

Interactive mobile app teaches people how to manage diabetes

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A new interactive mobile phone app called DiabetesIQ, released this week, challenges people to test their knowledge of diabetes and to compete with one another as they learn about the complexities of the disease, which affects more than 25 million Americans, including 4 million Californians.

Developed as a free download by the University of California, San Francisco (UCSF) <u>Diabetes</u> Teaching Center and QuantiaMD, a company headquartered in Waltham, Massachusetts, the new app is intended to help improve <u>human health</u> by turning the task of managing diabetes into an interactive game experience and bringing it to users of the Droid, iPad, iPhone and iPod Touch.

The new game follows a quiz-show format where players answer multiple-choice questions about diabetes and then see how their answers compare to the other users in real time. Users are asked specific questions, ranging from, "How does regular daily exercise affect insulin?" to "What happens when you combine dancing with alcohol?"

The app is intended to explore how the lifestyle and diet decisions play out in terms of blood sugar. Its end goal is to connect the theory of managing diabetes to everyday reality.

"Education is a fundamental part of therapy," said Martha Nolte Kennedy, the Medical Director of the UCSF Diabetes Teaching Center. "Almost anything you do can change your blood sugar and your response



to insulin."

Learning How to Self-Manage Diabetes

The app originated with material developed over the last few decades at the UCSF Diabetes Teaching Center, which has helped thousands of people with all types of diabetes manage their disease. Traditionally, the center has offered general information, individual counseling and multilevel classes, but in recent years the center developed a comprehensive web site to offer the same information to the masses online.

According to, Nolte Kennedy the app was the logical next step – a way of reaching a broader audience, including the youngest generations of people with diabetes.

"We're very enthusiastic about the approach," she said.

Diabetes is a chronic and complex disease and living with it demands daily, often around-the-clock, attention to the intricate balance between exercise, eating and medication. Normally our bodies maintain the appropriate blood sugar level constantly monitoring it and releasing hormones to bring it up or down as needed. But people with diabetes lose this natural balance and must maintain their blood sugar in other ways, including medication.

Numerous iPhone and Android apps related to diabetes already exist – both for free and for sale. They do everything from tracking exercise to monitoring blood pressure or glucose to counting carbs to helping people adhere to just about every diet that has ever been invented.

DiabetesIQ is one of the first purely educational diabetes apps, however, and it fills a niche by being the only game that helps people learn how to self-manage their diabetes – an important part of living with the disease.



It was developed by QuantiaMD in collaboration with UCSF and is free and available to all patients regardless of their affiliation with UCSF.

According to Nolte Kennedy, improvements in drugs and technology mean people with diabetes can now choose from a large range of foods, eat more of what they want, and have more stable blood sugars when physically active. The key, she said, is knowing how to self-manage diabetes. DiabetesIQ is designed to offer a basic primer.

Playing the game will tell you what would be best to eat, for instance, if you are exercising and want to prevent low <u>blood sugar</u>. Would that be:

A banana or fruit juice?

Peanut butter or cheese?

A chocolate bar?

Diet soda?

All of the above?

[Hint: don't answer "All of the above"]

DiabetesIQ is available for free download at the Apple iTunes store and Google Android Market. It is available for <u>iPhone</u>, iPad, or iPod touch devices running iOS 4.0 or later, or Google Android 1.6 and higher.

Provided by University of California, San Francisco

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