

## Case Study

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### *The Amazing Incredible YOU* in Expedition Health

Expedition Health  
Denver Museum of Nature & Science

Described by Nicole L. Garneau and Brian Hostetler

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#### **Abstract**

Like hiking up Mount Evans, visiting *Expedition Health* at the Denver Museum of Nature & Science reveals the amazing, incredible abilities of every person's body, whether they're doing something as simple as maneuvering a hallway or as challenging as climbing a rock ledge. *Expedition Health* is not just another exhibition about the human body, it is an exhibition experience about YOUR human body—how it is constantly changing in ways you can see, measure, and optimize through the choices you make. The regionally-focused and uniquely relevant Colorado expedition theme creates the framework for the educational philosophy behind the exhibition—to provide visitors with experiences that show them the intricacies of how their bodies work, driving their curiosity and engaging critical thinking about their own health as a combination of genetics, lifestyle, and environment.

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*Expedition Health* (EH) is a human biology exhibition with an empowering health message: your body changes in ways you can see, measure, and optimize. The regionally-themed EH experience is highly customized for each and every visitor. It is an engaging journey of physical, intellectual, and emotional self-discovery, from the visitor experience in the gallery to an extended-experience website. When visitors enter the exhibition, they are introduced to the theme of EH, a trek up one of Colorado's most beloved "fourteeners," Mount Evans. Each visit starts with an

encounter at one of ten sign-in stations. Here, visitors enter some information about themselves to activate their Peak Pass. This information—and more throughout the exhibition—becomes part of a database that customizes and records the visitor experience at Peak Pass-activated exhibits. Later, on the EH website, visitors can access additional activities and revisit their experience online using a unique login number on a personal profile which is printed at one of six sign-out stations.

EH includes nineteen content areas, covering topics from cardiovascular health to controlling your brain waves. Instead of focusing on abstract concepts, many of the exhibits in EH allow visitors to see how their own body reacts to stimuli they might be subjected to in a real expedition. For instance, at an exhibit dealing with wind chill, visitors actually put their hand in a wind stream and monitor their hand's temperature as capillaries contract, bringing less blood to the area. The result is an experience that shows a visitor how their actual body reacts to cold.

In addition to the main gallery components, four specialized learning environments within the exhibition are geared to visitors of different ages, interests, and learning styles. Tykes Peak gives early learners and caregivers a place to explore in developmentally appropriate ways. The Summit Science Stage is the hub of facilitated programs within the exhibition including demonstrations and shows on health related topics. BodyTrek Theater is an immersive “object theater” combining objects, videos, and props. The show features a Mount Evans expedition with an expert mountain guide, illustrating how people adapt to extremes, such as high elevation and exertion. Biology Base Camp is a 1,200-square-foot wet lab open to and visible from the exhibition floor. It can accommodate up to 30 visitors and volunteers at a time.

More than half of EH's content areas are accompanied by real human anatomical specimens from the Museum's Health Sciences collection—23 in total. Ranging from a preserved human femur set (How do You Measure Up?) to a plastinated digestive tract (Fate of a Granola Bar), these specimens ground the exhibition's interactive activities, programs, and



Filming for BodyTrek Theatre on Mount Evans.  
*Photo courtesy of author.*

interpretation in human anatomy and biology. Fascinating to look at and examine, they spark a tremendous amount of conversation and reflection among visitors.

The Peak Pass experience in EH helps visitors understand more about their own body as they explore the gallery. The intention of using visitor driven, personalized exhibit experiences in EH is the same as in many different health museums around the country—relevance. Personalizing concepts of health by showing how your actual body works immediately makes the information relevant to you. For instance, telling a visitor that their pupils constrict when a light is shone into them gives them an abstract idea of how the body works, but allowing a visitor to actually see their pupil as it contracts demonstrates to them that this concept is very real, and very important to their lives.

The Peak Pass collects authentic data that visitors generate during their visit. For instance, at an exhibit called “Size up Your Stride,” visitors advance past a panoramic video capture device. This movie is immediately shown on a big screen for

Conducting experiments in Biology Base Camp. Photo courtesy of author.



other visitors in the gallery to see. In addition, the information collected, as well as a picture of the visitor in motion, is saved to that Peak Pass profile to be accessed later at Sign Out, and at home via the Internet. Visitors are encouraged to share their data, pictures, and videos with a variety of groups, including parents, classmates, and other family members.

What makes EH stand out from many previous attempts at exhibit personalization (including our own past health exhibition, Hall of Life) is the type of data collected and the types of interactions visitors can expect here. EH is a bold attempt to make health fun, not just through incredible technology and interactives, but by our approach to learning. The exhibition designers of EH wanted to make the journey of discovering things about your own body an active experience, full of opportunities to ride, balance, and cling, while learning about the heart, brain, and muscles. Active experiences in a health exhibition allow visitors to explore complex ideas using their own anatomical toolkit, one which they thought they knew backwards and forwards before coming in.

The designers of EH wanted visitors to collect data about themselves that they would not be ashamed to show their friends. The primary goal of this exhibition is not to encourage people to simply monitor their health by repeated visits (similar to a “health fair”), but to have an educational, enjoyable, and social experience revolving around health. For example, weight and Body Mass Index intentionally are not calculated in this exhibition, because most people do not associate positively with these metrics. From our previous experience including these measurements in a health gallery, we found that many visitors did not enjoy learning that information. In a museum environment, we want visitors to have fun while learning, not to feel guilty, or talked down to. In building positive relationships with health, and with health experts and advisors who helped bring the EH concepts together, we hope that visitors will improve their outlook on maintaining their health outside the exhibition environment.

EH takes human biology out of the doctor’s office and into an environment that many people might easily experience themselves. The idea that health is a “Lifelong Expedition” is one of the cornerstones of this exhibition. After an experience in EH, we want visitors to think about their body and its function in the context of their everyday experiences, whether that entails climbing mountain, going to school, or just navigating through their day.

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**About the authors**

Nicole Garneau, the Department Chair and Curator of Health Sciences at DMNS, heads the citizen-science Genetics of Taste lab. Brian Hostetler is the Museum’s Educator/Coordinator for Health Gallery Programs, including *Expedition Health*.