 or, better still, avoid its occurrence. We expect that what we learn will have relevance for those who teach Jin Shin Jyutsu, practice Jin Shin Jyutsu, receive Jin Shin Jyutsu from others, and use self-help.

There are numerous principles that guide Jin Shin Jyutsu practitioners – that is, many aspects of what is a complex knowledge system derived from a theory of Qi and derivative health traditions that include Acupuncture, Reflexology, Qi Gong, and Tai Chi. Additionally, there is an intensive and extensive empirical underpinning that emerges from the insightful and systematic research of Jiro Murai. Unfortunately, possibly because of the case-oriented, non-positivistic methodology Jiro Murai employed, his empirical work, that continued until his death, received scant attention outside of the Jin Shin Jyutsu community.

Jiro Murai's use of an apprentice model to disseminate what he learned is reminiscent of authentic inquiry (Tobin, 2015), the primary methodology for our study reported in this chapter. He taught many of those on whom he practiced and intensively tutored a few hand-selected apprentices, including Mary and her father.

Since Mary's return to the USA and her dissemination efforts, Jin Shin Jyutsu has been taught, documented, and spread internationally. Also, the Jin Shin Jyutsu knowledge system has continued to expand. In this process, interpretations and

adaptations have clarified and expanded the knowledge base, as have the practices of faculty at the Mary Burmeister Institute and those who have learned from the various courses they taught. Maria Miniello’s chapter in this volume (Chapter 17) lays out many of the central tenets of Jin Shin Jyutsu in clear detail. Because of the relevance of two key tenets to this chapter, I summarize them here. First, is the principle that universal energy flows up the back of the body and down the front in what is the Main Central Vertical Flow. Similarly, Right and Left Supervisor flows ascend vertically on the right and left of the spine and descend on the front of the body – either side of center. Finally, the mediator, which flows diagonally from left to right and right to left, is the third of the Trinity flows. Other flows, that we refer to as organ flows and safety energy lock flows, derive from and relate to the Trinity flows.

The arrangement of the Safety Energy Locks on the torso is used to identify which are Bustline, Waistline, and Hipline. On the torso, the Bustline Safety Energy Locks are 13,10; Waistline Safety Energy Locks are 14, 9; and Hipline Safety Energy Locks are 15, 25. Using the analogy of fractal relationships, the pattern of Bustline, Waistline, and Hipline is repeated on different parts of the body, including legs, feet, arms, hands, and the head/neck. Of significance to this chapter is the classification pertaining to the head/neck where Bustline Safety Energy Locks are 20, 4; Waistline are 21,12; and Hipline are 22,11.

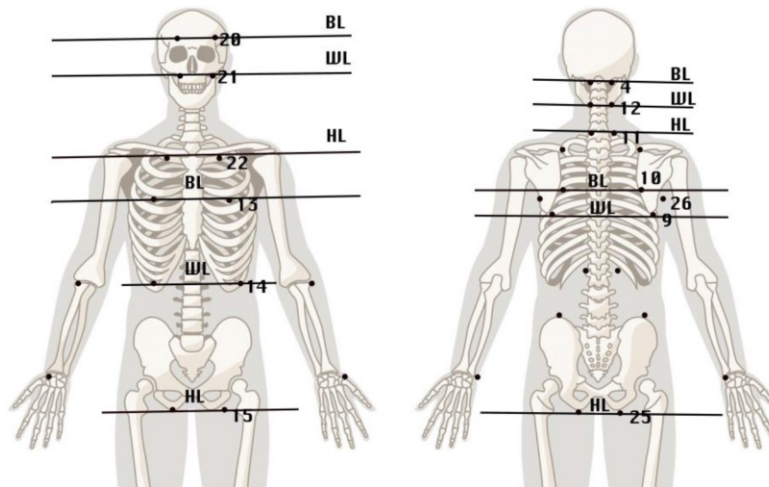


Figure 22.2. Safety energy lock classifications having a fractal relationship in head and torso parts of the body

... Diabetes is not just a pancreas affair. We need to look at the whole body with special interest for the waistline and potential burdens on it, the neck, and also look for long-term damage that might already have occurred, as well as help with lifestyle changes. (Hell, 2014, p. 10)

Billie Watkins (2014) provides a summary of uses of Jin Shin Jyutsu to address Diabetes Type 2, highlighting an association with Right shoulder congestion (of Qi) that produces a waistline health project. Hell (2014) provides a rationale for Spleen Function Energy being used in the treatment of Diabetes Type 2, since the Spleen Flow distributes energy throughout the body. In the *A and Q text: Know myself*, Mary Burmeister provides a connection between the Pancreas, Spleen, and Liver flows (A and Q refers to answers and question; Burmeister, 1990). The use of these flows makes sense given the physiology of Diabetes Type 2 and its relationship to the pancreas and the liver, which work together to harmonize metabolism. Hell recommends the following flows as useful in the treatment of Diabetes Type 2: Safety Energy Lock 14, Safety Energy Lock 9, Diaphragm and Umbilicus organ flows. Furthermore, Hell notes that for chronic conditions Safety Energy Lock 15 can block the energy flow, disharmonizing descending energy and affording a buildup at Safety Energy Lock 14. Similarly, Safety Energy Lock 10 (Bustline) can be blocked and this will cause ascending energy to accumulate at Safety Energy Lock 9.

Although it is beyond the scope of this chapter to describe the complexity of reading the energetic pulses (Walsh & King, 2008), it is possible to read them in many ways, including identifying disharmonies relating to ascending/descending and Bustline, Waistline, Hipline. The radial artery on each wrist is the primary site used by Jin Shin Jyutsu practitioners to interpret the pulses using three fingers (index, middle, ring) on each hand. The middle finger is placed at the base of the radial styloid process (a conical shaped projection of the radial bone – akin to a hill). The middle finger is placed at the base of the styloid process, away from the wrist crease. The other fingers fall into place adjacent to the middle finger. The radial artery is a peripheral artery that is proximate to the skin surface at the wrist and also to the radial bone, which facilitates detection of the palpated pulses. Each finger accesses a distinctive pulse which can be interpreted in terms of harmony of Qi and wellness. To take an example that is salient to this chapter, if I read from the pulses that there is disharmony at the Bustline level for ascending energy, then Safety Energy Lock 10 could be considered along with Safety Energy Lock 4. Other aspects of body reading and/or facts from the Jin Shin Jyutsu knowledge base would inform a decision of which of these Safety Energy Locks to harmonize. Interestingly, both of these Safety Energy Locks are Bustline, whereas it is widely agreed that Diabetes Type 2 is ultimately a Waistline project. To understand why Bustline flows are salient to a treatment we emphasize that if a Safety Energy Lock is locked, energy on the back of the body will not be able to ascend and energy on the front of the body will not be able to descend. Such understandings can factor into a selection of which Safety Energy Locks to harmonize when the pulse and other body signs indicate energy accumulation at the Bustline level.

OUR APPROACH TO RESEARCH

In this study, we used authentic inquiry as a methodology (Tobin, 2015). The approach is contingent and emergent, consisting of four overarching goal areas,

which are interrelated. The first focuses on learning from the research. In this case, Nick and I are the primary participants and we should learn as a result of being involved in the study. Importantly, whereas it is expected that each of us will expand our understandings in many ways, different perspectives are anticipated and respected. We regard it as a priority to understand each other's perspectives and also to become increasingly aware of diverse knowledge systems that have addressed Diabetes Type 2 (e.g., Western medicine, Jin Shin Jyutsu, iridology, acupuncture, and naturopathy).

The second goal area concerns education. As a result of being a participant in this study we should learn from one another, and to an increasing extent, understand each other's perspectives. Furthermore, those with whom we interact also should learn from what we have learned in the study. Because we have just two participants in this particular study, the third and fourth authenticity criteria reduce to just one set of priorities – changed practices. The goal is that participation in research should catalyze individual and collective changes in practice – along the lines of the goals of participants. Equity and social justice always are a concern – ensuring that the research seeks to ensure that all participants benefit from being involved in research, not just those who are best placed to take advantage of what we learn from the research.

Our approach stands in contrast to studies designed to have statistical generalizability. In authentic inquiry, participants are added serially, when and as necessary. Even though this study commenced more than two years ago, we continue to learn at a rapid pace. Given the intensive nature of the research we judge it as premature to add further participants or to switch to a different set of methodologies. We are learning a great deal and readers of this chapter will judge whether what we have learned can be applied to them. Our challenge is to clearly describe what we did, what we learned, and the context so that readers can decide whether and how to appropriate what we have learned and how to apply the knowledge in their social settings. It is important to note that we do not elevate the importance of theory over practice. Instead, what we learn includes the stories we provide in this chapter together with associated practices we employed. Those who decide there are benefits to be gained from what we have done, learned, and reported can adopt and adapt what they appropriate from their interactions with our text. Anticipated users are best placed to decide that, based on their settings and associated contingencies, specific changes are deemed worthwhile.

The kind of generalizability we seek resides in the intensive nature of the inquiry and its extensive, unfolding nature. We did not seek to control, just to understand and learn from what is happening in the present and our efforts to figure out why it is happening. We did not seek to be objective, but instead tried to maximize subjectivity, adopting what we refer to as critical subjectivity, whereby we seek to take our biases into account as we figure out what they are and how they are salient. We are guided by the mantra of doing as much good and as little harm as possible.

Over the two-year stretch in which the study was conducted, I was troubled when Nick came for a treatment with an extremely high blood sugar concentration. In

the moment, I may have experienced concern for Nick, apprehension of wanting to produce immediately successful outcomes, and challenge by a daunting health project. As I look back on those two years, I realize that having a relatively high glucose concentration in the blood is a risky disharmony that can set the stage for flows of universal energy being blocked and diverted. Furthermore, if the preferred state for the body is to have a blood sugar concentration below 100 mg/dL, then the implications of having blood sugar concentration in the 200 s might be potentially harmful. It is highly probable that the pulses would reflect the body's priorities – which might relate to harmonizing important flows rather than reducing blood sugar concentrations.

A second source of uneasiness was our tendency to judge the efficacy of Jin Shin Jyutsu flows based on short-term changes. For example, since Qi flows through the body on a 24-hour cycle, changes initiated in a one-hour session might not be apparent until one day later. Accordingly, it seems prudent to use multiple lenses to judge the efficacy of Jin Shin Jyutsu in relation to treating Diabetes Type 2. When large changes occur almost immediately, we should seek to learn from them, and when there appear to be few or even no changes immediately after treatment, we should try to figure out the what, why, and what-more questions, while remaining vigilant for signs of longer-term change. Given the importance of lifestyle to the emergence and retention of Diabetes Type 2, we should not expect quick fixes. That has certainly been our mindset for much of this study. To this point in time we are searching for different ways for Jin Shin Jyutsu and complementary approaches such as an anti-inflammatory diet and exercise, to harmonize and heal in ways that reduce dependence on pharmaceutical solutions and repair functioning of organs, cells, and other physiological entities such as nerves.

JIN SHIN JYUTSU TREATMENTS

When dealing with Diabetes Type 2, we need to be aware that, as long as there are pancreatic cells delivering insulin, it is in most cases a reversible process. (Hell, 2014, p. 9)

On December 21, 2014 Nick and I commenced our research on Diabetes Type 2. The purpose of the study was to use Jin Shin Jyutsu to complement Western treatments of Diabetes Type 2 that involve dietary restrictions (no use of high sugar or high carb foods) and medication (insulin and metformin). Nick laid out the parameters for what we would consider to be a successful study:

... To reduce insulin and metformin gradually and still maintain the same blood sugar range. If we can do that consistently, we will be able to eliminate insulin and metformin one day. That will be the optimal cure. Even if we can reduce the insulin and metformin by half, it will be a tremendous success as it will prove that the body has restarted making insulin that works and is effective.

I accept that I will need to continue to take medication because the Diabetes Type 2 is too advanced. Unless I do this, I may have to continue to increase

the medication to cope with deterioration of the pancreas and liver. In the past year, I had to increase dosage by 20% – perhaps even more. The reason for this increase is that I did not have the time to exercise and make my body more efficient. My lifestyle at home is too demanding. My body is telling me – don't get defeated by circumstances.

In this section, we include four vignettes selected to highlight some of the key ideas that emerged from our longitudinal study. The first part of each of the four analyses provides my edited notes to Nick following the treatment. In addition to correction of typos, material considered to be irrelevant to the study has been omitted. The second part is a critical analysis of what happened, when possible connecting to theory and the Jin Shin Jyutsu knowledge base.

As part of a multilevel methodology we employed in this research, we used video to capture the Jin Shin Jyutsu sessions in which we used oximeters to measure pulse rate and blood oxygenation. The video enabled us to look closely at the way in which Jin Shin Jyutsu was administered and received, timing each of the flows and using micro-analysis (i.e., frame by frame analysis) to better understand what was happening during a treatment. The microanalyses are part of ongoing research and were used in this study to provide details such as the time for each Flow, hence allowing us to review trends associated with blood oxygenation and pulse rate within and between Jin Shin Jyutsu flows.

A Typical Treatment

The Jin Shin Jyutsu treatment administered on April 4 at approximately 10 AM started with a blood sugar reading of 221 mg/dL. Nick let me know that he had breakfast about two hours before and had taken his medication. He also let me know he was experiencing high levels of stress.

The treatment lasted for approximately 1 hour 15 minutes, commencing with the Left-hand Flow for the Lung Function Energy. The pulses were relatively strong (i.e., powerful) on both wrists – supporting my initial decision to consider the Umbilicus, Lung, Liver, and Diaphragm flows.

The nine components to the treatment I administered were: Left Flow for Lung function energy; both sides of the Supervisor Flow; Right Flow for the Liver function energy; low and high holds on the spine from thoracic vertebra 1 to Thoracic Vertebra 12 (this included a conscious move of the hands to assume a central location proximate to Thoracic Vertebrae, 5–7); both sides of a mediator hold stretching from Right Safety Energy Lock 11 to Left Safety Energy Lock 16 and vice versa; Left Umbilicus function energy; Right Diaphragm function energy; Right Spleen function energy; and a wrap-up that included three separate components – both sides of the diagonal Safety Energy Locks 24 and 26; and “cross-hands” from the calves to the big toe, beginning at low Safety Energy Locks 8 and finishing at Safety Energy Locks 7; the head/neck, including Safety Energy Locks 3, 11, 12, and 4. The reduction in blood sugar was equivalent to 34%.

Insights gleaned from looking back. Reflecting on this vignette, the first issue that arises is Nick arriving for treatment with blood sugar concentration of 221 mg/dL. If the goal of medication is to sustain wellness by maintaining harmony in the glucose levels, then swings of more than 100 mg/dL are an indicator that the body may be under stress and it is likely that neuroception will assess a high level of risk and switch control of the body to the sympathetic, fight-flight mode of operation. Simultaneously, less control would be exercised through the parasympathetic component of the vagus nerve, affecting the production of insulin and glucagon. If a scenario like this occurs, then physical disharmony in blood chemicals may produce disharmonies in the flow of Qi – which can be addressed at least partially in a Jin Shin Jyutsu treatment like the nine-component treatment described in the vignette.

A second issue to be addressed concerns the Jin Shin Jyutsu flows used in this treatment. What I chose to do in the moment reflected my intuition, which is grounded in my relatively short, but intense learning of the art of Jin Shin Jyutsu. My decisions reflected my reading of Nick's body as the treatment began and unfolded for an hour and a quarter. This included interpreting the pulses and feeling for blockages at the safety energy locks and in different regions of the body. I monitored Qi flow throughout the treatment and made in the moment decisions on what to do next. There were always good alternatives.

A third issue concerns the 34% decrease in blood sugar. This is a high percentage decrease – though not unusual in this study (see [Table 22.1](#)). It certainly exceeds the likely drop in blood sugar that might have occurred in one hour and 15 minutes (i.e., without any Jin Shin Jyutsu treatment). It is noteworthy that as Jin Shin Jyutsu was administered, the blood sugar dropped substantially. This begins to

Table 22.1. Blood sugar differences as they relate to 11 Jin Shin Jyutsu treatments

<i>Date (2014/2015)</i>	<i>Pre (mg/dL)</i>	<i>Post (mg/dL)</i>	<i>Difference (mg/dL)</i>
12/21	218	176	42
12/28	158	107	51
12/29	201	193	8
01/21	183	150	33
01/23	208	133	75
01/25	195	139	56
01/31	137	90	47
02/12	122	122	0
02/14	150	101	49
02/22	248	154	94
02/28	161	78	83
Averages	180	131	49 (27%)

address an issue of whether or not an intervention grounded in a theory concerning the energetic body makes a difference to harmony and wellness in the physical body. This result suggests that an excess of glucose in the body was reduced substantially during a treatment of 75 minutes. The resulting blood sugar was still higher than optimal. What is important to emphasize is that it is likely that decreases in blood sugar concentration and improvements in other indicators of harmony could continue for hours, days, and weeks after treatment. In this study, we have not, to this point in time, looked at blood sugar levels in a 24-hour cycle following treatment.

Finally, the treatment length is greater than the one-hour maximum recommended by Mary and most Jin Shin Jyutsu practitioners. We are not suggesting that treatments exceed one hour. The optimal time is contingent on the person receiving treatment and the condition of the body during the treatment. On this occasion, we decided to continue because it seemed beneficial to do so. On most other occasions, we sought to keep sessions to 45 minutes or less, mainly because of scarcity of time.

Follow-up Session Two Days Later

Nick ate breakfast at 7 AM and took his medication at 7 AM as well. In addition, he worked out in the gym for 30 minutes and jogged from his house to mine. Nick arrived at about 10:10 AM. Today I did not read the pulses because I had worked out what the treatment session would comprise. Nick's glucose level prior to starting the treatment was 95 mg/dL.

The normal range value obtained for blood sugar concentration allows me to make an important point regarding Jin Shin Jyutsu – as a practitioner, I am not targeting high blood sugar, which I regard as a symptom associated with disharmony in the flow of Qi. When harmony is restored to the Qi flow, the body can repair damage and restore appropriate functioning. In the case of a Diabetes mellitus project that has been ongoing for almost 20 years, repair and restoration are unlikely to be immediate and regular treatments (including self-help) may be necessary for days, weeks, months, and years ahead.

Based on my reading of notes from a class I took with one of the faculty from the Jin Shin Jyutsu Institute, I noticed that the Liver Flow was appropriate for increasing oxygen levels and holding the middle toes also would increase oxygen levels. I decided I would administer the Right and Left Liver flows and also hold the middle Left finger and Right toe and vice versa. Also, I would hold both middle toes (18 minutes).

I connected an oximeter so that I could review oxygen levels and pulse rate during the treatment. Just prior to the session starting, oxygenation of the blood was 95% and pulse rate was 94 bpm. Contrary to what we expected a trend in this study is that blood oxygenation dropped during the Jin Shin Jyutsu treatments.

In order to increase oxygenation of the blood I did the Diaphragm Right Flow, sitting on the Left-hand side (23 min and 10 sec).

I did the Right Flow for Safety Energy Lock 4. I consider this flow to be effective for treating Diabetes Type 2 because it consistently lowers blood sugar and is recommended by Jin Shin Jyutsu practitioners for harmonizing the vagus nerve.

At 35 minutes and 12 seconds I began the Left Umbilicus Flow.

At 45 minutes and 30 seconds the videotape stopped recording, just after I had announced that I would finish up with the Spleen Flow – “to re-energize the system.” My recollection is that I did the Right Flow, thereby implicating the Left Safety Energy Lock 14. After completing the relatively short Flow I closed with the Safety Energy Lock 26/Safety Energy Lock 24 Flow.

We watched the oxygenation and pulse rate data (the visual display) for approximately 1 minute after I had concluded the treatment. The oxygenation steadily increased to about 94% and the pulse rate decreased to 62 bpm.

Nick measured his blood glucose level and obtained a reading of 60 mg/dL – a 37% decrease.

Variation in blood oxygenation during Jin Shin Jyutsu treatment. The second vignette highlights the way in which technical interests can pervade a treatment. I had done my homework and prepared what I considered to be “the best” treatment for Diabetes Type 2 – designed to increase oxygen levels in the blood in an endeavor to promote energy release from the glucose dissolved in the blood. On this occasion the treatment followed the plan and the outcomes were similar to the previous treatment – a decrease in blood sugar by 37%. However, absent was the artistic approach that characterized the treatment described in the first vignette. On this occasion the treatment was not reliant on body scanning and pulse listening. In hindsight, this was a shortcoming even though the blood sugar decreased and was relatively low. Interestingly, a text message I sent to Nick after communicating the results from this session noted: “Need to take pulses after every Flow. Should not just follow a recipe. Have to listen carefully to pulses and make sense of them.”

We had used finger pulse oximeters in our ongoing research on expressed emotion while teaching (Tobin, King, Henderson, Bellocchi, & Ritchie, 2016). Accordingly, the connection between emotion and physiological change was central to our ongoing scholarship and permeated our thinking about Jin Shin Jyutsu being utilized to re-harmonize Qi flows that had been disrupted by malfunctions in the physical body. On this occasion, the concentration of oxygen in the blood ranged from 82% to 94% (standard deviation 1.6%). The pulse rate varied from 62 bpm to 85 bpm (standard deviation 3.7 bpm).

Interestingly, during administration of Jin Shin Jyutsu, the blood oxygenation levels dropped appreciably. We wondered whether this might be due to heightened chemical activity associated with a 37% reduction in blood sugar. As can be seen from the results reported above, the minimum blood oxygen was 82%, well below the maximum of 94% – which is appreciably lower than approximately 98% associated with relaxed every day activity.

The glucose level of 60 mg/dL, obtained immediately after the treatment, is at the lower limit of what is considered normal glucose concentration, and above the level used to signal hypoglycemia. Of course, the critical question to be addressed in follow-up studies is what happens to the blood sugar in the hours and days after treatment. We regard addressing this question as a priority for our ongoing research.

Jin Shin Jyutsu in a Limited Time Interval

What we did today is not so different from what we did previously, except, I rushed. Next time we definitely should do less to achieve more.

Nick had no medication today. He had lunch at 11:30 am approx. and we began the Jin Shin Jyutsu session at 15:37 and finished at 16:15.

Here are the flows we performed and the data associated with the session. The total time spent doing Jin Shin Jyutsu was 32 min and 36 sec.

10 Flow Left (13 min 32 sec)

23/25 Flow Left (5 min 03 sec)

Spleen energy Flow Left (2:43)

Spleen Flow Right (1:45)

Liver Flow Left (3:09)

Umbilicus Left Flow (4:43)

Wrap up (1:41)

During treatment, the mean heart rate was 66 bpm (range from 59 bpm to 89 bpm; standard deviation 4.0 bpm) and the mean oxygenation was 93% (range from 90% to 98%; standard deviation 1.6%).

Prior to treatment blood pressure was 140/88 and after treatment it was 129/79.

Pulse rate prior to treatment was 86 bpm and after treatment it was 77 bpm.

Blood sugar was 164 mg/dL prior to treatment and 144 mg/dL after treatment. A reduction of 20 mg/dL occurred (i.e., 12%).

Looking more deeply. In the third vignette, it seems evident that my approach was more technical than artistic. I base this claim on the comment of rushing through – when to move the hands during a Flow should not be governed by “trying to” accomplish a pre-planned schedule. More important is the feeling of the pulses. When the pulses in the left and right hands are harmonized, it is a sign that the Flow could be advanced to the next step. Judging from the decreasing time allocated to the final flows, this vignette serves as a reminder to do less and do it well.

A second issue to address is Nick not having medication with his lunch. As was the case in vignette 1, the glucose concentration was very high and the treatment

Table 22.2. Blood oxygenation and pulse rate during Jin Shin Jyutsu flows

Time	Treatment	Oxygenation				Heart Rate			
		min	max	mean	s.d	min	max	mean	s.d
18 m	Overall	90	98	93.2	1.6	59	89	65.6	4.0
1.9 m	Pre Flow 1	95	98	96.7	0.7	68	89	75.1	5.4
13.5 m	10 Left	90	98	93.4	2.0	59	78	65.0	3.4
0.3 m	Pre Flow 2	91	93	92.2	0.5	63	67	64.5	0.9
5.1 m	23/25 Left	91	94	92.4	0.7	60	70	63.6	1.8
0.9 m	Pre Flow 3	92	94	93.0	0.4	61	66	62.9	1.4
2.7 m	Spleen Left	92	94	92.8	0.5	61	67	63.2	1.5
0.3 m	Pre Flow 4	92	92	92	0.0	63	65	64.2	0.7
1.6 m	Spleen Right	92	93	92.4	0.5	61	68	63.5	1.6
0.9 m	Pre Flow 5	92	93	92.7	0.5	64	70	65.9	1.8
3.2 m	Liver Left	92	94	92.9	0.6	61	74	65.4	2.8
0.8 m	Pre Flow 6	93	94	93	0.2	62	79	67.5	4.6
4.7 m	Umbilicus Left	92	95	93.4	0.6	63	76	66.5	2.8
0.3 m	Pre closing	92	94	92.7	0.6	66	79	70.6	3.4
1.7 m	Closing	93	95	94.1	0.6	64	81	68.1	3.9
0.2 m	Post treatment	92	94	92.8	0.8	66	69	68	1.1

reduced it by 12%. This level was well above normal range of 70–100 mg/dL. Once again, the question to be answered is whether blood sugar continues to drop in the hours and days after the Jin Shin Jyutsu treatment.

Allowing the blood sugar to spike to the point that it reached 164 mg/dL was likely associated with numerous disharmonies in the body – including the functioning of the vagus nerve, and hence the pancreas and liver. Malfunctioning in these areas of the physical body might disrupt Qi flows that pass through this region of the body, including Spleen, Umbilicus, Diaphragm, and Liver flows. Safety energy locks in the region also might be locked, in which case more organ flows might be disrupted and other regions of the body such as neck, shoulder, eyes, and toes might be adversely impacted. These implications draw attention to the long-term consequences of Diabetes Type 2 that can cause damage to the physical body, especially in the regions of the body I just mentioned.

When we use the finger pulse oximeter we obtain three data sets – blood oxygenation, pulse rate, and plethysmograph. Although we have not reported the analyses of the plethysmograph data in this chapter – they are analogous to blood pressure data. Typically, we find the range between high pressure and low (similar to systolic and diastolic) decreases as the treatment progresses. In this treatment, we

also measured blood pressure before and after the treatment and showed a decrease from 140/88 to 129/79. That is, the Jin Shin Jyutsu treatment was associated with a reduction in blood pressure from high to almost normal.

In this treatment, the blood oxygen concentration decreased from normal (98%) to 90% – once again reflecting a potentially higher level of chemical activity as glucose was converted to energy and glycogen. It is possible that the oxygenation of the blood did not drop to the same level as in the previous vignette because there was less insulin available and insufficient metformin to increase the cellular absorption of glucose. Pulse rate dropped from 86 bpm to 77 bpm from beginning to end of treatment and during the treatment a relaxing average of 66 bpm was maintained. It is possible that such conditions would signal that the body was safe and would support the functioning of both the pancreas and liver.

Through the Lenses of Polyvagal Theory

Nick: Can you please make a note of all flows u worked on me yesterday. They were very effective. My sugar went very low. I needed to eat after I came home. Great job.

Ken: Terrific. We did Left 9, Left 23/25, and Right 4.

Less Is More

We included this final vignette as an example of less is more when it comes to Jin Shin Jyutsu treatments. There is no need to squeeze in all the flows that have proved to be effective in the past, and as a treatment unfolds, it is important to continuously scan and listen to the body. The inclusion of the Right Safety Energy Lock 4 Flow is an example of theory informing the selection of a Flow based on the pulses, in this case indicating a Bustline Flow – ascending energy. Whereas I might have selected a 10 Flow (also Bustline and ascending), my recent review of polyvagal theory and the importance of harmony in the vagal nerve (physical body) prompted me to think about the salience of either the Left or Right Safety Energy Lock 4 Flow. On this occasion, the quiet pulses were on the left-hand side and so I opted to do the Right Flow, which focused on the region in which the right vagus exits the cranium.

Harmonizing Right Safety Energy Lock 4 raises the possibility that blockages in this region could be associated with problems in the functioning of the right vagus. Given that the vagus is the longest nerve in the body, disharmony in any of the Safety Energy Locks could signal danger to the vagus nerve and catalyze physiological changes such as in blood oxygenation and pulse rate. If the physical risk is assessed as high, neuroception could initiate fight-flight routines. Administering a Right Safety Energy Lock 4 Flow appeals as a component of a treatment regimen for Diabetes Type 2 because of the importance of the right vagus to the production of the key hormones involved in harmonizing the concentration of glucose in the body.

Left Safety Energy Lock 9, which is a waistline safety energy lock, is ideal for Diabetes Type 2 treatment because it addresses congestion of energy in the right shoulder, and blockages in Safety Energy Locks on the left side of the body (below the waist) that are proximate to critical parts of the physical body responsible for controlling blood sugar. Similarly, Left Safety Energy Lock 23/25 Flow has a role in blood circulation and composition, as well as regeneration. The regenerative potential of the 23/25 Flow has considerable significance for Nick, who has been living with Diabetes Type 2 for almost 20 years. The Left Flow focuses on the left side of the physical body in the region of organs and associated nerves that are salient to Diabetes Type 2. It too can be considered a waistline project that can move energy to promote harmonious flow of Qi.

Nick was excited when we finished this Flow; and, as has been true every time we engaged in a Jin Shin Jyutsu treatment, the pulses were harmonized at the conclusion of this relatively short duration treatment of approximately 45 minutes.

SELF-HELP

The first time I suggested self-help to Nick I had in mind around about 30 minutes in the morning and another 30 minutes at night. To my surprise, this was completely unrealistic. If Nick was to do self-help, the most that might be expected was 10–15 minutes a day. In fact, Nick indicated that the time for Jin Shin Jyutsu homework would be taken from his daily allotment to physical exercise. Hence, it is necessary to prioritize what is most important to recommend – otherwise, my suggestions are futile (i.e., not practical).

The following is an example of suggestions I provided, via email or text message, after each session.

Homework should include deep breathing while completing the Main Central Flow, both sides of the Mediator Flow, and both Supervisor Flows. Please do your homework for at least 30 minutes in the morning and in the evening.

Over the duration of the project my focus was to assign self-help suggestions based on what we had learned from the most recent treatment. Often this involved suggesting that Nick try the first two holds for several flows we had used during a treatment. However, as we were writing, editing, and rewriting this chapter it occurred to me that maintaining harmony in the energetic and physical bodies ought to be a priority reflected in the use of pharmaceuticals, Jin Shin Jyutsu, diet, and exercise. From the point of view of Jin Shin Jyutsu, I concluded that initially we should keep it simple. For example, holding each finger for 2 minutes while focusing attention on the out breath would be one example of assisting the body to harmonize all safety energy locks and organ function energy flows. To hold each of the five fingers and palm center on both hands would take a total of 24 minutes, which is much more manageable than the activities I prescribed as homework on most occasions. Of course, the holds could be for 1 minute rather than 2. If time restrictions preclude

this happening in one sitting, the activity could be spread across time and still would be beneficial. Another advantage of the finger and palm holds is simplicity. It is not difficult to do and is relatively inconspicuous – hence it can be done in public, while commuting (for example).

WELLNESS AND THE ROAD AHEAD

In order to prepare to administer the treatments in this study, I pored through my notes from Jin Shin Jyutsu classes I had taken with faculty from the Mary Burmeister Jin Shin Jyutsu Institute, and Jin Shin Jyutsu resources, especially Watkins' (2014) *26 Keys to Unlock my Inner Treasure* and Waltraud Riegger-Krausse's (2014) *Health is in your hands*. In this study, Nick used Riegger-Krausse's flash cards as a resource for self-help for his family and himself. The cards provided information on the key flows for Safety Energy Locks and organ flows. Also, the article written by Hell (2014) was invaluable in our preparation of this chapter. Because of the centrality of Mary Burmeister's work to the Jin Shin Jyutsu Knowledge Base, the texts she wrote were foundational.

To a marked extent the critical label of Diabetes Type 2 framed my preparation and my determination to succeed focused attention rather than the art of reading Nick's body to learn what it was communicating about disharmonies in the Qi flow. Throughout this chapter we have made note of the importance of being in the moment during a Flow and following intuition artistically, rather than technically. Central to Jin Shin Jyutsu practice is reading and interpreting the body – making sense of Qi flows and blockages in terms of texture and qualities of harmony/disharmony.

Complements in the Treatment of Diabetes Type 2

We are well aware that Jin Shin Jyutsu alone is unlikely to cure Diabetes Type 2 as quickly or as well as a treatment regimen that includes Jin Shin Jyutsu, dietary consideration, and physical activity. Also, we are intrigued by Jed Schwartz's use of iridology as a window into health projects in the physical body and uses of herbs and dietary supplements to remediate emerging, present, and chronic health projects (Schwartz, Chapter 18). For example, the presence of sulfur in the iris can contribute a brown coloration to regions corresponding to the intestines, stomach, and lymph system. If the color is observed, it can be removed through diet – for example, by eliminating added sugar (even in fruit) and alcohol.

Kathy Abascal warns that “healing the body and restoring full liver function may take time” (Abascal, 2011, p. 137). With goals of maintaining the insulin/glucagon equilibrium and assisting the liver to respond to glucagon, Abascal recommends increasing the amount of green vegetables in the diet – to assist the cells to increase their sensitivity and responsiveness to insulin. Contrary to a widely accepted mantra that a piece of fruit is good for you, Abascal cautions that fruits do not assist in

overcoming insulin resistance and fruit juices should be avoided because they can contribute to insulin resistance. To overcome insulin resistance and assist the liver to sustain acceptable blood sugar levels, people with Diabetes Type 2 should eat meals and snacks at regular times – taking care to avoid food that triggers insulin resistance. Abascal cautions against snacking between the five mealtimes (breakfast–snack 1 – lunch – snack 2 – dinner) and advocates an overnight fast by not eating three hours before going to bed. Similarly, by avoiding bread, cheese, and sulfites, the growth of *Candida albicans*, a fungus, can be checked. In addition, there are herbs that can be taken (e.g., asparagus root) to eliminate *Candida albicans* and diets designed to eliminate problems related to invasive *Candida* (Sichel & Sichel, 1990). In relation to this study it is salient to note that the growth of *Candida albicans* can be fueled by high blood sugar levels and is often associated with Diabetes Type 2 (Zomorodian, Kavooosi, Pishdad, Mehriar, Ebrahimi, Bandegani, & Pakshir, 2016). Consequently, it seems like a high priority to check for the presence of *Candida albicans* and its potential impact on functioning of the lymph nodes, digestion, and elimination.

There is little point in prescribing a diet change if the person receiving treatment is unable to change his lifestyle to conform. Nick emphasized this point:

Nick: Dietary restriction for a long time impacts the quality of life and thus becomes a distraction. My food intake is tuned for gaining control of my Diabetes Type 2. I don't use any high sugar or high carb in my diet. All food intakes eventually lead to a rise in blood sugar if it contains any calories. There are some foods that shoot the sugar level up very quickly before the body can neutralize and some foods do it slowly. I do look at what I eat. If I am within my 3-hour window, then it is less of a problem. That is why I resist to nibble in between my meals and target more of the low glycemic foods. Also, I quit eating 2–3 hours before going to bed, including all beverages that have possible sugar. I have minimal dependency on artificial sweeteners.

The biggest challenge for chronic patients suffering from Diabetes Type 2 is that such folks want to lead as normal a life as possible. Dietary restriction for a long time impacts the quality of life and thus becomes a distraction.

As was noted by Schwartz, herbs and supplements can be considered part of a diet that complements something like Abascal's anti-inflammation recommendations. Eric Yarnell, Kathy Abascal, and Robert Rountree (2009) provided an extensive compilation of alternative and complementary herbs for a number of diseases, including Diabetes Type 2. They listed several herbs that have significantly reduced blood sugar levels. Those that seem most promising for uses in our ongoing research are: devil's club (*Oplopanax horridum*), prickly pear (*Opuntia* spp.), cinnamon bark (*Cinnamomum cassia*), prodigiosa (*Brickellia grandiflora*), tronadora (*Tecoma stans*), and matarique root (*Psacalium decompositum*).

Skeptics

This study suggests that the use of Jin Shin Jyutsu over a two-year period can harmonize Qi flow and also address disharmonies in the physical body. Most notably, use of particular organ and safety energy lock flows appreciably reduce the concentration of blood sugar. Similarly, during Jin Shin Jyutsu flows oxygenation of blood, pulse rate, and blood pressure all seem to decrease. We assume that the reduction in oxygen saturation is related to the chemistry of reducing blood sugar. The reduction in pulse rate and blood pressure reflects a peaceful/relaxing body – potentially a physical environment in which the vagus nerve is harmonized, allowing it to support effective functioning of the liver and pancreas.

Finally, there are skeptics who do not believe in Qi and the efficacy of knowledge systems such as Jin Shin Jyutsu, that have Chinese medicine as a foundation. The results of our study may serve as encouragement for such people to consider the potential of complementary aspects of Jin Shin Jyutsu in the treatment of Diabetes Type 2. For example, engaging self-help activities, such as holding fingers and palms, even when critical labels such as Diabetes Type 2 apply, can help to restore harmony and wellness.

As for our studies of Diabetes Type 2? They are ongoing. We have much more to accomplish. We acknowledge that Jin Shin Jyutsu treatment must be contextualized in relation to lifestyle and caution that bodies should be regarded holistically – we do not consider it wise to assume that what we learned about specific Jin Shin Jyutsu flows will apply in an analogous way to all bodies in all circumstances. A strong focus on finding a cure for Diabetes Type 2, that is to some extent universally generalizable, fails to account for the body in its social context. Taking the larger view is a deterrent to overgeneralizing and it also is a reminder that the purposes of authentic inquiry relate to wellbeing of all participants. Hence, a focus on harmony in the body as a whole is a good place to begin and a good place to finish each Jin Shin Jyutsu treatment.

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Before Tobin became a university science educator in Australia in 1974, he taught high school physics, chemistry, biology general science, and mathematics for 10 years. He began a program of research in 1973 that continues to the present day – teaching and learning of science and learning to teach science.

COMPLEMENTARY PERSPECTIVES ON THE ENIGMA OF DIABETES MELLITUS



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