

ALEXA DIABETES CHALLENGE
TEAM SUGARCANE



SANOFI



startupbootcamp



alexa

KATI, MED DOCTOR

LEO, ENGINEER

JAN, ENGINEER

ANDI, DESIGNER



***Type1 diabetes**
since 15 years

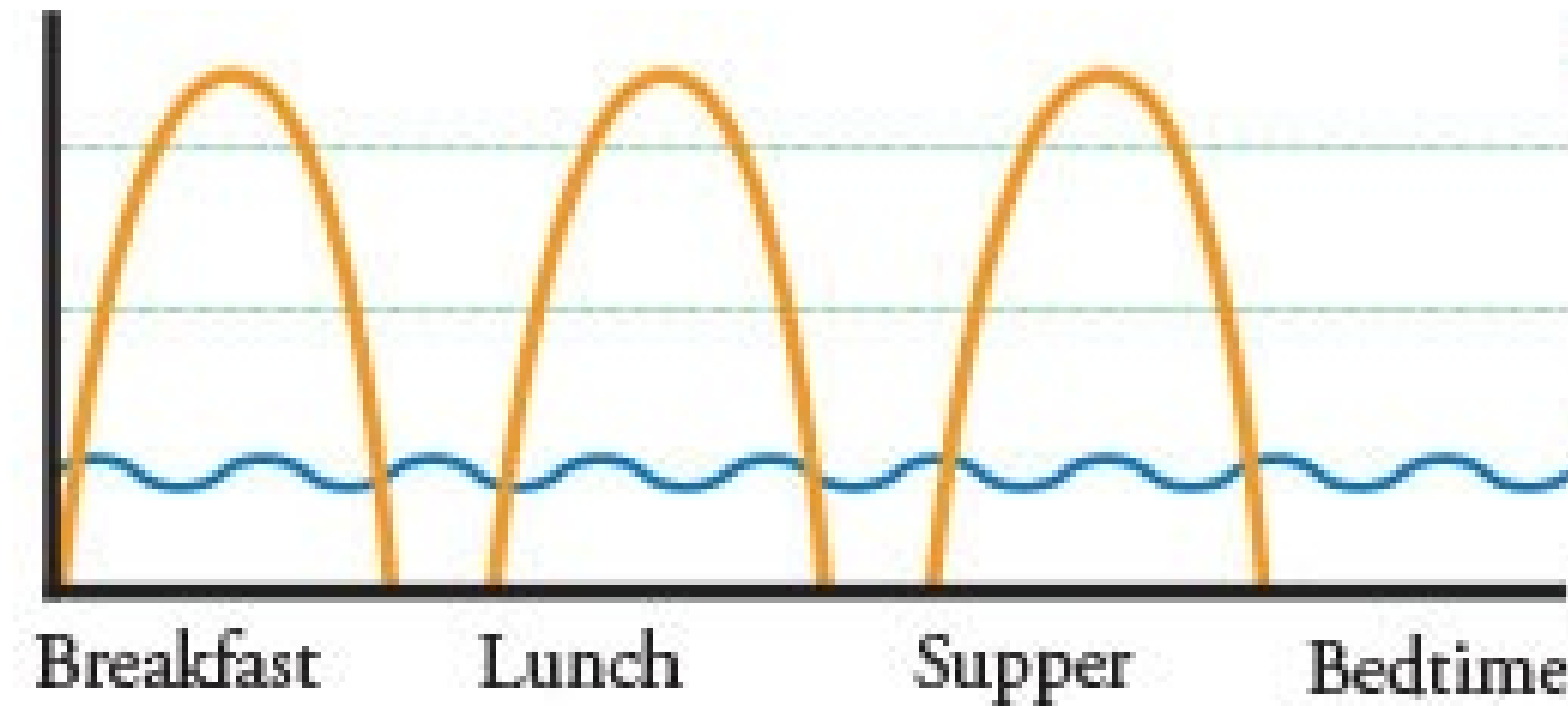
***Type2 diabetes**
since 10 years

***honeybadger**

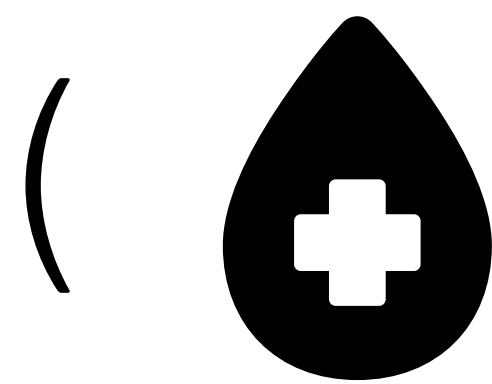
***cookiemonster**

INSULIN DOSING IS A FULL-TIME JOB

**CONSTANT
MONITORING**

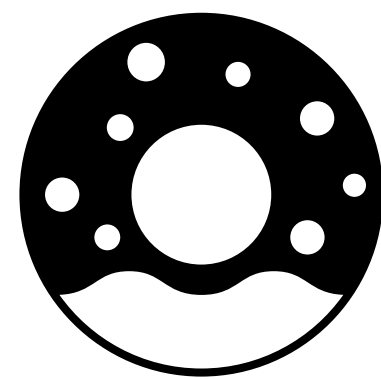


**SEVERAL
TIMES A DAY**



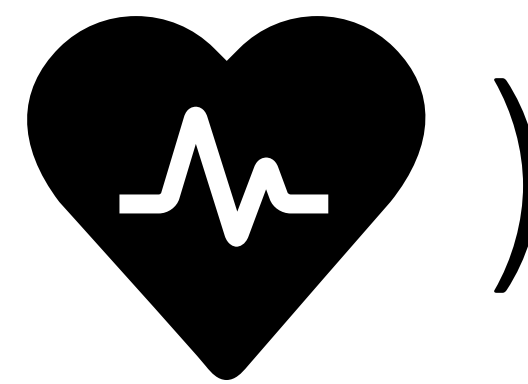
**BLOOD SUGAR/
INSULIN LEVEL**

+



**CARB
INTAKE**

-



**ACTIVITY
LEVEL**

×



**PERSONALIZED
CORRECTION**

=



**INSULIN
BOLUS**

BOLUS = LATIN FOR BEST GUESS



TYPE-1



99%

TYPE-2



13%

TYPE-G



90%

60% of all people with diabetes calculate their **bolus insulin doses wrong** and end up in **hypo-** (life threatening) and **hyperglycaemia** (harmful to organs). This is mostly because of **impairments, laziness or context** (hands dirty while cooking).

*Sussman et al J Diabetes Sci Technol. 2012 Mar; 6(2): 339–344.

ALEXA ...
TELL SUGARCANE
I WANT TO CALCULATE MY BOLUS.

**YOUR CURRENT...
SENSOR CLUCOSE**
IS [...] MMOL/L.THIS
IS LOW/HIGH/OK.

YES/NO ...
I WANT TO EAT [...]

THIS CONTAINS [...]
OF CARBS. WITH
AN EXCHANGE
FACTOR OF [...] YOU
WILL NEED [...] BO-
LUS UNITS FOR
YOUR TARGET.

**YOU SHOULD/NOT
EAT SOMETHING.**
DO YOU WANT TO?

THIS WAS LOGGED
IN YOUR SMART
DIABETES PLAN.



**AUTOMATED LOG &
PERSONALIZED DOSING***

**IF YOU FEEL BAD
PLEASE TELL ME!**

**I DON'T FEEL WELL
ALEXA CALL [...]**



EMERGENCY CALL

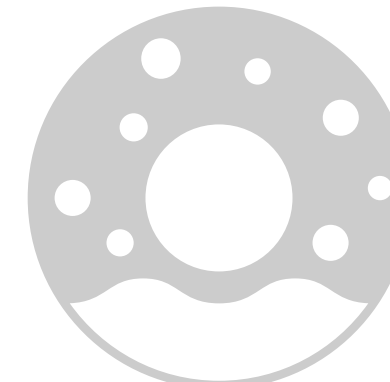
*NOT IMPLEMENTED



USER FACTORS



ALEXA SUGARCANE



FOOD INTAKE



INSULIN DOSE



**PROTECTED
DATABASE***



**CONNECTED SENSOR
+ WEB SERVICE**



**FOOD DATA
WEB SERVICE**



**ACTIVITY
MONITOR***

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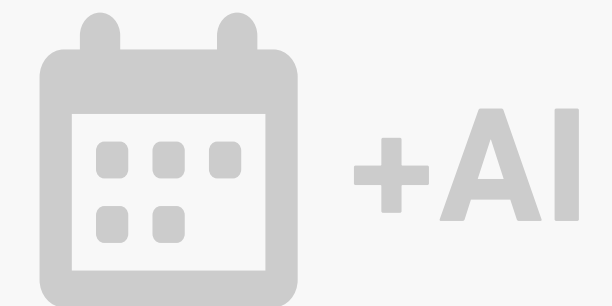
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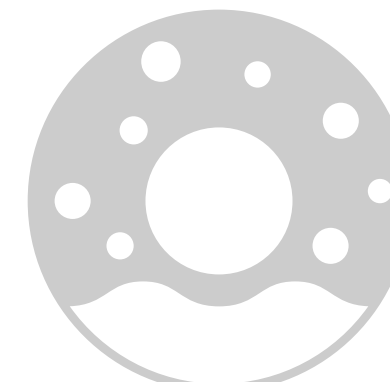
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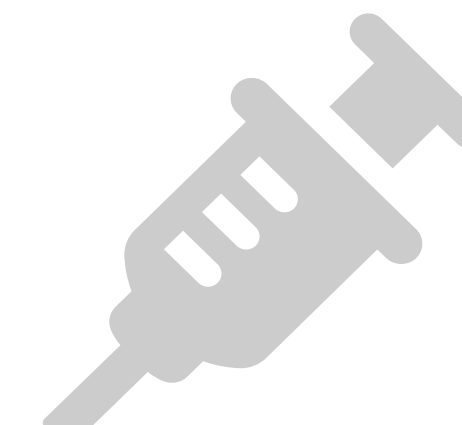
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FOOD INTAKE



INSULIN DOSE



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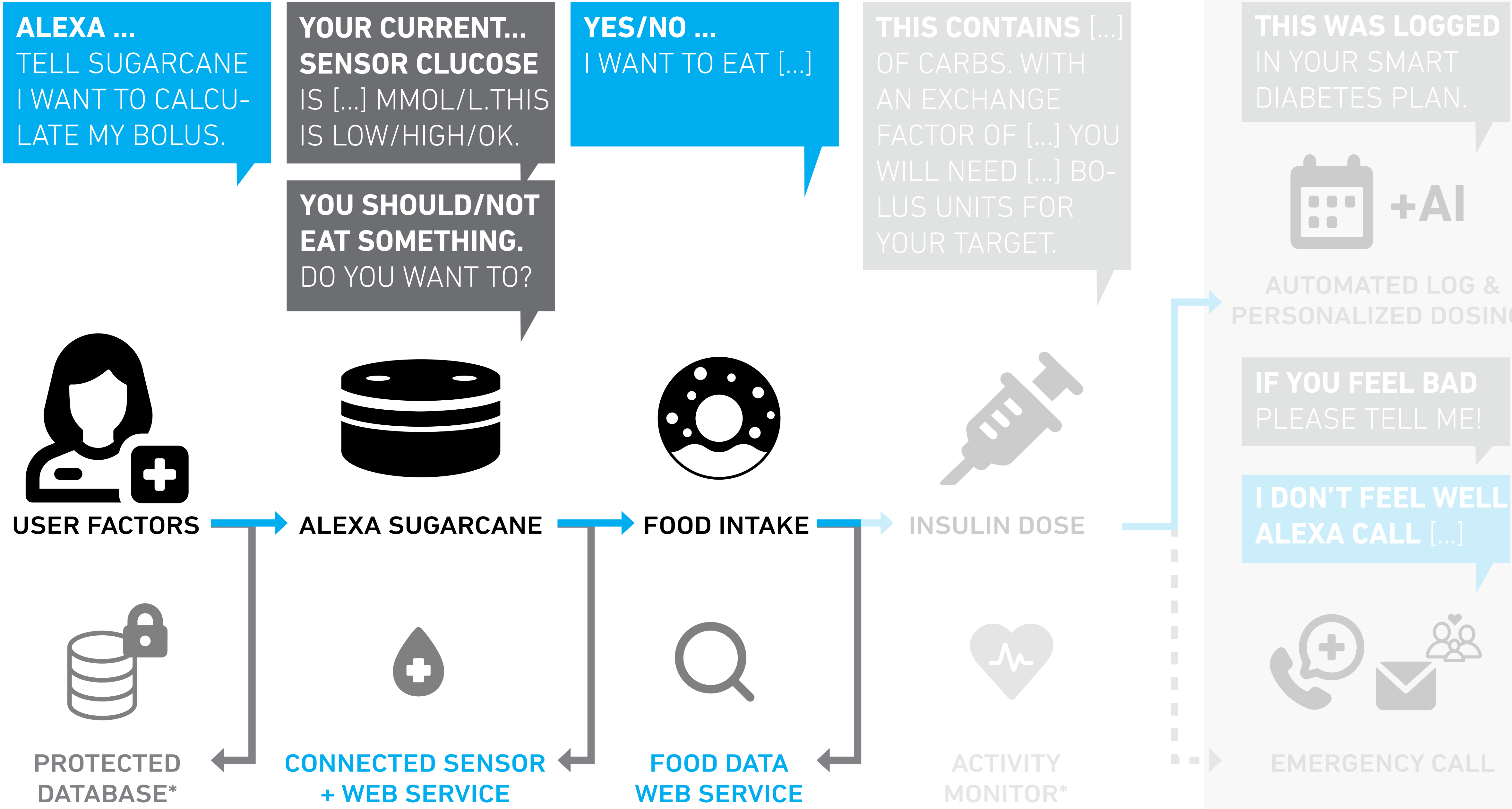
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ACTIVITY
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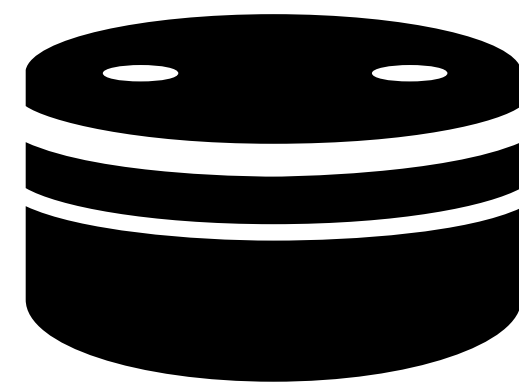


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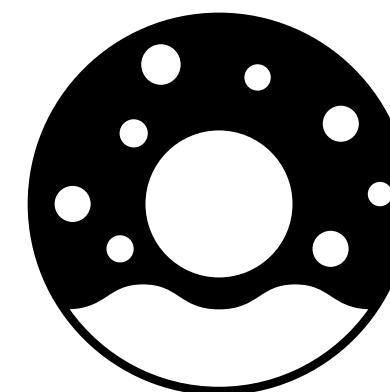
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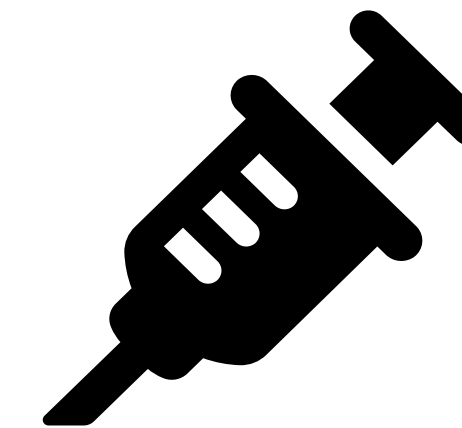
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ALEXA SUGARCANE



FOOD INTAKE



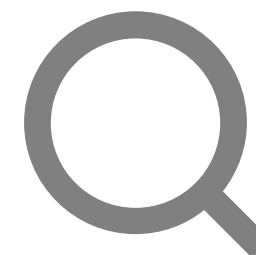
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ACTIVITY
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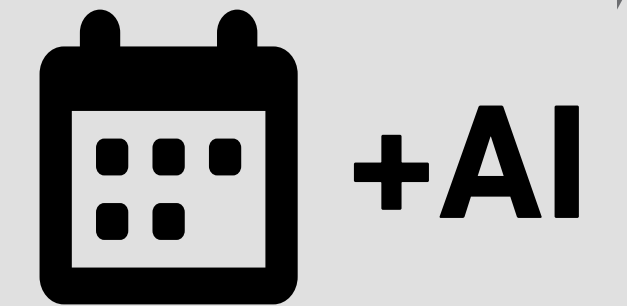
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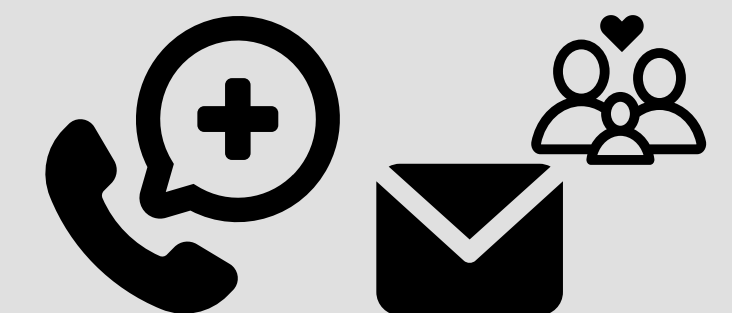
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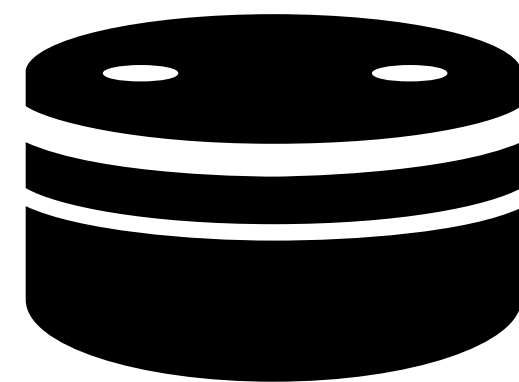


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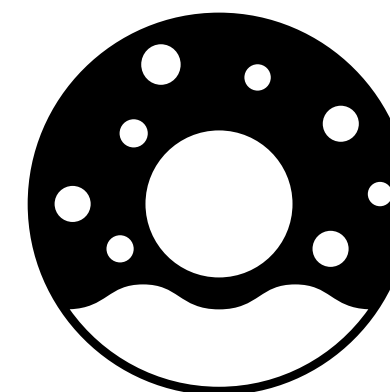
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ACTIVITY
MONITOR*

IT SEEMS SMALL BUT A BETTER BOLUS CALCULATION ...



- **makes it simple to calculate** correct dose and blood sugars in target range
 - **especially helps dependent people** like children, elderly people or with eye complications
-
- ➔ **less acute emergencies**
 - ➔ **increase patient's and families' quality of life**
 - ➔ **better prognostic outcome** through personalized dosing, less complications on nerves, eyesight and kidneys

SWEET, THANKS!

