

## THEME and CONTENT- THE HEALER WITHIN

### • Primary Theme/Concepts

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The health emphasis in the world has shifted from curing disease to preventing it. *The Healer Within*® is an exhibition that encourages young visitors not only to see and hear, but to touch, listen, learn and become actively engaged in improving their own health. The exhibit gives visitors the knowledge that will assist them to optimize their body's own self-healing abilities.

Tracing cause and effect of disease by going back to the early teachings of Aristotle, the exhibit centers on four principles.

1. The body is an interacting unit of body, mind and spirit.
2. The body has inner healing mechanisms.
3. Structure and function are interdependent.
4. Meaning-expectancy responses – beliefs affect the healing process.

In addition to featuring a virtual reality tour through the immune system, the exhibition also offers insights into the body's anatomy and physiology, emphasizing the body, mind and spirit interactions.

### • National Significance

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“Lifestyle diseases” such as obesity, cancer, diabetes and heart disease are now known to be the result from environmental factors and the way people choose to live. For more than a decade, Americans have shown a growing interest in wellness and fostering health from within. Many have stopped smoking, started exercising, and are eating healthier foods. The emphasis is shifting from just curing/treating disease to preventing it.

Indeed, the doctor-patient relationship is changing rapidly in the United States. Patients are doing their own research and want to be actively involved in their treatment options. *The Healer Within*® exhibit is committed to increasing public awareness of the active patient's role that is vital to American healthcare today. The exhibit reinforces the proactive stance that has launched its way into American health care, reiterating that the more we understand both causes and effects of wellness, the more we can make smarter choices and live the healthiest lives possible. The exhibit makes a dramatic statement that health is more than just the absence of disease. *The Healer Within*® builds respect for the body and imparts knowledge to our youngsters about how to care for it. Visitors leave with a desire to get healthy and stay that way.

### • Scope and Size

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Display area: 2,000 -2,500 sq. ft., 10' ceiling

Gross weight: approximately 9 tons

Venues: minimum 3 months per showing, with up to 6 months possible.

• **Component Descriptions (A total of 34 interactive components)**

**Four banners describe the four principles of Osteopathic Healthcare**

BODY-MIND-SPIRIT

Interactions

STRUCTURE-FUNCTION

Interdependency

INNER HEALING

Mechanisms

MEANING-EXPECTANCY

Responses

**Wellness Theater** (10 ft. diameter, 7 ft high, seats 15)

Five minute, wide screen HDTV video presentation. The presentation focuses on wellness and the principles of how the body works and heals. Our guides are young adults interested in staying healthy, body-mind and spirit. The introduction contains footage of a wide range of sports activities to impart awareness of the body's powerful self-healing capabilities and ways to enhance these.

**Body Unity**

Anatomical rendition of the brain and nervous system backlit demonstrates that feeling affects the brain (happiness, sadness and anger) and chemical signals travel through the whole nervous system. Users select a mood in the brain/mind and watch the affect it has on the nervous system.

**Large Scale Brain Model**

Participants press push buttons to find out which parts of the brain are involved in each of ten activities.

**Dissected Human Nervous System**

Replica of a completely dissected human nervous system currently on display at A.T. Still University in Kirksville, Missouri. Pressing push buttons illuminates fiber optics, revealing pathways involved in such everyday activities as turning a door knob or breathing.

**Virtual Pond**

This station represents the latest in technology interactive programming. The virtual pond lets you enjoy the spiritual healing of nature by splashing water and chasing fish with your hand – but never get wet. Osteopathic medicine practices that closeness to nature is healthy and provides spiritual connectivity and healing.

### **Spiritual Harp**

Music is created by organizing sounds with silent breaks. Its history predates the written word and is connected deeply to all aspects of human beings – birth, marriage, religion and death. Music has developed from observing and imitating the sounds of nature typically animal communications such as the chirping of birds, and insects or the drumming sounds of other animals or dripping water. The spiritual harp creates a variety of harp like sounds when hand movements break the light beams in this open area container. Children and adults can create their own music.

### **Children's Anatomy Photo Op**

The anatomy of a child's organs and body systems is proportionally different from that of adults. This exhibit uses the anatomical children illustrations of renown artist Kate Sweeney to relate to younger viewers. They can learn about bones, muscles and blood vessels on one side of the station, and pose with those structures using the other side.

### **Skeletal Puzzle**

This station teaching the basics of our body's framework the bones. Using a finger mouse the user is able to build the skeleton to understand structure-function concepts.

### **Cell Model and Parts**

The smallest living component of our body is the cell. If the cells become ill or die, it affects the whole body. This station lets the user explore the components of this tiny but most important piece of the human body.

### **Teaching Lesson Plan Station**

This station was funded through a federal IMLS grant at a cost of almost \$140,000 dollars. It is a web based kindergarten to eighth grade curriculum on health and human science. Parents and teachers can review the 74 lesson plans. The website can be accessed free on the internet once the user leaves the exhibit.

### **Posture Interactions Demonstration**

Participant begins by observing his/her postural alignment while standing with both feet at floor level. Placing one foot on a slightly raised surface, one can see the resulting misalignment and twisting of the spine. Graphics describe some of the complex interactions between distant structures revealed by posture.

### **Biofeedback Relaxation**

Using a biofeedback device, visitors gain an appreciation for the balance of mind, body, and spirit. Users discover that their thoughts and moods can have direct, immediate, and observable results. Text expands on this describing the effects our thoughts have on cardiovascular health, immune response, digestion, and more.

### **Virtual Reality White Blood Cell Warrior**

This virtual reality interactive is produced in conjunction with the Gestertek/Vivid Group of Toronto, Canada. The visitor becomes a virtual player as a white blood cell that goes on a mission through the body to search for disease (pathogens), and experiences how the immune system eliminates these threats. Movements include shrinking and enlarging, reaching out and grabbing, shooting, and engulfing.

### **Transparent Anatomical Mannequin (TAM)**

This TAM is the focal point and main output display for an interactive, which invites exploration of connections in the body. A quiz poses eight questions about physiology and anatomy. Each question has three possible answers. TAM offers a spoken response to selection of any answer; key anatomical structures light up when a correct answer is selected.

### **Self-Healing Processes**

Feedback in Perception/Warm and Cool

Participants feel a warm pipe with one hand and a cool pipe with the other, then feel a pipe whose temperature is midway between the two extremes. Surprisingly, the medium temperature pipe feels different to each hand. Text explains that our response to change often reflects immediately preceding conditions. Our body alerts us to differences of hot and cold which is relative to what we have just experienced.

### **Feedback for Balance/Effects of Additional Cues**

Standing on a skateboard deck (a few inches above floor level), one looks at an image with such helpful visual cues as a horizon and vertical lines. Then one tries again, this time with the visual cues in a gentle undulating movement. The result is reduced ability to balance on the skateboard deck. Feel confident? The skateboard can be activated for a slow movement. The message stresses the importance of feedback loops in balance based on visual clues, movement and a host of other unconscious body functions, many related to health.

### **Skin the First Line of Defense**

Participants will see how the skin is made up and learn about its flexible but durable design. Issues of skin pigment are shown using brother and sisters of different ethnic backgrounds. Also, issues of body piercing and tattooing are shown and the risks of such activities to one's health are explored.

### **Cancer Defender Interactive**

This computer-based activity explores the complex interactions that keep cancer at bay. Participants play a lifestyle game in which choices can help or harm their "healer within." At the end of the first part of the activity, participants become white blood cells fending off attacking cancer cells.

### **Platelet Fibrin Sculpture**

One sees a large-scale model of blood platelets linked by strands of fibrin in the early stages of clot formation. Text explains the model and emphasizes the body's self-healing abilities.

### **Physiological Responses to Exertion**

A participant begins by taking an approximate resting pulse reading, using a noninvasive measuring device. Next, one exercises upper torso and arms, using an exercise machine for several minutes. A second pulse reading shows an increase in all but conditioned participants. Text explains why aerobic exercise increases pulse rate.

### **Microscopic Views of the Healing Process**

Peering into a Wentzscope, visitors examine tissues both healing and healed to see firsthand the body's remarkable self-repair system at work. Computer interactive interprets the microscopic specimens and displays them on screen for group activities.

### **Structure-Function Musculo-Skeletal Skateboarder**

A model skeleton moves along on a skateboard; one leg's muscles and nerves are modeled; the other leg's bone structure is visible. Participants use push button controls to select music choices (classical, country, and techno) to fit their mood while observing the movement of the skeleton and some muscles. Text explains body and mind interaction in tasks and how muscle groups are organized into flexors and extensors for various activities.

### **Body Mechanics Demonstration**

This interactive gives a choice of a CD movie and then a game to let viewers make choices on ways to maintain a healthy body. The game reinforces the concepts identified in the movie.

### **Circulation Interactives**

A large heart model, approximately 10x life size, sets the theme for this group of four hands-on demonstrations about the circulatory system.

### **Heart Sounds**

The participant presses a button and hears real heart sounds. Text explains the sounds.

### **EKG Unit**

The heart responds to electrical currents. How one's heart is influenced by an electric charge is explained and then the participant can take their own EKG reading by holding onto a bar that registers the heart's electrical beat.

### **Blood Pressure/Fluid Volume Effects**

Pumping a siphon bulb in each of two diagrammatic model circulatory paths, the user observes that the path with the greater fluid volume requires greater pressure to achieve flow equivalent to that through the path with less fluid volume in it. Text explains how fluid retention in the body increases blood pressure. Mention may be made here of the role dietary salt intake plays in blood pressure.

### **3-D Heart Images**

Reinforcing the other stations of the giant heart, a computer monitor demonstrates the hearts action and structure with 3-D glasses.

### **Diagnosis/Pressure Points Mannequin Demo**

A life-size mannequin invites visitors to explore the subtleties of diagnosis using pressure points. A push button is located at each of ten pressure points. Pressing the button, one hears a brief explanation of what sensitivity at this location might indicate to a physician. Graphics describe the careful training required for pressure point diagnosis, as well as fundamental principles and major categories of pressure point diagnostics.

### **Diagnosis/Hidden Obstruction**

This interactive helps explain how D.O.s locate hidden soft tissue injuries. The edges of a piece of fabric extend past a hinged cover, which hides the point where the fabric is secured. Gently tugging at the fabric's edge, one attempts to find the attachment point's location, then lifts the cover to verify. Text explains that many ailments originate in soft tissue injuries, which are most readily located using techniques like this one.

### **Diagnosis/Concealed Topography**

This interactive helps explain how D.O.s assess the condition of tissue layers below the skin. A piece of fabric stretched in a frame concealed metal shapes—a heart, star, diamond, and spiral. Feeling the shapes through the fabric, one tries to identify each, then lifts the frame to verify. Text explains the value of such diagnostic techniques, and describes the intensive training required to master it.

### **Diagnosis/Resilience and Texture**

Here, one finds out that a tissue's texture and resilience can signal its well-being. One compares the feel of a viscous liquid with that of a colloidal suspension. Text explains how tactile cues like these can help a D.O. diagnose disease.

### **Healthy Choices Interactive Figures**

Six large cartoon figures offer whimsical advice on wellness through exercise, balanced diet, personal hygiene, risk avoidance, stress reduction, and tobacco abstinence. A simple game or interactive underscores each message. Touching a button by each cartoon, one hears the figure's thoughts on its particular health topic.

**Life Stages/ Health Care (Back area of the Theater)**

Here, one can explore health challenges and opportunities at each stage of life. A screen for each life stage presents ways to benefit from healthy choices and regular consultations with one's doctor. The presentation reinforces the importance of the whole person approach to wellness and highlights the members of a complete health care team and educational requirements to become a health care member.

**Health Materials Board**

This station permits the placement of community health and prevention related materials for guests to pick up as they leave the exhibit.

**Health Principles Floor Banners**

Teaching floor banners of children K-3rd grade stating the 4 principles of the body's healing process.

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