

PRIMO TEMPO: COGITO ERGO SUM Diabete e tecnologia: la conosco?

SECONDO TEMPO: INTELLEGO ERGO SUM Diabete, cibo e tecnologia: come la utilizzo

Insonnia d'amore: chi usa la tecnologia può dormire sonni tranquilli?

Vantaggi e svantaggi di algoritmi e allarmi...nell'intimità

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C'e' Letteratura
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WILEY

RESEARCH ARTICLE

Sexual lifestyle among young adults with type 1 diabetes

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Orit Pinhas-Hamiel. Pediatric Endocrine and

Abstract

Background Sexual lifestyles including sexual activity, problems, satisfaction, and the formation and maintenance of relationships are greatly affected by physical health. Data are limited regarding the sexual lifestyle of adolescents and young adults with type 1 diabetes mellitus (T1DM). Fear of hypoglycemic episodes during sexual intercourse and intimacy issues can impact individuals with T1DM. The aim of this study was to assess sexual lifestyles of individuals with T1DM.

Methods Fifty-three patients with T1DM, 27 (51%) males, mean \pm SD age 27.9 ± 8.3 years completed the Hypoglycemia Fear Survey-II and the Sex Practices and Concerns questionnaire.

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Results Thirty-seven (70%) reported they **never or almost never had concerns in their sexual lifestyles that were related to their diabetes.**

None experienced severe hypoglycemia during sex, but 21 (40%) reported occasional mild hypoglycemic events.

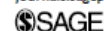
More than two-thirds do not take any measures to prevent hypoglycemia before sex (decreasing insulin dose, snacks, and measuring blood glucose levels).


Fear of hypoglycemia during sex was reported by 18 (35%); those who reported increased fear experienced mild hypoglycemic events during sex (61.1% vs 26.5%, $P = .01$), were singles (94.4% vs 64.7%, $P = .02$), and had higher scores on the Worries subscale of the Hypoglycemia Fear Survey-II (42.8 ± 12.8 vs 34.9 ± 10.5 , $P = .04$) compared with those who did not.

Original Article

The Impact of Externally Worn Diabetes Technology on Sexual Behavior and Activity, Body Image, and Anxiety in Type 1 Diabetes

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and Martin de Bock, PhD, FRACP^{1,2,5,6}

Abstract

Background: We aimed to explore the impact of externally worn diabetes technologies on sexual behavior and activity, body image, and anxiety in adopters and nonadopters of these devices.

Methods: People with type 1 diabetes aged 16-60 years living in Western Australia were invited to complete an online survey.

Results: Of the 289 respondents (mean age 34.3 years), 45% used continuous subcutaneous insulin infusion (CSII) and 35% used continuous glucose monitoring (CGM). Approximately half of CSII users stated that the pump interferes with sex. Of these, 75% disconnect their pump during sexual activity to avoid this issue. Comfort during sex influenced the location of the CSII insertion site in 22% of respondents, with the abdomen being preferred. One in four non-CSII users cited sex-related concerns as a factor for not adopting the technology. CGM interfered with sexual activity in 20% of users, but did not commonly affect CGM placement (only 18%). Sexual activity was reported as a factor for not adopting the technology in 10% of non-CGM users. No differences in body dissatisfaction ($P = .514$) or anxiety ($P = .304$) between CSII and non-CSII users were observed. No differences in sexual activity and behavior between technology users and nontechnology users were observed.

Conclusion: Wearable technologies impact upon sexual activity and this influences the decision to adopt the technology. Despite this, technology users are similar in terms of sexual behavior, anxiety, and body image compared to nontechnology users. Where appropriate, these data can be used to identify potential concerns, address strategies to mitigate them, and inform people with diabetes when considering adopting external technologies.

Original Article

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Sexual Behavior

There were no statistically significant differences observed between technology (CGM or CSII) and nontechnology users with respect to any measures of sexual behavior,

- age of first sexual intercourse ($P = .568$),
- number of sexual partners (female $P = .642$, male $P = .271$),
- frequency of sexual intercourse with current partner ($P = .916$),
- ratings of physical satisfaction ($P = .304$)

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Sexual Behavior

- **Technology users did report higher levels of emotional satisfaction** with their current sexual partner ($P = .026$),
- Almost all participants (99.2%) reported being 90%- 100% **honest** when answering the questions in the survey.
- Most did not find the survey **embarrassing** (72.9% reported that it was not at all embarrassing, 21.4% found it slightly embarrassing).

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



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ISPAD GUIDELINES



WILEY

ISPAD Clinical Practice Consensus Guidelines 2022: Psychological care of children, adolescents and young adults with diabetes

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ISPAD Clinical Practice Consensus Guidelines 2022:
Psychological care of children, adolescents and young adults
with diabetes

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Anecdotal evidence from diabetes clinics often lists “**body image**” as an **obstacle to technology adoption**, as some people with

diabetes (adolescents, young adults), “*do not want to have anything attached to their bodies.*”

- systematic review on this topic, there were **no differences in body image between those with T1D using and not using technology (insulin pumps, CGM)**.
- These disadvantages of technology used in diabetes management are usually listed as **barriers to its adoption**, and rarely, these might be the reasons to discontinue pump or CGM.

ISPAD Clinical Practice Consensus Guidelines 2022:
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Evidence from the **T1D Exchange**, US-based diabetes registry, highlights that the **overall insulin pump discontinuation was 3%**. Those who discontinued insulin pump therapy were more likely to have higher HbA1c levels at baseline, and the **most frequently listed reasons for discontinuation were problems with wearability (57%), disliking the pump or feeling anxious (44%)**.

Therefore, the fears and obstacles should be acknowledged and discussed with adolescents with T1D and their parents/carers, and advantages should be carefully explained, so the family can make an informed decision about whether to use a device.

ORIGINAL ARTICLE

Exploring Sexual Life Experiences and Perceptions of Women with Diabetes: A Qualitative Study

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ABSTRACT

Background: Sexual life can be affected through different aspects of living with diabetes. This study aimed to explore the perception and experiences of Iranian women with diabetes at reproductive age regarding the impact of diabetes on their sexual life.

Methods: This qualitative study was conducted from August 2018 to February 2019 in five diabetes centers in Tehran. Purposeful sampling method was used to select the participants, and data were collected by in-depth semi-structured interviews. Data were analyzed manually using the conventional content analysis method. Data saturation occurred after interviewing 24 women with diabetes.

Results: Three themes were identified. The first theme was “diabetes-related threatened sexual life” with three categories: change in sexual functioning, negative sexual self-evaluation, and concern in

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Azin³, MD; Abbas Rahimiforoushani⁴, PhD

2. Diabetes Treatment Challenges in Sexual Life

The participants described how the adverse effects of diabetes treatment and the psychosocial distress related to diabetes medication affected their sexual life.

2.a. Adverse Effects of Diabetes Treatment in Sexual Life

One of the participants with T1DM who used an insulin pump discussed her problems with using insulin pump during sex and said: ***“I cannot tolerate my insulin pump during sex. Sometimes, it gets disconnected during sex. It negatively affects our sexual relationships.”***

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2.b. The Psychological Distress Related to Diabetes Treatment

An Insulin pump user participant, while **looking down** and **wiping her tears**, explained her feelings of embarrassment and low self-confidence due to wearing an insulin pump in sexual relationships: ***“My self-confidence has decreased. I feel very embarrassed because I have to wear an insulin pump even in my sexual relationships. I hate its vibration sound at that time.” (P1)***

Zamponi et al. *BMC Women's Health* (2020) 20:73
<https://doi.org/10.1186/s12905-020-00939-1>

BMC Women's Health

RESEARCH ARTICLE

Open Access

Association between type 1 diabetes and female sexual dysfunction



Virginia Zamponi^{1,2}, Rossella Mazzilli^{1*}, Olimpia Bitterman², Soraya Olana¹, Cristina Iorio¹, Camilla Festa², Chiara Giuliani², Fernando Mazzilli¹ and Angela Napoli²

Abstract

Background: This study aims to evaluate: 1) the prevalence of Female Sexual Dysfunction (FSD) in women affected by type 1 Diabetes Mellitus (DM) and the control group; 2) the correlation between duration of DM, HbA1C levels and sexual life quality; 3) the relationship between different methods of insulin administration and sexual life quality; 4) the correlation between FSD and diabetes complications.

Methods: We selected 33 women with type 1 DM and 39 healthy women as controls. Each participant underwent a detailed medical history and physical examination and completed the 6-item Female Sexual Function Index questionnaire (FSFI-6). In patients affected by type 1 DM, the different methods of insulin administration (Multi Drug Injection - MDI or Continuous Subcutaneous Insulin Infusion - CSII) and the presence of DM complications were also investigated.

Results: The prevalence of FSD (total score ≤ 19) was significantly higher in the type 1 DM group than in the control group (12/33, 36.4% and 2/39, 5.2%, respectively; $p = 0.010$). No statistically significant differences were found regarding FSD according to the presence of complications, method of insulin administration or previous pregnancies.

Conclusions: This study underlined that FSD is higher in women affected by type 1 DM than in healthy controls. This could be due to the diabetic neuropathy/angiopathy and the type of insulin administration. Therefore, it is

Association between type 1 diabetes and female sexual dysfunction



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*“Regarding the type of insulin administration, we observed a **higher prevalence of FSD in women with MDI administration compared to CSII, both for total score and single items, showing better sexual outcomes in the second group, even though the results are not statistically significant.***

Table 5 Total score and single items of FSFI-6 in: a) CSII and MDI-treated women vs Control group; b) in women affected by complicated DM (Complications) or without complications (No complications) vs Control group

Questionnaires	CSII	MDI	Control group	P value
Total score	21.5 ± 4.2	18.8 ± 6.6	24.8 ± 3.4	0.0004
ITEM - 1	3.2 ± 0.7	2.9 ± 1.0	4.1 ± 0.7	< 0.0001
ITEM - 2	3.9 ± 0.7	3.2 ± 1.1	4.1 ± 0.9	0.0087
ITEM - 3	3.7 ± 1.4	2.6 ± 1.9	4.5 ± 0.8	0.0014
ITEM - 4	3.5 ± 1.4	3.5 ± 1.5	4.2 ± 0.9	0.1255
ITEM - 5	4.1 ± 0.7	3.1 ± 1.7	4.2 ± 0.7	0.1345
ITEM - 6	3.2 ± 1.0	3.6 ± 1.0	3.6 ± 1.0	0.2386
Questionnaires	Complications	No complications	Control group	P value
Total score	18.1 ± 5.9	22.1 ± 4.1	24.8 ± 3.4	< 0.0001
ITEM - 1	2.9 ± 1.0	3.2 ± 0.6	4.1 ± 0.7	< 0.0001
ITEM - 2	3.3 ± 1.1	3.8 ± 0.8	4.1 ± 0.9	< 0.0133
ITEM - 3	2.5 ± 1.6	3.9 ± 1.4	4.5 ± 0.8	< 0.0002
ITEM - 4	3.1 ± 1.5	3.6 ± 1.3	4.2 ± 0.9	< 0.0257
ITEM - 5	3.1 ± 1.5	4.2 ± 0.8	4.2 ± 0.7	< 0.0296
ITEM - 6	3.2 ± 0.9	3.4 ± 1.0	3.6 ± 1.0	0.2458

DM Diabetes Mellitus, MDI Multi Daily Infusion, CSII Continuous Subcutaneous Insulin Infusion, FSFI Female Sexual Function Index

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Sleep



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ORIGINAL ARTICLE



WILEY

Sleep and diabetes-specific psycho-behavioral outcomes of a new automated insulin delivery system in young children with type 1 diabetes and their parents

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Abstract

Background: Data on the use of Control-IQ, the latest FDA-approved automated insulin delivery (AID) system for people with T1D 6 years of age or older is still scarce, particularly regarding nonglycemic outcomes. Children with T1D and their parents are at higher risk for sleep disturbances. This study assesses sleep, psycho-

Sleep and diabetes-specific psycho-behavioral outcomes of a new automated insulin delivery system in young children with type 1 diabetes and their parents

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Methods:

Thirteen parents and their young children (ages 7–10) on insulin pump therapy were enrolled.

Children completed an initial 4-week study with **SAP** using their own pump and a study **CGM** followed by a 4-week **phase of AID**.

Sleep outcomes for parents and children were evaluated through **actigraphy watches**.

Several **questionnaires** were administered at baseline and at the end of each study phase. CGM data were used to assess glycemic outcomes.

Sleep and diabetes-specific psycho-behavioral outcomes of a new automated insulin delivery system in young children with type 1 diabetes and their parents

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Results:

Actigraphy data did not show any significant change from SAP to AID, except a **reduction of number of parental awakenings** during the night ($p = 0.036$).

Parents reported statistically significant **improvements in Pittsburgh Sleep Quality Index total score** ($p = 0.009$), Hypoglycemia Fear Survey total score ($p = 0.011$), diabetes-related distress ($p = 0.032$), and depression ($p = 0.023$).

While on **AID**, time in range (70–180 mg/dL) significantly increased compared to SAP ($p < 0.001$), accompanied by a reduction in hyperglycemia ($p = 0.001$).

Conclusions: These results suggest that use of AID has a **positive impact on glycemic outcomes in young children as well as sleep and diabetes-specific quality of life outcomes in their parents.**

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RESEARCH LETTER

WILEY

Impact of the CamAPS FX hybrid closed-loop insulin delivery system on sleep traits in older adults with type 1 diabetes

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RESEARCH LETTER

WILEY

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TABLE 1 Between-group differences in glucose and sleep outcomes at the end of intervention periods

Sleep outcomes	HCL (n = 34)	SAP (n = 36)	^a Paired mean difference	P value
Overnight (12:00–5:59 AM) sensor glucose outcomes during objectively measured sleep				
Time spent at glucose level, %				
3.9 to 10.0 mmol/L	85.8 (11.3)	76.2 (15.3)	10.7 (95% CI 6.2, 15.1)	<0.001
>10.0 mmol/L	12.8 (11.5)	22.2 (15.6)	−10.4 (95% CI −14.9, −5.8)	<0.001
< 3.9 mmol/L	1.29 (0.00, 2.18)	0.10 (0.00, 2.58)		0.864
<3.0 mmol/L	0.00 (0.00, 0.24)	0.00 (0.00, 0.00)		0.583
Mean glucose, mmol/L	7.5 (1.0)	8.3 (1.2)	−0.85 (95% CI −1.2, −0.51)	<0.001
Sleep outcomes	HCL (n = 35)	SAP (n = 36)	^a Paired mean difference	P value
Total sleep time, hours	7.6 (1.1)	7.5 (1.1)	0.13 (95% CI −0.25, 0.51)	0.491
Sleep onset latency, minutes	32.6 (20.5, 53.1)	32.5 (22.1, 68.5)		0.448
Sleep efficiency, %	81.5 (5.6)	80.0 (6.4)	1.9 (95% CI −0.016, 3.83)	0.052
Wake after sleep onset, minutes	37.3 (32.6, 60.8)	46.9 (30.9, 59.4)		0.480
Awakenings, number	50.1 (35.3, 65.7)	51.2 (41.7, 73.4)		0.257
Perceived sleep quality past month: PSQI score	5.3 (3.3)	5.2 (2.9)	−0.03 (95% CI −1.09, 1.02)	0.954

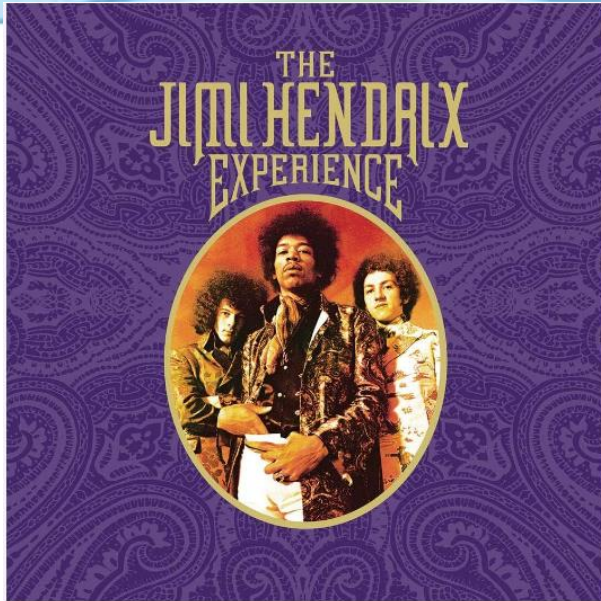
Note: Data are expressed as mean ± standard deviation or median (interquartile range).

Abbreviations: HCL; hybrid closed-loop, PSQI, Pittsburgh Sleep Quality Index; SAP; sensor augmented pump.

^aNormally distributed data are presented as mean differences of values (HCL intervention minus SAP control phase). A positive difference indicates that the measurement was higher during the HCL period than during the SAP period.

PRIMO TEMPO: COGITO ERGO SUM Diabete e tecnologia: la conosco?

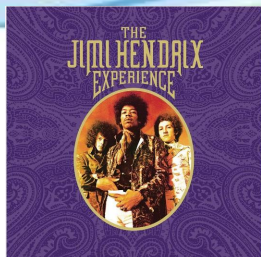
SECONDO TEMPO: INTELLEGO ERGO SUM Diabete, cibo e tecnologia: come la utilizzo



The Cuneo Experience

PRIMO TEMPO: COGITO ERGO SUM Diabete e tecnologia: la conosco?

SECONDO TEMPO: INTELLEGO ERGO SUM Diabete, cibo e tecnologia: come la utilizzo



The Cuneo Experience

- Pz che lascia telefono con app con allarmi in altra stanza per non sentire gli avvisi del CGM (!)
- Pz che non sente gli allarmi ma li sente il partner..
- Pz con CGM s.c. che ha perso il trasmettitore durante l'«intimità» e l'ha ritrovato attaccato al partner !

Riassumendo / Conclusioni

«Insonnia d'amore: chi usa la tecnologia può dormire sonni tranquilli? Vantaggi e svantaggi di algoritmi e allarmi...nell'intimità»

- Poca letteratura scientifica a supporto
- Necessità di confronto con pz per approfondire

PRIMO TEMPO: COGITO ERGO SUM Diabete e tecnologia: la conosco?

SECONDO TEMPO: INTELLEGO ERGO SUM Diabete, cibo e tecnologia: come la utilizzo

Grazie per l'attenzione !!!

That anger you feel..



**when a pump or CGM alarm wakes you
up in the middle of the night**