

Consent to Participate in a Research Study

Clinical Acceptance of the Artificial Pancreas: The International Diabetes Closed Loop (iDCL) Trial - A Randomized Clinical Trial to Assess the Efficacy of Adjunctive Closed Loop Control Versus Sensor-Augmented Pump Therapy in the Management of Type 1 Diabetes

1 Today, you are being asked to take part in this **research** study because you have type 1 diabetes
2 and use an insulin pump. The goal of this research is to get new knowledge that may help other
3 people, but it is not the same as treatment of type 1 diabetes. We want to find what works best
4 for treating you and others with this condition.

5
6 Your study team will be talking with you about this research and this document. Please take
7 your time deciding whether you want to participate in this research and please carefully read this
8 document. To take part in the study, you will need to carefully read and sign this document.

9
10 Before you decide to take part in this research study, we encourage you to speak with friends and
11 family members about it. If you do not understand all the information, please ask your study
12 doctor or nurse to explain. If you are taking part in another study, please tell us right away.

13
14 **NON-PARTICIPATION STATEMENT**

15 Participation in this study is voluntary and you must agree to take part. If you decide to stop
16 participation in this research, that will happen immediately. No penalty or loss of medical care
17 will result from your decision. While the study is occurring you may continue to receive medical
18 care not related to this study.

19
20 **WHO IS DOING THE STUDY**

21 Your study team will carry out this study. Their names are listed on the Cover Page of this form.
22 The National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK), which is part of
23 the federal government, is paying for this research. This funding will be used by your doctor’s
24 office and other clinical centers to conduct the research study and by the Jaeb Center for Health
25 Research to coordinate the study

26
27 **WHY ARE WE DOING THIS STUDY?**

28 The purpose of this study is to see if the use of an automated insulin delivery system (“study
29 system”) can safely and successfully manage blood sugars. This type of system is also referred to
30 as an artificial pancreas or a closed-loop system. The name of the study system is inControl. The
31 system consists of (1) an insulin pump that delivers insulin, (2) a continuous glucose monitor or
32 CGM that measures your sugar level, and (3) software that determines how much insulin will be
33 given.

34

Consent to Participate in a Research Study

Clinical Acceptance of the Artificial Pancreas: The International Diabetes Closed Loop (iDCL) Trial - A Randomized Clinical Trial to Assess the Efficacy of Adjunctive Closed Loop Control Versus Sensor-Augmented Pump Therapy in the Management of Type 1 Diabetes



The CGM sensor has a thin needle that is inserted just under the skin. It measures the glucose in the fluid under the skin and shows this information every 5 minutes. The sensor needs to be changed about every 7 days. The insulin pump has a catheter that is inserted under the skin. It needs to be changed about every 3 days. This may be similar to the insulin pump infusion set you are already using.

The study system is experimental and can only be used for research. The U.S. Food and Drug Administration has approved its use in this research study.

We previously tested a version of this system in about 400 individuals. They used a similar version of the system in other studies for shorter periods of time at home. We did not find an increased risk for high or low blood sugars or other problems. We are now ready to further test the system at home with more people for a longer period.

58
59
60
61
62
63
64
65
66
67
68
69
70
71

HOW MANY PEOPLE ARE WE EXPECTING TAKE PART IN THIS STUDY?

We expect about 126 people will take part in this study at 7 different clinical centers in the United States and Europe.

WHO CAN PARTICIPATE IN THIS STUDY?

To take part in this study, you will need to:

1. Be at least 14 years old
2. Have type 1 diabetes and have used insulin for at least one year
3. Have used an insulin pump for at least the last 6 months
4. Have an HbA1c level <10.5% (a test of blood sugar control over the last 3 months)
5. Be willing to connect the study smartphone to the internet at least once per week either using your Wi-Fi or using a cell phone data plan provided to you
6. Not take any medicine but insulin to lower blood sugar either now or during the study

Consent to Participate in a Research Study

Clinical Acceptance of the Artificial Pancreas: The International Diabetes Closed Loop (iDCL) Trial - A Randomized Clinical Trial to Assess the Efficacy of Adjunctive Closed Loop Control Versus Sensor-Augmented Pump Therapy in the Management of Type 1 Diabetes

- 72 7. Not be employed by or have immediate family members employed by TypeZero
- 73 Technologies, LLC.
- 74 8. Not have a boss or an immediate family member who is directly involved in the study.
- 75 9. Be willing not to participate in another study at the same time as this study
- 76 10. Be willing to follow the procedures that will be described in the next sections
- 77

78 There are some conditions that may prevent you from being part of the study. Your study doctor
79 will check if you have these or not. Pregnant women cannot participate. If you are a woman who
80 has the potential to get pregnant we will do a urine test to be sure you are not pregnant before
81 you enter the study.

82

WHAT HAPPENS IF I AGREE TO TAKE PART IN THIS STUDY?

83 About half of the individuals in the study will use the closed-loop study system. The other
84 individuals will use the CGM and insulin pump only, which we refer to as sensor-augmented
85 pump (SAP).

86

87 This study will take about 12-17 weeks for you to complete. The next sections list what will
88 happen during the study.

89

Screening Visit

90
91 If you agree to participate, you will sign this consent form before any study-related procedures
92 take place. You will have some tests done to make sure you qualify and that it is safe for you to
93 be in the study.

94

95 These include the following:

- 96 • Collection of information about you: This may include contact information, diabetes
97 history, the past and current medical conditions, surgical procedures, menstrual history
98 (females), allergies, medications and supplements, family history, social history
99 (drinking, smoking, and drug habits), and whether or not you have various symptoms.
100 You also will also be asked about your pump settings and average daily insulin use over
101 the past week.
- 102 • Physical exam (height and weight, blood pressure)
- 103 • HbA1c test unless you have had one within the past 2 weeks
- 104 • Additional blood tests if your study doctor has any concerns about medical conditions
105 that might put you at risk in the study
- 106

Consent to Participate in a Research Study

Clinical Acceptance of the Artificial Pancreas: The International Diabetes Closed Loop (iDCL) Trial - A Randomized Clinical Trial to Assess the Efficacy of Adjunctive Closed Loop Control Versus Sensor-Augmented Pump Therapy in the Management of Type 1 Diabetes

- 107 • A urine pregnancy test if you are a woman who can become pregnant. The pregnancy test
108 must be negative for you to participate and will be repeated at some follow-up clinic
109 visits during the study.

110
111 We will give you a study blood glucose meter and blood ketone meter to use during the study.
112 You will need to perform a ketone test if your glucose level is higher than 300 mg/dL for more
113 than 1 hour, or greater than 400 mg/dL at any time. We will give you instructions on how to use
114 and maintain your meters.

115
116 You will be asked to keep a glucagon emergency kit on hand at home. If you need a prescription
117 for the glucagon emergency kit, you can ask your study doctor.

118
119 The screening visit will last 1 to 2 hours.

120 121 Initial CGM Use

122 If you have used a CGM that is the same as the study CGM for at least 21 out of the last 28 days,
123 you will skip to the Main Phase of the study described below. Otherwise, you will use the study
124 CGM as described here.

125
126 First, you will wear the study CGM for 2 weeks without being able to see the glucose values it
127 records. This is called “blinded” CGM.

- 128 • You will be taught how to use the CGM including putting in a new sensor after 7
129 days (or sooner if the sensor comes out).
130 • You will use the CGM at home for 2 weeks. You should follow your normal
131 routine during this time for meals, fingersticks, and insulin boluses. If you were
132 using a personal CGM before entering the study, you may continue to use it.
133 • You will return for a follow-up clinic visit after 2 weeks.
134 • Study staff will download the “blinded” study CGM data to determine if you wore it
135 often enough to continue in the study—at least 11 out of 14 days. They will also
136 check for any skin reaction in areas where you wore the CGM.
137 • Study staff may suggest changes to help you improve your blood sugar control.

138
139 If you are eligible to continue, study staff will change the CGM settings so you can see the CGM
140 glucose values. You will wear the study CGM for 2 more weeks at home. This is called
141 “unblinded” CGM.

- 142 • You will be trained how to use CGM information in your diabetes management.

Consent to Participate in a Research Study

Clinical Acceptance of the Artificial Pancreas: The International Diabetes Closed Loop (iDCL) Trial - A Randomized Clinical Trial to Assess the Efficacy of Adjunctive Closed Loop Control Versus Sensor-Augmented Pump Therapy in the Management of Type 1 Diabetes

- 143 • Study staff will download the “unblinded” study CGM data to determine if you
144 wore if often enough to continue in the study—at least 11 out of 14 days. They
145 will also check for any skin reaction in areas where you wore the CGM.
146 • Study staff may suggest changes to your insulin pump settings to help you
147 improve your blood sugar control.
148

149 ***Main Phase***

150 If you skipped the CGM Use phase above, the procedures described below could occur as part of
151 the Screening visit. Otherwise, a separate visit will occur at least 4 weeks after the Screening
152 visit.
153

154 If you qualify to start the main phase of the study, you will again be asked if you have any
155 questions about the study. We want to make sure that if you continue, you understand the study
156 and feel that you could follow the procedures needed in either study group.
157

158 We will draw blood for another HbA1c test. The blood will also be used for a C-peptide test.
159 This measures whether your body makes any of its own insulin. Everyone in the study will
160 complete some questionnaires. Topics will include a personality assessment, hypoglycemia
161 awareness, low and high blood sugar, and your feelings about managing your diabetes.
162

163 At this visit, a computer program will be used to select whether or not you will be given the
164 closed-loop study system or use the study CGM with your own insulin pump. Through a process
165 similar to flipping a coin, you will be assigned to either the closed-loop group or the SAP group
166 for the rest of the study. You will have a 50/50 chance of being in either group. Neither you nor
167 the study staff will have a choice in which group you will be placed.
168

169 You will receive diabetes education. The education will cover key parts of diabetes
170 management.
171

172 **SAP Group**

173 If assigned to this group, you will use your personal insulin pump along with the study CGM at
174 home. We will call you after the first week to see how you are doing with the CGM. You will
175 come back to the clinic after your second week so we can answer any questions you may have
176 and review your glucose data. Study staff may suggest changes to help you improve your blood
177 sugar control. You will then continue to use the study CGM and your personal pump for about
178 13 weeks at home. You will have a series of phone contacts and clinic visits during this period
179 as shown in Table 1 below.

Consent to Participate in a Research Study

Clinical Acceptance of the Artificial Pancreas: The International Diabetes Closed Loop (iDCL) Trial - A Randomized Clinical Trial to Assess the Efficacy of Adjunctive Closed Loop Control Versus Sensor-Augmented Pump Therapy in the Management of Type 1 Diabetes

180 You will be asked to upload data from study devices at different times during the study. You
181 will be given all necessary equipment to do this.

182
183 Closed-Loop Group

184 If assigned to this group, you will be trained to use the study pump on its own. You will also be
185 trained to use the closed-loop study system to control the study pump. You will be taught how to
186 use the study system in all modes of operation similar to your personal insulin pump. Using the
187 study system in closed-loop mode will automatically adjust your insulin delivery based on the
188 CGM glucose readings. You can always stop the study system at any time and take over control
189 of your insulin pump.

190
191 Training may happen during a single visit or two visits to the clinic. By the end of training, you
192 will be expected to perform certain tasks without help from study staff members. You will be
193 given a printed User Guide as a reference. You will also wear a blinded CGM sensor as
194 described above during your first two weeks of home use.

195
196 At-Home Study Procedures

197 You will use the study system at home day and night for a 1-week period and then have a phone
198 call with study staff to review your experience. You will continue to use the system for another
199 week, followed by a clinic visit to review your training and answer any questions you have.
200 Study staff may suggest changes to help you improve your blood sugar control. Then you will
201 use the study system at home for about 13 weeks. You will have a series of phone contacts and
202 clinic visits during this period as shown in the table below.

203
204 You should use the study system in closed-loop mode whenever possible. . In the following
205 situations you should contact study staff to determine whether temporarily to stop closed-loop
206 use:

- 207
- You have a fever above 101.5 degrees Fahrenheit
 - You have a major illness
 - You need to use certain medications including epinephrine (e.g. for the emergency treatment of a severe allergic reaction or asthma attack) or oral or injectable glucocorticoids; details will be provided to you in a written guide
- 211

212
213 You will be provided with an Emergency Card with information regarding the study system to
214 carry with you at all times while participating in the study in the event you need emergency
215 medical care.

216

Consent to Participate in a Research Study

Clinical Acceptance of the Artificial Pancreas: The International Diabetes Closed Loop (iDCL) Trial - A Randomized Clinical Trial to Assess the Efficacy of Adjunctive Closed Loop Control Versus Sensor-Augmented Pump Therapy in the Management of Type 1 Diabetes

217 The study system will transfer CGM and pump data to a central database every few minutes
218 when the study smartphone is connected to the internet. The system must be connected to the
219 internet at least once per week.

220
221 You will be able to contact study staff at any time with a question, problem, or concern.
222

Scheduled Clinic Visits

223 The schedule for clinic visits is the same for everyone in the study. The main reason for these visits
224 is to troubleshoot any problems and ask you about any changes in your health.
225

226
227 Follow-up visits will occur at 5 weeks, 9 weeks, and 13 weeks.
228

229 The following procedures will be performed in both groups at each visit, unless otherwise listed
230 below:

- 231 • Assessment of study device use (*except 9-week visits*)
- 232 • Review of any problems or events that have occurred (*except 9-week visit*)
- 233 • Download of study device data
- 234 • Blood draw for HbA1c (*13-week visit*)
- 235 • Insertion of a blinded CGM device as described above (*9-week visit*)

236

Scheduled Phone Calls

237 In addition to the 1-week phone call described above, study staff will call you at 34 weeks. The
238 schedule for these calls is the same for everyone in the study
239

240

34-Week Phone Call Procedures

- 242 • Discussion of your use of the study devices
- 243 • Discussion of any changes in your health
- 244 • Review of available study device data to identify any safety issues

245

Final Visit (13-week Visit)

247 The final study visit will be at least 13 weeks after the Screening visit. Procedures will be similar
248 to those described for the Screening and follow-up visits. You will return some or all study devices
249 as instructed by study staff. If needed, you will be switched back to the insulin pump you were
250 using before entering the study. You will complete another set of questionnaires with similar
251 topics as before. There will be a final blood draw for HbA1c tests. You will have weight and (if
252 you are under 21 years old) height measurements taken again.

Consent to Participate in a Research Study

Clinical Acceptance of the Artificial Pancreas: The International Diabetes Closed Loop (iDCL) Trial - A Randomized Clinical Trial to Assess the Efficacy of Adjunctive Closed Loop Control Versus Sensor-Augmented Pump Therapy in the Management of Type 1 Diabetes

253 Table 1 below summarizes what will happen at each call and visit during the main study phase.

254

255 **Table 1: Main Phase of Study**

256

	Week of Study:						
	0	1w	2w	3w	5w	9w	13w
Clinic Visit (V) or Phone Call (P)	V	P	V	P	V	V	V
Review if you can continue in the study	X						
Pregnancy Test	X						
Blinded CGM (2 weeks)						X	
Blood draw for HbA1c test	X						X
Blood draw for C-peptide test	X						
Study device download	X		X		X	X	X
Review diabetes management and any new medical problems	X	X	X	X	X		X
Study questionnaires	X						X

257

258 **Additional Study Procedures**

259 If you are a female and menstruating, you will be asked to keep a log of when your menses occur
 260 to see the impact it has on your blood sugars. You may choose not to participate in this part of
 261 the study if you prefer. If you participate, you will be given a paper log to record this
 262 information for the study team. This will help us to better understand blood sugar fluctuations
 263 and insulin requirements during menses and the impact of the closed-loop system. Your decision
 264 to participate, or to not participate, in these additional procedures will not affect your ability to
 265 be in this study.

266

267 **ARE THERE RISKS IN THIS STUDY?**

268 Taking part in research often involves some risks of physical or psychological injury or discomfort.
 269 The most likely risks of this study are described below. These deserve careful thought. This study
 270 may include risks that are unknown at this time.

271

Consent to Participate in a Research Study

Clinical Acceptance of the Artificial Pancreas: The International Diabetes Closed Loop (iDCL) Trial - A Randomized Clinical Trial to Assess the Efficacy of Adjunctive Closed Loop Control Versus Sensor-Augmented Pump Therapy in the Management of Type 1 Diabetes

272 Risks related to your normal medical care are not listed in this form. We encourage you to
273 discuss these with your study doctor, your primary care provider, or another health care
274 professional.

275

276 Risk of Low Blood Sugar

277 As with any person who uses insulin, there is always a risk of having low blood sugar
278 (hypoglycemia). Low blood sugar should not happen more often during the study than before the
279 study. Symptoms of low blood sugar can include:

- 280 • sweating
- 281 • shaking
- 282 • not feeling well
- 283 • fainting
- 284 • seizures (convulsions)

285 In very rare cases low blood sugar can lead to brain damage or death. Even if low blood sugar does
286 occur, it almost always goes away quickly with treatment to raise the blood sugar.

287

288 Risk of High Blood Sugar

289 High blood sugar also should not happen more often during the study than before the study. High
290 blood sugar usually does not cause many obvious symptoms, but you may become thirsty or have a
291 higher level of sugar in your urine. In severe cases, diabetic ketoacidosis (DKA) or coma may
292 occur. DKA can lead to kidney failure, irregular heartbeat, heart attack, muscle breakdown, and
293 even death.

294

295 Fingerstick Risks

296 About 2 drops of blood will be removed by fingerstick to test blood sugar levels. It hurts when the
297 needle goes into your finger but not for long. In about 1 in 10 times, a small amount of bleeding
298 under the skin will produce a bruise. A small scar may persist for several weeks. The risk of an
299 infection is less than 1 in 1000.

300

301 Blood Draw Risk

302 Possible risks from blood draws include:

- 303 • Pain (common)
- 304 • Bruising (common)
- 305 • Redness (common)
- 306 • Temporary discomfort from the needle stick (common)
- 307 • Clotting (unlikely)

Consent to Participate in a Research Study

Clinical Acceptance of the Artificial Pancreas: The International Diabetes Closed Loop (iDCL) Trial - A Randomized Clinical Trial to Assess the Efficacy of Adjunctive Closed Loop Control Versus Sensor-Augmented Pump Therapy in the Management of Type 1 Diabetes

- 308 • Excessive bleeding (unlikely)
- 309 • Lightheadedness (rare)
- 310 • Infection (rare)
- 311 • Fainting (rare)
- 312 • Swelling of tissue (rare)
- 313

314 Total blood loss during this study is approximately 15 milliliters or about 3-4 teaspoons.

315
316 Insulin Pump Therapy Risks

317 The risks of using an insulin pump may include:

- 318 • Discomfort during insertion of the infusion set (common)
- 319 • Bruising at the site of infusion set insertion (common)
- 320 • Bleeding at the site of insertion (rare)
- 321 • Infection at the site of insertion (rare)
- 322 • Allergy to the infusion set or adhesive (rare)
- 323 • Insulin pump malfunction and mechanical problems (rare)
- 324 • Allergy to insulin (very rare)
- 325 • Changes to your skin (very rare)
- 326

327 Continuous Glucose Monitoring Sensor Risk

328 Potential risks from using a CGM include:

- 329 • Discomfort when the sensor is inserted into the skin (common)
- 330 • Itchiness, redness, bleeding and bruising at the insertion site (unlikely to rare)
- 331 • Tape allergies (rare)
- 332 • Infection at the site of sensor insertion (rare)
- 333

334 Study System Risks

335 There is a risk that parts of the closed-loop study system may not work properly. As a result, you
336 could receive less or more insulin than you need and be at risk for high or low blood sugars. The
337 following are some common ways the study system might not work correctly:

- 338 • CGM sensor reads higher or lower than your actual glucose level
- 339 • CGM sensor stops working or cannot communicate with the study system. If this occurs, the
340 pump will start delivering your normal insulin rate within 30 minutes.
- 341
- 342
- 343

Consent to Participate in a Research Study

Clinical Acceptance of the Artificial Pancreas: The International Diabetes Closed Loop (iDCL) Trial - A Randomized Clinical Trial to Assess the Efficacy of Adjunctive Closed Loop Control Versus Sensor-Augmented Pump Therapy in the Management of Type 1 Diabetes

344 Risk of Reusing the Continuous Glucose Monitor

345 The FDA approved the continuous glucose monitor as a “single use device.” This means that
346 they recommend that only one person use this device as there is a rare risk that a blood-borne
347 pathogen, such as Hepatitis B, may be spread if used with multiple patients. In the study, we
348 may reuse CGM receiver or transmitter parts after careful cleaning. The sensors will not be
349 reused.

350

351 Risk of Reusing the Blood Glucose Meter or Ketone Meter

352 The FDA approved these meters for “single-patient use.” This means that they recommend that
353 only one person use this device as there is a rare risk that a blood-borne pathogen, such as
354 Hepatitis B, may be spread if used with multiple patients. In the study, we do not plan to reuse
355 these meters.

356

357 Risk of Reusing the Insulin Pump

358 The FDA approved the insulin pump for “single-patient use.” They suggest that only one person
359 use this device as there is a rare risk that a blood-borne pathogen, such as Hepatitis B, may be
360 spread if used with multiple patients. In the study, the insulin pump may be reused after careful
361 cleaning.

362

363 Risks for Women

364 If you are pregnant now, or get pregnant during the study, please tell us. We do not know how the
365 study may affect an unborn baby, so you will not be able to join or stay in the study. A urine
366 pregnancy test will be done during the Screening visit and will be repeated during the study if you
367 are a woman who can become pregnant. You and your partner must use an approved form of birth
368 control during this study. Ask your doctor for more details about the proper birth control method
369 for you.

370

371 Questionnaires

372 The questions asked on the questionnaires will include questions about your personal attitudes, and
373 behaviors related to diabetes. It is possible you may find these questions to be upsetting. Similar
374 questionnaires have been used in other studies, and this reaction is uncommon. You can refuse to
375 answer any questions that make you feel uncomfortable. You can decide not to answer
376 questions, take a break, or stop taking part in the study at any time. There are no physical risks
377 present. Many precautions will be made to keep your information confidential, but this is not a
378 guarantee.

379

380

Consent to Participate in a Research Study

Clinical Acceptance of the Artificial Pancreas: The International Diabetes Closed Loop (iDCL) Trial - A Randomized Clinical Trial to Assess the Efficacy of Adjunctive Closed Loop Control Versus Sensor-Augmented Pump Therapy in the Management of Type 1 Diabetes

381 Unknown Risks

382 There may be additional risks associated with the study system that are not known at this time.
383 If we become aware of any new risks, you will be told about them. You will be able to decide if
384 you want to continue to take part in this study.

385

386 Loss of Privacy

387 Study staff will do their best to make sure that your private information is kept confidential, but
388 participating in research may involve a loss of privacy and the potential for a breach of
389 confidentiality. Information about you will be replaced with a code. A list linking the code and
390 your information will be kept separate from the research data.

391

392 Information about your data uploaded from your study devices will be collected for the study and
393 transmitted through a secure electronic system to the Jaeb Center for Health Research in Tampa,
394 Florida. This center is coordinating the study. It reviews all of the study information that is
395 collected. The Jaeb Center for Health Research will be reviewing the data, but will not have your
396 personal information.

397

398 The blood glucose meter used in the study is made by a company called Ascensia. Data from the
399 meter will be downloaded by study staff during clinic visits using software at the clinic. You
400 should not try to use any other software to download data from the meter. This includes software
401 from Ascensia called the CONTOUR DIABETES app. Your data may not remain confidential if
402 you use this app or other software to download the data. Study staff will remind you about this
403 during the study

404

405 **WHAT ARE THE BENEFITS OF TAKING PART IN THIS STUDY?**

406 There may be a possible medical benefit to you if you decide to take part in the study, but it is
407 not a guarantee. For instance, it is possible that your blood sugar control will improve during the
408 study using the study system or using just your insulin pump with CGM. If you are just using
409 the insulin pump, the blood sugar information from the CGM along with the instructions given
410 for management changes will be useful for your diabetes control.

411

412 You may receive no direct benefit from being in the study. People who take part in this research
413 study will add new knowledge that may help other people with type 1 diabetes.

414

415

416

Consent to Participate in a Research Study

Clinical Acceptance of the Artificial Pancreas: The International Diabetes Closed Loop (iDCL) Trial - A Randomized Clinical Trial to Assess the Efficacy of Adjunctive Closed Loop Control Versus Sensor-Augmented Pump Therapy in the Management of Type 1 Diabetes

417 **WHAT ALTERNATIVE PROCEDURES OR TREATMENT ARE AVAILABLE IF I DO**
418 **NOT TAKE PART IN THIS STUDY?**

419 If you do not take part in this study, you could continue using your current insulin pump. You
420 could also talk with your doctor about other ways to take insulin. If you do not participate, your
421 medical care will not be affected.

422
423 We encourage you to discuss these options with your study team, your general primary care
424 physician, or another health care professional who has knowledge of type 1 diabetes.

425
426 **WHAT IF I WANT TO WITHDRAW FROM THE STUDY, OR I AM ASKED TO**
427 **WITHDRAW FROM THE STUDY?**

428 You can stop participating in this study at any time. You may continue to receive medical care
429 not related to this study. However, we encourage you to talk to a member of the study team so
430 they know why you are stopping the study.

431
432 If there are any new findings during the study that may affect your participation, you will be told
433 about them so you can decide if you want to continue.

434
435 No penalty or loss of medical care will result from your decision. You may continue to receive
436 medical care not related to this study.

437
438 The study doctor may decide to stop your participation without your permission if he or she
439 thinks that being in the study may cause you harm. Some possible reasons for this include:

- 440 • the study doctor decides that continued participation is not safe for you, especially if you
- 441 have a severe low blood sugar or DKA
- 442 • you need treatment not allowed in the study
- 443 • failure to follow instructions
- 444 • the study is canceled

445
446 **ARE THERE COSTS RELATED TO TAKING PART IN THE STUDY?**

447 Testing that is specifically for this study will be paid for by the study. The costs of treatment,
448 office visits, and tests that are part of your type 1 diabetes care will be your or your insurance
449 company's responsibility. The study will pay for:

- 450 ➤ CGM-pump system, system supplies, and smartphone (closed-loop group)
- 451 ➤ CGM sensors (both treatment groups)
- 452 ➤ Blood glucose meter, test strips, and control solution (both treatment groups)
- 453 ➤ Blood ketone meter, test strips, and control solution (both treatment groups)

Consent to Participate in a Research Study

Clinical Acceptance of the Artificial Pancreas: The International Diabetes Closed Loop (iDCL) Trial - A Randomized Clinical Trial to Assess the Efficacy of Adjunctive Closed Loop Control Versus Sensor-Augmented Pump Therapy in the Management of Type 1 Diabetes

454 ➤ Blinded CGM (both treatment groups)

455

456 At the end of the study, or if you decide to remove yourself from the study, you must return the
457 study system parts to the study team listed on the Cover Page.

458

459 All other tests and procedures, including your own insulin, and other medical problems that
460 would happen even if you were not in this study are your or your insurance company's
461 responsibility.

462

IS THERE COMPENSATION FOR TAKING PART IN THIS STUDY?

463 If you take part in the study, you will be paid \$50 for each completed office visit required for the
464 study to cover travel and other visit-related expenses. You will not receive any compensation for
465 extra visits your doctor believes are needed for your usual care.

466

WHAT HAPPENS IF I EXPERIENCE A RESEARCH RELATED INJURY?

467 Medical care is available if you have a research-related injury. If you have an emergency, you
468 can get emergency care. If possible, you should tell the emergency care medical staff that you are
469 in a research study. You should also tell your study team about the emergency as soon as
470 possible.

471

472 The study will not provide costs for medical expenses or any other costs for research-related
473 injuries. The costs of care are your or your insurance company's responsibility. Money for lost
474 wages or direct or indirect losses is not available.

475

CONTACT INFORMATION FOR QUESTIONS OR PROBLEMS

476 If you have questions about this study, a research-related injury, have concerns, suggestions or
477 questions about the study, contact your study team using the provided contact information on the
478 Cover Page.

479

480 If you have unanswered questions about your rights as a research participant, wish to talk about
481 your concerns or suggestions linked to the research study, want additional information about the
482 research, or want to provide comments about the research, contact the Jaeb Center for Health
483 Research Institutional Review Board (IRB) Office at 813-975-8690 or irb@jaeb.org

484

HOW WILL MY INFORMATION BE PROTECTED AND KEPT CONFIDENTIAL?

485 As required by law, study related records with identifying information will be kept confidential.
486 Safeguards for authorized access, security, and privacy of your information have been put in

487

Consent to Participate in a Research Study

Clinical Acceptance of the Artificial Pancreas: The International Diabetes Closed Loop (iDCL) Trial - A Randomized Clinical Trial to Assess the Efficacy of Adjunctive Closed Loop Control Versus Sensor-Augmented Pump Therapy in the Management of Type 1 Diabetes

491 place by the Federal Privacy Regulations. Unless the law requires it, your name, address, social
492 security number, telephone number, or any other direct identifying information will not be used
493 to identify you.

494
495 **A. Purpose of Authorization**

496 We have rules to protect information about you. Federal and state laws and the federal medical
497 Privacy Rule also protect your information. By signing this form you provide your permission,
498 called your “authorization,” for the use and disclosure of information protected by the Privacy
499 Rule.

500
501 You must sign the **Protected Health Information Authorization** at the end of this form if you
502 want to be in the study. When you sign the form, you give permission for the use and disclosure
503 of your Protected Health Information (PHI) for the study. PHI is health information that
504 identifies you. Your authorization is beneficial and important for the study. Without your
505 authorization, you will not be able to be in this research study.

506
507 **B. Use and Disclosure of the PHI**

508 Your study doctor will collect information about you. This information includes things learned
509 from procedures listed and described in this form as well as your name, address, date of birth,
510 and information from your medical records. Your name, address, telephone number, and social
511 security number are examples of identifiable information.

512
513 A code number will replace your name, address, telephone number, or social security number in
514 the results given to the study coordinating center which is the Jaeb Center for Health Research in
515 Tampa, Florida.

516
517 The study doctor’s office will not disclose study results that have your identifiable information
518 except as explained in Section C. or when required by law. The Jaeb Center and this doctor’s
519 office will guard the privacy of your study PHI.

520
521 Study results without the protected information may be shared in medical journals and at
522 scientific meetings. Your records will be confidential. No one will disclose your identity in a
523 medical journal or at a scientific meeting.

524
525 **C. Authorized Recipients and Users**

526 It is possible that people outside of this doctor’s office and the Jaeb Center may need to see or
527 receive your information from this study. Some examples include: government agencies (such as

Consent to Participate in a Research Study

Clinical Acceptance of the Artificial Pancreas: The International Diabetes Closed Loop (iDCL) Trial - A Randomized Clinical Trial to Assess the Efficacy of Adjunctive Closed Loop Control Versus Sensor-Augmented Pump Therapy in the Management of Type 1 Diabetes

528 the U.S. Food and Drug Administration), committees that monitor safety, other sites in the study,
529 and companies that sponsor the study.

530
531 In most cases the information will have a code number with it instead of your name, address,
532 telephone number, or social security number.

533
534 There are some situations where the information will not have a code number but may include
535 your name, address, telephone number, or social security number (PHI). If so, people outside this
536 doctor’s office who assist in your care may see your study PHI. They may not be covered by the
537 federal Privacy Rule. Everyone who needs to see your information will be told it is confidential
538 – but we cannot guarantee full confidentiality.

539
540 **D. Other Considerations**

541 The data collected in the study may be provided to other researchers to use; however, the data
542 that are provided will not contain any information that could identify you.

543
544 When the results are made public, all of the study data collected may also be made public.
545 However, there will be no identifying information included.

546
547 A description of this clinical trial will be available on <http://www.ClinicalTrials.gov>, as required
548 by U.S. Law. This Web site will not include information that can identify you. At most, the
549 Web site will include a summary of the results. You can search this Web site at any time.

550
551 **E. Cancellation of HIPAA Authorization**

552 You may cancel your permission for the use and disclosure of your study PHI at any time. You
553 need to contact your study doctor and give him/her a notice of cancellation in writing. When you
554 cancel your permission or when you withdraw from the study directly, you are no longer part of
555 the study. No new information about you will be gathered for the study except when there is an
556 adverse (unfavorable) event that is related or potentially related to the study. If an adverse event
557 happens, your entire medical record may need to be reviewed.

558
559 The Jaeb Center will receive all the information that was collected for the study up to the time of
560 cancellation or withdrawal. The Jaeb Center will receive any new information about any adverse
561 (unfavorable) event that is related or potentially related to the study.

562
563
564

Consent to Participate in a Research Study

Clinical Acceptance of the Artificial Pancreas: The International Diabetes Closed Loop (iDCL) Trial - A Randomized Clinical Trial to Assess the Efficacy of Adjunctive Closed Loop Control Versus Sensor-Augmented Pump Therapy in the Management of Type 1 Diabetes

565 **F. 50 Year Expiration Date and Indefinite Expiration Date**

566 Some of your study PHI does not have a code number with it. Your permission for the use and
567 disclosure of this PHI lasts 50 years from the date of your signature or until the end of the study,
568 whichever is sooner.

569

570 The rest of your study PHI does have a code number with it. When it is collected, it becomes a
571 research report. Your permission for the use and disclosure of these coded data will never end.

572 These coded data do not have your name, address, telephone number, or social security number.

573 *The above supports the HIPAA Privacy Rule – 45 CFR 164.508*

574

Consent to Participate in a Research Study

Clinical Acceptance of the Artificial Pancreas: The International Diabetes Closed Loop (iDCL) Trial - A Randomized Clinical Trial to Assess the Efficacy of Adjunctive Closed Loop Control Versus Sensor-Augmented Pump Therapy in the Management of Type 1 Diabetes

575 **STANFORD UNIVERSITY LOCAL REQUIRED LANGUAGE**

576

577 **Research–Related Injury**

578 All forms of medical diagnosis and treatment – whether routine or experimental – involve some
579 risk of injury. In spite of all precautions, you might develop medical complications from
580 participating in this study. If such complications arise, the Protocol Director and the research
581 study staff will assist you in obtaining appropriate medical treatment. In the event that you have
582 an injury or illness that is directly caused by your participation in this study, reimbursement for
583 all related costs of care first will be sought from your insurer, managed care plan, or other
584 benefits program. **You will be responsible for any associated co-payments or deductibles as**
585 **required by your insurance.**

586

587 If costs of care related to such an injury are not covered by your insurer, managed care plan or
588 other benefits program, you may be responsible for these costs. If you are unable to pay for such
589 costs, the Protocol Director will assist you in applying for supplemental benefits and explain how
590 to apply for patient financial assistance from the hospital.

591

592 You do not waive any liability rights for personal injury by signing this form

593

594 **CA Bill of Rights**

595 As a research participant, you have the following rights. These rights include but are not limited
596 to the participant's right to:

597

598 • be informed of the nature and purpose of the experiment;
599 • be given an explanation of the procedures to be followed in the medical experiment, and any
600 drug or device to be utilized;

601 • be given a description of any attendant discomforts and risks reasonably to be expected;

602 • be given an explanation of any benefits to the subject reasonably to be expected, if
603 applicable;

604 • be given a disclosure of any appropriate alternatives, drugs or devices that might be
605 advantageous to the subject, their relative risks and benefits;

606 • be informed of the avenues of medical treatment, if any available to the subject after the
607 experiment if complications should arise;

608 • be given an opportunity to ask questions concerning the experiment or the procedures
609 involved;

610 • be instructed that consent to participate in the medical experiment may be withdrawn at any
611 time and the subject may discontinue participation without prejudice;

611 • be given a copy of the signed and dated consent form; and

Consent to Participate in a Research Study

Clinical Acceptance of the Artificial Pancreas: The International Diabetes Closed Loop (iDCL) Trial - A Randomized Clinical Trial to Assess the Efficacy of Adjunctive Closed Loop Control Versus Sensor-Augmented Pump Therapy in the Management of Type 1 Diabetes

- 612 • be given the opportunity to decide to consent or not to consent to a medical experiment
613 without the intervention of any element of force, fraud, deceit, duress, coercion or undue
614 influence on the subject's decision.
615

Stanford University HIPAA Authorization

616 In order to participate in this study, you must also sign the Stanford University HIPAA
617 Authorization Form.
618

619 With your permission, we may photograph or videotape your participation in this trial.
620 Photographs and videotapes will be used in presentations at conferences, potential study subjects,
621 and potential research donors. Your willingness to have photos taken is independent of your
622 participation in this trial. Your photo or videotape will not be used without your consent. Your
623 identity can remain anonymous.

I agree to be photographed/videotaped during this trial.

Initials

I agree to be photographed/videotaped during this trial but would like to remain anonymous.

Initials

I do **NOT CONSENT** to being photographed/videotaped during this trial.

Initials

624
625
626

Consent to Participate in a Research Study

Clinical Acceptance of the Artificial Pancreas: The International Diabetes Closed Loop (iDCL) Trial - A Randomized Clinical Trial to Assess the Efficacy of Adjunctive Closed Loop Control Versus Sensor-Augmented Pump Therapy in the Management of Type 1 Diabetes

627 **Your Full Name (printed)** _____

628
629 **Description of Representative's Authority to Act for the Subject**

630 _____ (if applicable)

631
632
633 **Protected Health Information Authorization**

634
By signing, you authorize the use and disclosure of your protected health information. This information is collected as part of your participation in this study.

Signature Date

635
636 **Study Enrollment**

637
By signing, you agree to take part in this study. Your signature means that:

- *you have read this informed consent form about the study named below;*
- *you have been given the chance to discuss the study and to ask questions;*
- *you have verbally summarized your understanding of the study to the person who is explaining it to you; and*
- *you freely choose to participate.*

Name of Study: A Randomized Clinical Trial to Assess the Efficacy of Adjunctive Closed Loop Control Versus Sensor-Augmented Pump Therapy in the Management of Type 1 Diabetes

Signature Date

I certify that to the best of my knowledge the participant understands the nature, demands, risks, and benefits involved in his/her participation in this study.

Investigator's Printed Name Investigator's Signature Date

638 **You will be given a signed copy of this document in case you want to read it again.**