



Timothy Skinner



# Conflict of Interest

## emojifit Diabetes – a new lifestyle approach

[View More by This Developer](#)

By Decision Support Analytics Pty Ltd

This app is only available on the App Store for iOS devices.



This app is designed for both iPhone and iPad

**Free**

Category: [Medical](#)

Updated: 06 July 2017

Version: 1.2.0

Size: 47.8 MB

Languages: English, Arabic, Catalan, Chinese (Hong Kong), Croatian, Czech, Danish, Dutch, Finnish, French, German, Greek, Hebrew, Hindi, Hungarian, Indonesian, Italian, Japanese, Korean, Malay, Norwegian, Polish, Portuguese, Romanian, Russian, Simplified Chinese, Slovak, Spanish, Swedish, Thai, Traditional Chinese, Turkish, Ukrainian, Vietnamese

Seller: Decision Support

Analytics Pty Ltd

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Rated 4+

**Compatibility:** Requires iOS 9.3 or later. Compatible with iPhone, iPad and iPod touch.

### Customer Ratings

This application hasn't received

### Description

emojifit Diabetes is a new lifestyle approach developed by Prof. Timothy Skinner, diabetes expert and health psychologist.

Type 2 diabetes management is complex. Getting the right balance of activity, medication, food choices and fun is

[Decision Support Analytics Pty Ltd Web Site](#) ▶ [emojifit Diabetes – a new lifestyle approach Support](#) ▶ ...More

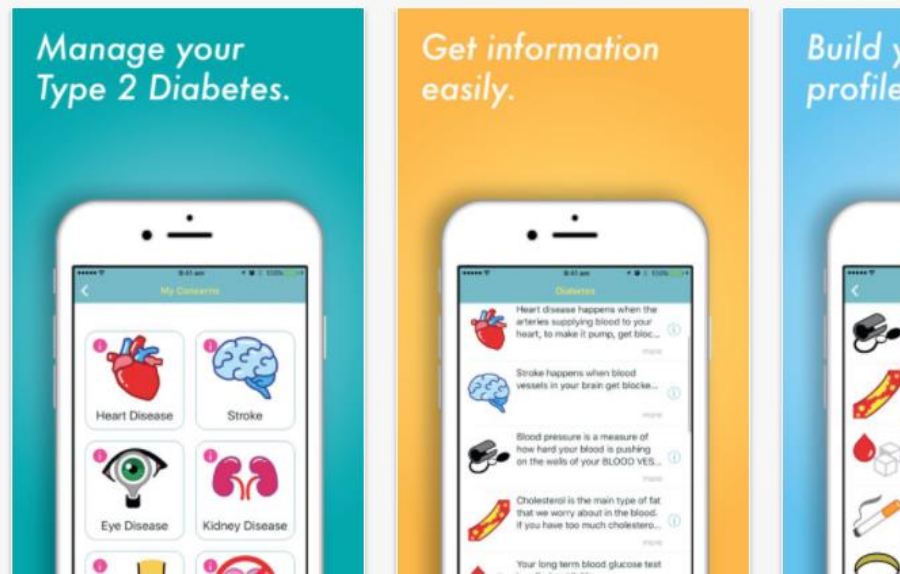
### What's New in Version 1.2.0

1. HealthyLiving NT has joined to the "emojifit Diabetes Care Team".
2. Add new congratulation page and notification feedbacks when 4-week-plan is completed.
3. Add new emojis to the existing functionalities.

[...More](#)

### Screenshots

iPhone | iPad



## What do we know about mobile applications for diabetes self-management? A review of reviews

J Behav Med (2016) 39:981–994

## Mobile Applications for Control and Self Management of Diabetes: A Systematic Review

J Med Syst (2016) 40: 210

## Mobile Apps for the Management of Diabetes

*Diabetes Care* 2017;40:e145–e146 | <https://doi.org/10.2337/dc17-0853>

## Effectiveness of mHealth interventions for patients with diabetes: An overview of systematic reviews

PLOS ONE | DOI:10.1371/journal.pone.0173160

## Usability and clinical efficacy of diabetes mobile applications for adults with type 2 diabetes: A systematic review

DIABETES RESEARCH AND CLINICAL PRACTICE 131 (2017) 70–81

## Mobile phone text messaging to improve medication adherence in secondary prevention of cardiovascular disease (Review)



Hood et al

13 systematic reviews 2016

Kitsiou et al 2017

15 systematic reviews 2008-2014



## IDF EUROPE POSITION ON MOBILE APPLICATIONS IN DIABETES



February 2017

# Digital Solutions for Health and Disease Management

Digital Health Discussion Paper  
May 2017

european public health alliance



# Thousands of Apps for Diabetes ?

The screenshot shows the Apple App Store interface with search results for 'diabetes'. The top navigation bar includes 'Sign In', 'Music', 'Movies', 'TV Shows', 'App Store', 'Books', 'Podcasts', 'iTunes U', and 'Library'. The search results are displayed in a grid format, showing various diabetes-related apps with their icons, names, categories, and purchase options.

**Showing results for "diabetes"**

**iPhone Apps**

- mySugr: Easy to use daily diabet...** Medical, In-App Purchases
- Diabetes Australia app** Health & Fitness
- Glucose Buddy - Diabetes Logbo...** Medical, In-App Purchases
- Diabetes in Check: Blood Glucose ...** Medical
- CalorieKing Australia Food...** Health & Fitness
- Diabetes IQ** Medical, In-App Purchases
- Diabetes App Lite - blood sugar...** Medical
- Pacer - Pedometer plus Weight Los...** Health & Fitness, In-App Purchases
- My Diet Diary Calorie Counter...** Health & Fitness
- Eat Healthy Hypnosis - My...** Health & Fitness, In-App Purchases
- Tactio Health: My Connected Heal...** Medical, In-App Purchases
- Easy Diabetes** Medical
- Noom Coach: Healthy Weight...** Health & Fitness, In-App Purchases
- Foodily Recipe Sharing with...** Food & Drink
- Glucose Buddy Pro : Diabetes...** Medical, \$10.99
- Weight Loss Hypnosis by...** Health & Fitness, In-App Purchases
- Diabetes Recipe App** Food & Drink
- Diabetic Friendly Recipes** Health & Fitness, In-App Purchases
- Human - Activity Tracker** Health & Fitness, In-App Purchases
- WebMD - Trusted Health and...** Health & Fitness
- My heart my life** Health & Fitness, In-App Purchases
- Daily Carb - Nutrition Count...** Health & Fitness, In-App Purchases
- Diabetes App - blood sugar...** Medical, \$10.99
- Qardio Blood Pressure Monit...** Health & Fitness

**ARTISTS AND MORE**

- Diabetes Australia > App Developer
- Roche Diabetes Care > App Developer
- Baker IDI Heart & Diabetes Institute > App Developer
- Diabetes Digital Media Ltd > App Developer
- Canadian Diabetes Association > App Developer



<b>Brzan et al 2016</b>	<b>Chavez et al 2017</b>	<b>Fu et al 2017</b>
Free	Free	
		> 2 functions
		Usability assessment
Monitoring BG	Blood glucose testing	
Monitoring insulin dose	Medication or Insulin Dosage	
Nutrition	Nutrition	
Exercise	Activity	
Weight		
	Education	
	Health Feedback	
9 apps	4 apps	7 usability 12 efficacy studies (10apps)

# Beneficial effects ?

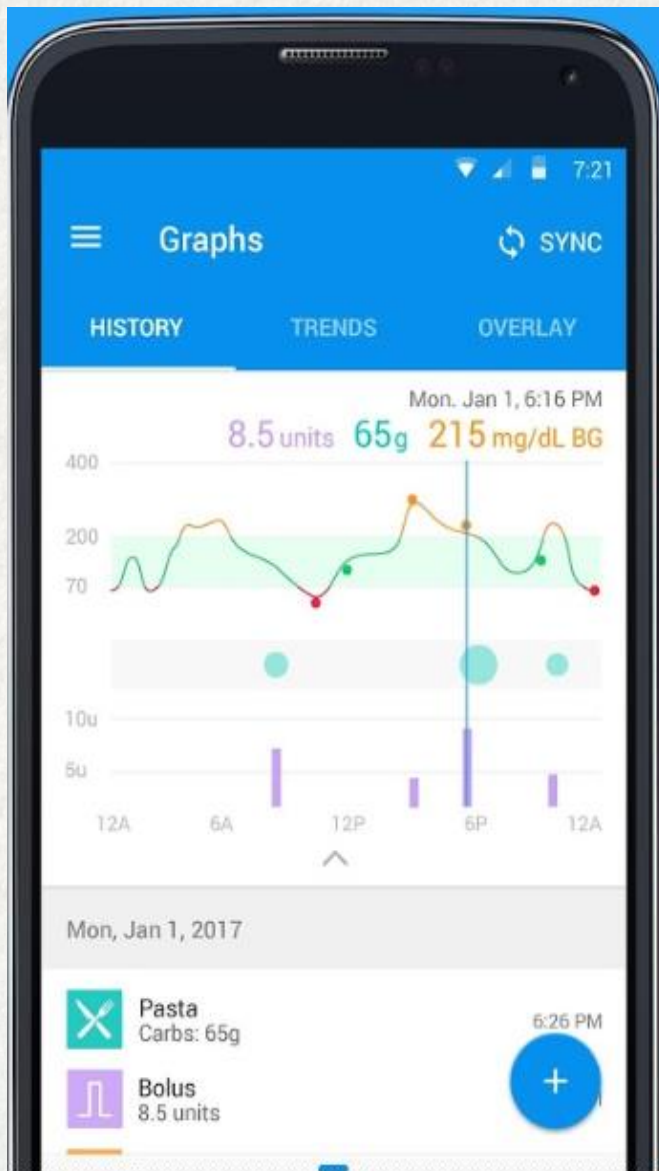
- Hood et al 2016
  - Much of the research consisted of small ( $n = 8-18$ ), uncontrolled studies to establish feasibility, acceptability, and preliminary effectiveness of the apps
  - studies that evaluated the benefit of added counseling combined with app usage did not find significant differences compared to using the app alone
- Adler et al 2017
  - Six out of seven trials showed a beneficial effect of mobile phone text messaging for medication adherence.
  - No study provided SMS tailored to individual patient characteristics.
- Fu et al 2017
  - 4 out of 10 studies significant HbA1C reduction of 0.4–1.9% [31,35,41,42]
  - Studies used app in conjunction with web and person support
- Kitsiou et al 2017
  - text-messaging and clinical feedback have a beneficial effect on glycemic control [MD of -0.5% (95% CI: -0.74, -0.26)]
  - transmission of BG measurements and clinical feedback, lead to statistically significant improvements in glycemic control [MD -0.8% (95% CI: -1.11, -0.5%).]



# Issues

- Blood glucose centric
  - Lipids, BP, Smoking, Depression, Foot Care, Weight
- Behavioural Science
  - Few apps built around current evidence base
- Lack of Person Centered Decision Support
  - Engage with one or two domains, with no choice
- Apps not evaluated
  - Trials come with add ons
- Longterm engagement
  - 41% retention at 3 months sector
- Literacy
  - Health, Numeracy, Digital

One Drop - Diabetes Management- screenshot





# Conclusion

No app that I could recommend to individuals or organizations that was asking me

Develop one

Costs too much time, money and effort



ResearchKit

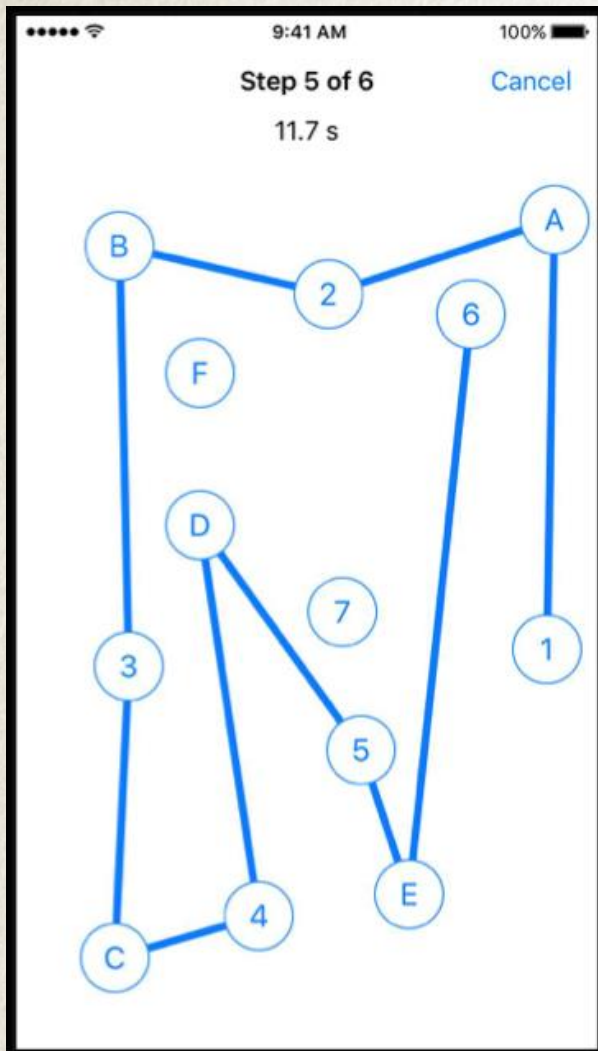


CareKit



HealthKit





9:41 AM 100%

Step 3 of 7 Cancel

### Left Shoulder Range of Motion

Place your device on your left shoulder with the screen facing out, as pictured.

Next

This screen shows the title 'Left Shoulder Range of Motion' and an instruction: 'Place your device on your left shoulder with the screen facing out, as pictured.' Below the text is a circular illustration of a person's left shoulder with a smartphone placed on it, screen facing out. At the bottom is a 'Next' button.

9:41 AM 100%

### Care Contents Today

S M T W T F S

★ ★ ○ ★ ○ ○

June 8, 2017

Your care overview is 75% complete

ACTIVITIES

**Breathing Exercise** Breathe App

● ● ○ >

**Heat Therapy** 5 mins

● >

**Neck Stretches** 3 mins

● ○ >

Care Contents Insights Connect

This screen shows a 'Care Contents' overview for 'Today'. It features a progress bar with a heart icon and a pulse line, indicating that the care overview is 75% complete as of June 8, 2017. Below this, there is a list of activities: 'Breathing Exercise' (Breathe App) with a progress bar showing 2/3 completed, 'Heat Therapy' (5 mins) with a progress bar showing 1/5 completed, and 'Neck Stretches' (3 mins) with a progress bar showing 1/3 completed. The bottom navigation bar includes 'Care Contents', 'Insights', and 'Connect'.

GitHub, Inc.

myPage Apple News Acronyms GRID DBI GRID FDP ConnectMe ASIC Portal

This repository Search Pull requests Issues Gist

carekit-apple / CareKit

Watch 109 Star 1,330 Fork 227

Code Issues 31 Pull requests 6 Projects 0 Wiki Pulse Graphs

CareKit is an open source software framework for creating apps that help people better understand and manage their health.

207 commits 2 branches 7 releases 28 contributors BSD-3-Clause

Branch: master New pull request Create new file Upload files Find file Clone or download

umerkhan-apple committed on GitHub Merge pull request #153 from moppymopperson/remove-radar-bug Latest commit 56c4874 on Mar 30

CKWorkspace.xcworkspace	Initial commit	a year ago
CareKit.xcodeproj	Merge pull request #130 from moppymopperson/publicAccessTableView	3 months ago
CareKit	Add OCK prefix to CareCardAccessibilityElement	2 months ago
CareKitTests	convergence	8 months ago
Sample	Merge pull request #153 from moppymopperson/remove-radar-bug	2 months ago
dependency @ c1493b9	Update dependency	7 months ago
docs	convergence	8 months ago
scripts	Added updated find_headers.rb from ResearchKit git	11 months ago
testing/OCKTest	Fix missing Mercury symbol on mmHg unit	3 months ago
.gitignore	Initial commit	a year ago
.gitmodules	convergence	8 months ago



# Conclusion

No app that I could recommend to individuals or organizations that was asking me

Feasible and viable for researchers and clinicians to develop and test an app

(April 2016 start, Nov 2016 demo, Mar 2017 launch)

# What we need

- Development and experimentation driven by users, clinicians, designers, behavioral scientists and technologist
- We need to design for our most vulnerable groups – language / education / culture free





# What we need

- More experimentation driven by users, clinicians, designers, behavioral scientists and technologist
- We need to design for our most vulnerable groups – language / education / culture free
- We need a repository for information and reviews of diabetes apps to help people with diabetes and their care team





Please be aware that Beacon is not currently being updated - see [more information](#)

## Diabetes Services

Websites (8)

Mobile Applications

Support Groups (3)

### Filter by:

Target Audience

(Show all)

Mobile Platform

(Show all)

Beacon Rating

(Show all)

[Beacon rating legend](#)

[About the Smiley Rating](#)

### **bant**



Platform: Apple

bant is a self-management mobile tool targeted at adolescents with type-1 diabetes. It is designed to allow you to quickly and easily record blood glucose readings throughout the day. (English, French, German, Italian, Russian and Spanish)



### **Few Touch**



Platform: Other

The Few Touch mobile application is designed to be a diabetes self-management tool and is compatible with phones with a Windows operating system. (Norwegian)



# beacon 2.0

Please be aware that Beacon is not currently being updated - see [more information](#)



**Beacon** is your portal to online applications for mental and physical disorders.

A panel of health experts categorise, review and rate websites and mobile applications. These ratings are provided to you along with the site link and access information. Reviews of internet support groups are now also included.

Improve your health by undertaking programs that have been found to work!



# What we did ?

- Used 20 years behavioural research and clinical practice to focus on user issues
- Took learning for development of self-management education programs (DESMOND, MEMO) to develop app processes
- Used accumulated evidence on motivation theory to design support and reminder systems
- Recruited graphic designer to develop emojis & pictograms
- Reviewed evidence base on social messaging to develop message strategy
- Developed ethical health promotion checklist for all posts
- Used the smell of an oily rag to fund writing the app software

# What we have got ?

- 3000 users in 30, countries giving lots of great feedback and information
- 420,000 thousand followers on facebook giving lots of great feedback and information
- 80% retention at 1 month
- Support to develop version 1.3 in Android



# Conclusion

No app that I could recommend to individuals or organizations that was asking me

Feasible and viable to develop and test an app  
(April 2016 start, Nov 2016 demo, Mar 2017 launch)

If we can do this, you can too

Please try, so we can learn