


Makena[®] (hydroxyprogesterone caproate injection) Auto-Injector

Billing Guide | Summer 2022



Makena
Care Connection[®]

Have Questions? Connect with us.

 info@makenacareconnection.com

 1-800-847-3418 (M-F, 8AM-8PM ET)

Benefits Investigation Support | Financial Assistance for Eligible Patients | Education and Adherence Support

Makena[®]
hydroxyprogesterone
caproate injection

FDA-approved indication for Makena[®] (hydroxyprogesterone caproate injection) and Important Safety Information

Makena is a progestin indicated to reduce the risk of preterm birth in women with a singleton pregnancy who have a history of singleton spontaneous preterm birth. The effectiveness of Makena is based on improvement in the proportion of women who delivered <37 weeks of gestation. There are no controlled trials demonstrating a direct clinical benefit, such as improvement in neonatal mortality and morbidity.

Limitation of use: While there are many risk factors for preterm birth, safety and efficacy of Makena has been demonstrated only in women with a prior spontaneous singleton preterm birth. **It is not intended for use in women with multiple gestations or other risk factors for preterm birth.**

Important Safety Information for Makena (hydroxyprogesterone caproate injection)

- Do not use Makena in women with any of the following conditions:
 - Current or history of thrombosis or thromboembolic disorders
 - Known or suspected breast cancer, other hormone-sensitive cancer or history of these conditions
 - Undiagnosed abnormal vaginal bleeding unrelated to pregnancy
 - Cholestatic jaundice of pregnancy
 - Liver tumors, benign or malignant, or active liver disease
 - Uncontrolled hypertension
- Makena should be discontinued if thrombosis or thromboembolism occurs
- Allergic reactions, including urticaria, pruritus and angioedema, have been reported with use of Makena or with other products containing castor oil
- Women receiving Makena should be monitored if they:
 - Are prediabetic or diabetic
 - Have conditions that may be affected by fluid retention, such as preeclampsia, epilepsy, cardiac or renal dysfunction
 - Have a history of clinical depression; Makena should be discontinued if depression recurs
 - Develop jaundice; consider whether benefit of use warrants continuation
 - Develop hypertension
- Certain pregnancy-related fetal and maternal complications or events were numerically increased in Makena-treated subjects as compared to placebo subjects, including miscarriage (2.4% vs. 0%) and stillbirth (2% vs. 1.3%), admission for preterm labor (16% vs. 13.8%), preeclampsia or gestational hypertension (8.8% vs. 4.6%), gestational diabetes (5.6% vs. 4.6%), and oligohydramnios (3.6% vs. 1.3%)
- In a study where the Makena intramuscular injection was compared with placebo, the most common adverse reactions reported with Makena intramuscular injection (reported incidence in $\geq 2\%$ of subjects and higher than in the control group) were: injection site reactions (pain [35%], swelling [17%], pruritus [6%], nodule [5%]), urticaria (12%), pruritus (8%), nausea (6%), and diarrhea (2%)
- In studies where the Makena subcutaneous injection using auto-injector was compared with Makena intramuscular injection, the most common adverse reaction reported with Makena Auto-Injector use (and higher than with Makena intramuscular injection) was injection site pain (10% in one study and 34% in another)

Introduction to Makena Auto-Injector

This guide covers some important issues about Makena Auto-Injector insurance coverage and reimbursement, including a coding key to help you and your office with Makena billing procedures. Remember that a patient's individual insurance benefits will depend on her coverage, and different insurers may have different coverage policies. **Note:** There are formulations of Makena other than Makena Auto-Injector. This guide is specific to Makena Auto-Injector, is provided for informational purposes only, and does not constitute legal advice.

For questions, call Makena Care Connection® at 1-800-847-3418 (fax: 1-800-847-3413), email info@makenacareconnection.com, or you can visit the website at www.makenahcp.com.

Makena distribution

As a specialty injectable, Makena can be covered by insurance plans as a pharmacy or medical benefit. Your patient's insurance plan will determine how Makena is covered.

- To prescribe Makena, submit the Makena Prescription Form to Makena Care Connection via fax at 1-800-847-3413
 - Makena Care Connection investigates the patient's insurance benefits, and upon approval, sends the Makena prescription to the payer-preferred dispensing pharmacy for processing
 - The pharmacy verifies insurance coverage, collects the patient's out-of-pocket cost, and ships the product
- Order and stock Makena through one of the specialty distributor partners (ie, buy-and-bill)
 - CuraScript: (877) 599-7748
 - McKesson Plasma and Biologics: (877) 625-2566

Makena dosing and administration¹

Makena is a once-weekly injection. Makena is administered by a healthcare provider subcutaneously via an auto-injector once a week (every 7 days). Makena is packaged as a single-use auto-injector (275 mg/1.1 mL).

Makena treatment should be started between 16 weeks, 0 days and 20 weeks, 6 days of gestation and continued until 37 weeks (last injection as late as 36 weeks, 6 days) or delivery, whichever occurs first.

Billing and coding instructions

The following information will be required when completing the CMS 1500 claim form (see sample form on page 6). Please use your clinical judgment to select the appropriate codes where applicable.

Current Procedural Terminology (CPT) Code

Please include the appropriate CPT code for any Makena® (hydroxyprogesterone caproate injection) related service in Box 24D of the CMS 1500 claim form. Submit a charge for the office visit using the injection code **OR** the appropriate office visit (Evaluation and Management) code 99202-99205, not both.

CPT Code ²	Description
Injection code	
96372	Therapeutic, prophylactic, or diagnostic injection; subcutaneous or intramuscular
OR	
Office visit code	
99202-99205	Office/outpatient visit, new patient; 10 min–60 min
00211-00213	Office/outpatient visit (by staff), established patient; 5 min–29 min

Note: Duration of appointment will vary depending on the nature of the visit.

Diagnosis Code (ICD-10-CM)

Please include the appropriate ICD-10-CM code to classify the diagnosis in Box 21 of the claim form.

ICD-10-CM Code ³	Description
O09.212	Supervision of pregnancy with history of preterm labor, second trimester
O09.213	Supervision of pregnancy with history of preterm labor, third trimester
O09.219	Supervision of pregnancy with history of preterm labor, unspecified trimester

Note: The ICD-10 codes start with an uppercase “O,” which is followed by a zero.

Disclaimer:

This resource and all supporting materials are supplied for information only and are not intended to be a thorough description or analysis of the subject matter herein, nor are they opinions of AMAG Pharmaceuticals. The information and opinions are based on the *AMA CPT 2022 and ICD-10-CM 2022* coding manuals and *CMS HCPCS Quarterly Update*. Because payer benefits change regularly, providers are responsible for confirming coverage, coding, and payment with respective payers. Providers are also responsible for ensuring accuracy of service claim forms and supportive documentation sent to payers. AMAG Pharmaceuticals does not make any representation or guarantees concerning the coverage or reimbursement of any service or item.

Important HCPCS billing and coding information

The J Code for Makena® (hydroxyprogesterone caproate injection) is J1726 and it should be used in column 24D of the CMS 1500 claim form.

HCPCS Code ^{4,5}	Code	Description	Unit of Administration
J code	J1726 <i>Some payers require the use of J3490. Please check with payer.</i>	Makena® (hydroxyprogesterone caproate injection)	10 mg=1 billable unit

- Enter the number of billable units in Box 24G

Important information about reimbursement

When calculating reimbursement, it is important to record the appropriate billable unit. The reimbursement per billable unit may vary based on your contracted payer rate; check with the payer to ensure that your claim is recorded correctly. Below is an example of how to calculate reimbursement using the Makena Auto-Injector:

There are 275 mg in one weekly dose (1.1 mL) of Makena therapy, administered subcutaneously via auto-injector.⁵

- J1726
 - 1 billable unit=10 mg
 - 1 Makena injection=27.5 billable units (275 mg/10 mg)
 - Calculation: 27.5 billable units x (reimbursement rate per billable unit)

Please confirm with the payer if partial billable units is acceptable or if rounding up of billable units is required.

Completing the CMS 1500 claim form

A National Drug Code (NDC) and quantity should be used when billing Makena. Use one of the following codes in Box 19 of the CMS 1500 claim form.

NDC	Product	Dosage
Subcutaneous auto-injector 64011-301-03–OR–64011-0301-03	Makena® (hydroxyprogesterone caproate injection) Auto-Injector	275 mg/1.1 mL

Payer requirements regarding 10-digit and 11-digit NDC may vary.

Please see **Important Safety Information** on page 2 and attached **full Prescribing Information** for Makena.

Makena[®]
hydroxyprogesterone
caproate injection

Completing the CMS 1500 claim form

Please see the following “Physician or supplier information” section of a sample CMS 1500 claim form for Makena® (hydroxyprogesterone caproate injection), completed using Makena Auto-Injector as an example.

14. DATE OF CURRENT: MM DD YY		ILLNESS (First symptom) OR INJURY (Accident) OR PREGNANCY(LMP)		15. IF PATIENT HAS HAD SAME OR SIMILAR ILLNESS. GIVE FIRST DATE MM DD YY		16. DATES PATIENT UNABLE TO WORK IN CURRENT OCCUPATION FROM MM DD YY TO MM DD YY	
17. NAME OF REFERRING PROVIDER OR OTHER SOURCE				17a. NPI		18. HOSPITALIZATION DATES RELATED TO CURRENT SERVICES FROM MM DD YY TO MM DD YY	
19. RESERVED FOR LOCAL USE				20. OUTSIDE LAB? <input type="checkbox"/> YES <input type="checkbox"/> NO		\$ CHARGES	
21. DIAGNOSIS OR NATURE OF ILLNESS OR INJURY (Relate Items 1, 2, 3 or 4 to Item 24E by Line)				22. MEDICAID RESUBMISSION CODE		ORIGINAL REF. NO.	
1. 009 212				23. PRIOR AUTHORIZATION NUMBER			
24. A. DATE(S) OF SERVICE From MM DD YY To MM DD YY		B. PLACE OF SERVICE	C. EMG	D. PROCEDURES, SERVICES, OR SUPPLIES (Explain Unusual Circumstances) CPT/HCPCS MODIFIER	E. DIAGNOSIS POINTER	F. \$ CHARGES	G. DAYS OR UNITS
1 MM DD YY MM DD YY							
2 MM DD YY MM DD YY							
3							

For service and project codes.

J code	D. PROCEDURES, SERVICES, OR SUPPLIES (Explain Unusual Circumstances) CPT/HCPCS MODIFIER	E. DIAGNOSIS POINTER	F. \$ CHARGES	G. DAYS OR UNITS
J1726		009212	\$XX.XX	27.5
10 mg=1 billable unit	96372			

Please confirm with the payer if partial billable units is acceptable or if rounding up of billable units is required.

Box 19: Local use information

Always enter the drug name, strength, dosage, and NDC (64011-301-03 **OR** 64011-0301-03). It is recommended that a copy of the published pricing source (ie, *Red Book* price page) for Makena be attached when a claim form is submitted.

Box 24D: Procedure code

Document product administration with appropriate CPT and modifier codes. For example: 96372; therapeutic, prophylactic, or diagnostic injection (specify substance or drug); subcutaneous or intramuscular and/or the office visit code based on the third-party payer’s reimbursement policy, plus a modifier code such as 644.2.² Please see page 4 for a list of potential codes.

Box 21: Diagnosis or nature of illness or injury

Document appropriate ICD-10-CM diagnosis codes corresponding to patient’s diagnosis:
Line 1—primary diagnosis code.
Please see page 4 for a code description.

Box 24G: Service units

Report unit of service.
J1726: 10 mg=1 billable unit.
Some payers may require use of J3490. Please check with payer.
Enter the additional information in Box 24, including (in order): date and place of service, charges, and qualifier.

Disclaimer: The sample CMS 1500 claim form above only includes the coding information outlined on prior page and should be used for information purposes only.

Frequently asked questions

The following are answers to some of the most frequently asked questions regarding insurance coverage.

Q. How can Makena Auto-Injector insurance coverage be determined for a specific patient?

- A. To determine if the health insurance plan provides coverage and payment for Makena, fax a completed Makena Prescription Form to 1-800-847-3413 or call Makena Care Connection® at 1-800-847-3418 to initiate the process. If the patient's insurance plan requires you to order Makena and submit a claim for each dose, contact the insurance plan directly to confirm the reimbursement rate for each injection.

Q. Which billing code should be used to submit to the insurance company?

- A. Makena has a unique J code (J1726) which should be used in column 24D of the CMS 1500 claim form.⁵ Some payers may require use of J3490. Please check with payer before submitting claims for reimbursement.

Many payers/insurers will reimburse a healthcare provider for the appropriate office visit CPT code or the injection code. Therefore, the submitted charge for the office visit should include the appropriate office visit CPT code that corresponds to the level of service provided or for the injection using CPT code 96372—therapeutic, prophylactic, or diagnostic injection (specify substance or drug); subcutaneous or intramuscular.²

Please verify the individual patient's benefits and confirm the reimbursement rate prior to submitting claims for therapy. Additionally, the reimbursement per billable unit may vary based on payer rates and/or the structure of the reimbursement policy.

Q. How do I bill using the Makena J code?

- A. The unique Makena J code—J1726—should be used in column 24D of the CMS 1500 claim form. The billable units for the Makena J code are in mg, which can be used in column 24G.⁵

When calculating reimbursement, it is important to record the appropriate billable unit in Box 24G of the CMS 1500 claim form. Using Makena Auto-Injector as an example, there are 275 mg in one weekly dose (1.1 mL) of therapy.

- J code calculation: 27.5 billable units x (reimbursement rate per billable unit)
- Cost per billable unit will vary based on contracted payer rate

Please confirm with the payer if partial billable units is acceptable or if rounding up of billable units is required. Some payers may require use of J3490. Please check with payer.

Q. Will the insurance company require a prior authorization for Makena® (hydroxyprogesterone caproate injection)?

A. As with other injectable drugs, some insurance companies will require a prior authorization for Makena. The prior authorization is often in place to ensure the patient meets the eligibility criteria for therapy based on the FDA-approved indication. Clinical eligibility includes women who:

- Are pregnant with a single baby, and
- Have a history of singleton spontaneous preterm birth (<37 weeks)

You may be contacted by Makena Care Connection®, the assigned pharmacy, and/or the insurance plans with questions regarding prior authorization for Makena.

Q. How does my patient get connected to financial assistance in a buy-and-bill scenario?

A. If your patient feels as though her out-of-pocket expense is too high for Makena Auto-Injector, please have her call Makena Care Connection to see if she is eligible for financial assistance. Please ensure the patient informs Makena Care Connection that she is receiving injections of Makena in your office that you purchased directly from a specialty distributor.

Eligibility criteria include:

- Patient meets the FDA-approved indication (pregnant with a singleton with a history of singleton spontaneous preterm birth <37 weeks of gestation)

In compliance with federal regulations, patients insured by a government-funded program (eg, Medicaid, TRICARE, etc.) are not eligible.

Q. What can I do for my patients who do not have insurance?

A. Make sure to check **“Patient does not have insurance and should be evaluated for patient assistance program”** in Step 1 of the Makena Prescription Form in order for your patient to be screened for eligibility for the Makena Patient Assistance Program.

Eligibility criteria include:

- Patient meets the FDA-approved indication (pregnant with a singleton with a history of singleton spontaneous preterm birth <37 weeks of gestation)

Restrictions apply. Patient must be ≤ 500% federal poverty level based on residency to participate in patient assistance program.

Q. Where can I access the CMS 1500 form?

A. The CMS 1500 form can be accessed on the Centers for Medicare & Medicaid Services website at <https://www.cms.gov/Medicare/CMS-Forms/CMS-Forms/Downloads/CMS1500.pdf>.

Q. What is the return policy?

- A. Under certain circumstances, Makena can be returned for credit. Please see our returns policy at www.makenahcp.com to see if your order qualifies.
-

Q. Is 340B/PHS pricing available?

- A. 340B-eligible hospitals and other eligible facilities can obtain Makena through CuraScript, Inc., McKesson Plasma and Biologics.
-

Q. Will I pay the list price or is the price higher due to distributor markups?

- A. You will purchase Makena at the product acquisition price (ie, list price/WAC, or 340B pricing for eligible hospitals). There are no distributor markups when Makena is purchased through CuraScript, Inc., McKesson Plasma and Biologics.

If purchasing auto-injector (1.1 mL) you may be eligible to receive a 15% volume discount. Please contact CuraScript (877-599-7748) for more information.

Centers for Medicare & Medicaid Services State Offices

Alabama (800) 362-1504	Illinois (800) 843-6154	Montana (800) 362-8312	Rhode Island (401) 462-5300
Alaska (907) 465-3030	Indiana (800) 577-1278	Nebraska (402) 471-3121	South Carolina (803) 898-2500
Arizona (602) 417-4000	Iowa (800) 338-8366	Nevada (775) 684-3600	South Dakota (605) 773-4678
Arkansas (800) 457-4454	Kansas (800) 766-9012	New Hampshire (603) 271-2261	Tennessee (800) 342-3145
California (800) 541-5555	Kentucky (800) 635-2570	New Jersey (800) 356-1561	Texas (800) 925-9126
Colorado (800) 221-3943	Louisiana (888) 342-6207	New Mexico (505) 827-3103	Utah (801) 538-6155
Connecticut (800) 842-8440	Maine (877) 353-3771	New York (800) 541-2831	Vermont (800) 250-8427
Delaware (800) 372-2022	Maryland (800) 977-7388	North Carolina (800) 662-7030	Virginia (804) 786-6145
District of Columbia (202) 442-5988	Massachusetts (800) 841-2900	North Dakota (701) 328-2321	Washington (800) 562-3022
Florida (888) 419-3456	Michigan (517) 373-3740	Ohio (800) 324-8680	West Virginia (888) 483-0797
Georgia (800) 766-4456	Minnesota (800) 657-3739	Oklahoma (405) 522-7300	Wisconsin (800) 362-3002
Hawaii (800) 316-8005	Mississippi (800) 421-2408	Oregon (800) 359-9517	Wyoming (307) 777-7531
Idaho (208) 334-5747	Missouri (800) 392-2161	Pennsylvania (800) 440-3989	

References: 1. Makena® (hydroxyprogesterone caproate injection) prescribing information, AMAG Pharmaceuticals, 2/2018. 2. American Medical Association. *CPT 2022: Professional Edition 4th Edition*, American Medical Association Press; 4th Edition, October 15, 2021. 3. American Medical Association. *ICD-10-CM 2022 the Complete Official Codebook with Guidelines*, American Medical Association Press; 1st Edition, September 30, 2021. 4. Centers for Medicare and Medicaid Services, US Department of Health and Human Services. *HCPCS Quarterly Update*; <https://www.cms.gov/Medicare/Coding/HCPCSReleaseCodeSets/HCPCS-Quarterly-Update>, July 2022 Alpha-Numeric HCPCS file, updated 05/09/2022. 5. <https://www.cms.gov/Medicare/Coding/HCPCSReleaseCodeSets/HCPCS-Quarterly-Update> Last Updated 05/09/2022, Accessed June 9, 2022

More than Makena® (hydroxyprogesterone caproate injection) with personalized patient support

To help support benefits investigations and prior authorizations for your patients, contact Makena Care Connection®.



Rx Support

Each woman is unique and so are her insurance benefits. Because timely access is so important to your practice, we'll aid in verifying insurance coverage and obtaining prior authorizations (when applicable) to help your patients get their Makena prescription on time.



Financial Assistance

AMAG Pharmaceuticals is committed to ensuring affordable access to Makena.

Copay Assistance*: Commercially insured patients whose health plan covers Makena Auto-Injector

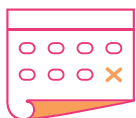
Most pay no more than

\$35
per injection

- Based on a sliding scale from \$0-\$35/injection
- Maximum company benefit of \$5,000

Patient Assistance Program†: Uninsured and commercially underinsured patients

- Eligible moms may receive a full course of therapy at no cost



Education & Adherence

We understand that moms receiving Makena injections may need some encouragement and support to stick to their weekly injection schedule, and we want to help. This free service offers educational and adherence support to encourage women to make Makena part of their pregnancy and take an active role in their health.

Each patient's eligibility is evaluated on an individual basis. To be eligible, patients must meet the FDA-approved indication for Makena. In compliance with federal regulations, patients insured by a government-funded program (Medicaid, TRICARE, etc) are not eligible. These programs and any assistance provided may be discontinued or modified at any time based on eligibility, state and local laws, and program availability.

*Financial assistance applies to the patient's copay, coinsurance and deductible for patients receiving Makena Auto-Injector. AMAG Pharmaceuticals will help lower the out-of-pocket cost each month, providing up to \$5,000 in financial assistance, or until therapy is completed, whichever comes first. The cost per injection is based on the household income with no upper-level income caps. Enrollment into the program cannot be retroactive.

†Restrictions apply. Patient must be at or below 500% federal poverty level based on residency to participate in patient assistance program.



Have Questions? Connect with us.



info@makenacareconnection.com



1-800-847-3418 (M-F, 8AM-8PM ET)

Please see **Important Safety Information** on page 2 and attached **full Prescribing Information** for Makena.

Makena
hydroxyprogesterone
caproate injection

Full Prescribing Information
attached here.

If missing, please visit
<http://www.makena.com/pi>

Please see **Important Safety Information** on page 2
and attached **full Prescribing Information** for Makena.

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Makena[®]
hydroxyprogesterone
caproate injection

HIGHLIGHTS OF PRESCRIBING INFORMATION

These highlights do not include all the information needed to use MAKENA safely and effectively. See full prescribing information for MAKENA.

MAKENA® (hydroxyprogesterone caproate injection) for intramuscular or subcutaneous use.

Initial U.S. Approval: 1956

RECENT MAJOR CHANGES

Dosage and Administration, Dosing (2.1) 02/2018
Dosage and Administration, Preparation & Administration (2.2) 02/2018

INDICATIONS AND USAGE

Makena is a progestin indicated to reduce the risk of preterm birth in women with a singleton pregnancy who have a history of singleton spontaneous preterm birth (1). The effectiveness of Makena is based on improvement in the proportion of women who delivered < 37 weeks of gestation (14). There are no controlled trials demonstrating a direct clinical benefit, such as improvement in neonatal mortality and morbidity.

Limitation of use: Makena is not intended for use in women with multiple gestations or other risk factors for preterm birth. (1)

DOSAGE AND ADMINISTRATION

- Makena auto-injector: Administer subcutaneously using Makena auto-injector at a dose of 275 mg (1.1 mL) once weekly, in the back of either upper arm (2.1)
- Makena (single- and multi-dose vials): Administer intramuscularly at a dose of 250 mg (1 mL) once weekly in the upper outer quadrant of the gluteus maximus (2.1)
- Begin treatment between 16 weeks, 0 days and 20 weeks, 6 days of gestation (2.1)
- Continue administration once weekly until week 37 (through 36 weeks, 6 days) of gestation or delivery, whichever occurs first (2.1)

DOSAGE FORMS AND STRENGTHS

1.1 mL single-use auto-injector for subcutaneous use contains 275 mg of hydroxyprogesterone caproate (250 mg/mL) (3)
1 mL single-dose vial for intramuscular use contains 250 mg of hydroxyprogesterone caproate. (3)
5 mL multi-dose vial for intramuscular use contains 1250 mg of hydroxyprogesterone caproate (250 mg/mL). (3)

CONTRAINDICATIONS

- Current or history of thrombosis or thromboembolic disorders (4)
- Known or suspected breast cancer, other hormone-sensitive cancer, or history of these conditions (4)
- Undiagnosed abnormal vaginal bleeding unrelated to pregnancy (4)
- Cholestatic jaundice of pregnancy (4)
- Liver tumors, benign or malignant, or active liver disease (4)
- Uncontrolled hypertension (4)

WARNINGS AND PRECAUTIONS

- Thromboembolic disorders: Discontinue if thrombosis or thromboembolism occurs (5.1)
- Allergic reactions: Consider discontinuing if allergic reactions occur (5.2)
- Decreased glucose tolerance: Monitor prediabetic and diabetic women receiving Makena (5.3)
- Fluid retention: Monitor women with conditions that may be affected by fluid retention, such as preeclampsia, epilepsy, cardiac or renal dysfunction (5.4)
- Depression: Monitor women with a history of clinical depression; discontinue Makena if depression recurs (5.5)

ADVERSE REACTIONS

- In a study where the Makena intramuscular injection was compared with placebo, the most common adverse reactions reported with Makena intramuscular injection (reported incidence in $\geq 2\%$ of subjects and higher than in the control group) were: injection site reactions (pain [35%], swelling [17%], pruritus [6%], nodule [5%]), urticaria (12%), pruritus (8%), nausea (6%), and diarrhea (2%). (6.1)
- In studies where the Makena subcutaneous injection using auto-injector was compared with Makena intramuscular injection, the most common adverse reaction reported with Makena auto-injector use (and higher than with Makena intramuscular injection) was injection site pain (10% in one study and 34% in another). (6.1)

To report SUSPECTED ADVERSE REACTIONS, contact AMAG Pharmaceuticals at 1-877-411-2510 or FDA at 1-800-FDA-1088 or www.fda.gov/medwatch. See 17 for PATIENT COUNSELING INFORMATION and FDA-approved patient labeling.

Revised 02/2018

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FULL PRESCRIBING INFORMATION

1 INDICATIONS AND USAGE

Makena is a progestin indicated to reduce the risk of preterm birth in women with a singleton pregnancy who have a history of singleton spontaneous preterm birth. The effectiveness of Makena is based on improvement in the proportion of women who delivered < 37 weeks of gestation. There are no controlled trials demonstrating a direct clinical benefit, such as improvement in neonatal mortality and morbidity.

Limitation of use: While there are many risk factors for preterm birth, safety and efficacy of Makena has been demonstrated only in women with a prior spontaneous singleton preterm birth. **It is not intended for use in women with multiple gestations or other risk factors for preterm birth.**

2 DOSAGE AND ADMINISTRATION

2.1 Dosing

- Makena auto-injector: Administer **subcutaneously** using auto-injector at a dose of 275 mg (1.1 mL) once weekly (every 7 days) in the back of either upper arm by a healthcare provider
- Makena (single- and multi-dose vials): Administer **intramuscularly** at a dose of 250 mg (1 mL) once weekly (every 7 days) in the upper outer quadrant of the gluteus maximus by a healthcare provider
- Begin treatment between 16 weeks, 0 days and 20 weeks, 6 days of gestation
- Continue administration once weekly until week 37 (through 36 weeks, 6 days) of gestation or delivery, whichever occurs first

2.2 Preparation and Administration

Parenteral drug products should be inspected visually for particulate matter and discoloration prior to administration, whenever solution and container permit. Makena is a clear, yellow solution. The solution must be clear at the time of use; replace vial if visible particles or crystals are present.

Specific instructions for administration by dosage form:

Makena single-dose or multi-dose vials (intramuscular use only)

Makena single-dose or multi-dose vials are only for intramuscular injection with a syringe into the upper outer quadrant of the gluteus maximus, rotating the injection site to the alternate side from the previous week, using the following preparation and administration procedure:

- Clean the vial top with an alcohol swab before use.
- Draw up 1 mL of drug into a 3 mL syringe with an 18 gauge needle.
- Change the needle to a 21 gauge 1½ inch needle.
- After preparing the skin, inject in the upper outer quadrant of the gluteus maximus. The solution is viscous and oily. Slow injection (over one minute or longer) is recommended.
- Applying pressure to the injection site may minimize bruising and swelling.
- If the 5 mL multi-dose vial is used, discard any unused product 5 weeks after first use.

Makena auto-injector (subcutaneous use only)

Makena auto-injector is a single-use, pre-filled, disposable device containing a 27 gauge, 0.5 inch needle that delivers one dose subcutaneously in the back of the upper arm.

Because Makena auto-injector is preservative-free, once the cap is removed the device should be used immediately or discarded.

Rotate the injection site to the alternate arm from the previous week. Do not use in areas where the skin is tender, bruised, red, scaly, raised, thick, or hard. Avoid areas with scars, tattoos, or stretch marks.

The solution is viscous and oily. The auto-injector takes approximately 15 seconds to deliver the dose; when the viewing window is fully blocked (completely orange), the full dose has been administered.

The "Instructions for Use" contains detailed steps for administering the subcutaneous injection using the auto-injector [see *Dosage and Administration* (2.3)]. Read the "Instructions for Use" carefully before administering Makena auto-injector.

2.3 Instructions for Use (Makena Auto-injector)

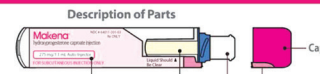
Instructions for Use: Read this carefully before each use.

FOR SUBCUTANEOUS USE ONLY

Makena®

hydroxyprogesterone caproate injection
275 mg/1.1 mL (250 mg/mL) Auto-injector

Single Use.
Administer one injection weekly.
Administration by Healthcare Professionals only.



Preparation

If you need help or instructions, call:
1-877-411-2510

- Carefully read all steps before beginning injection.
- Injection process must be completed without interruption.

Supplies You Will Need

- 1 Makena Auto-injector
- 1 alcohol swab
- 1 cotton ball or gauze

Storage Conditions

- DO NOT refrigerate or freeze.
- Protect from light.
- Store at 20° - 25°C (68° - 77°F).
- Keep away from children.

1 Inspect Makena Auto-Injector

- Inspect the Makena Auto-injector for any visible damage. **DO NOT** use if it appears damaged or broken, or if cap is missing or not secure.
- Check the expiration date. **DO NOT** use if expired.
- Inspect the medication liquid through the Viewing Window; it should be clear to light yellow and free of particles. (See Figure 1). **DO NOT** use if the liquid is cloudy or if particles are present. You may notice an air bubble; this is normal.

Figure 1:



2 Select & Prepare Subcutaneous Injection Site

- Only use the back of either upper arm for injection site.
- Rotate the injection site to the alternate arm from the previous week. (See Figure 2).
- Wash your hands with soap and water. Wipe the injection site with an alcohol swab.
- Allow the site to dry on its own. **DO NOT** fan or blow on the injection site. **DO NOT** touch the site again before injecting.
- DO NOT** use in areas where the skin is tender, bruised, red, scaly, raised, thick, or hard. Avoid areas with scars, tattoos, or stretch marks.

Figure 2:



INJECT SUBCUTANEOUSLY IN THE BACK OF EITHER UPPER ARM

Administering Subcutaneous Injection

3 Remove Cap

- ▶ Twist the cap counter clockwise (this will break the red safety seal), and pull cap straight off. (See Figure 3).

After the cap is removed, a few drops of liquid may appear - this is normal. Auto-injector should be used or discarded once cap is removed. DO NOT recap for later use. DO NOT use if device is dropped.

Figure 3: TWIST THEN PULL

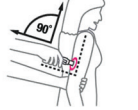


DO NOT touch or try to remove Needle End of Auto-Injector after cap is removed, doing so can cause injury.

4 Position Makena Auto-Injector

- ▶ Support the upper arm with the opposite hand. (See Figure 4).
- ▶ On the relaxed outstretched arm to be injected, gently place the Makena Auto-Injector at a 90° angle to the injection site (back of upper arm. See Figure 4).
- ▶ Check that you can see the viewing window clearly.

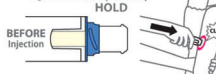
Figure 4:



5 Begin Injection

- ▶ It will take approximately 15 seconds for the full dose to be delivered.
- ▶ Push down while supporting the upper arm with the opposite hand.
- ▶ A click will occur when the injection begins. (See figure 5).
- ▶ Hold the Auto-injector against the arm.

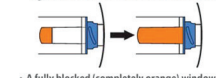
Figure 5: PUSH, CLICK, HOLD



6 Complete Injection

- ▶ While holding against the arm, watch the viewing window until it turns orange. Verify viewing window has turned completely orange before removing from injection site.
- ▶ It is normal if there is slight bleeding after injection. If this occurs, hold a cotton ball or gauze on the area with light pressure for a few seconds. DO NOT rub the area.

Figure 6: WATCH VIEWING WINDOW



7 Disposal After Injection

- ▶ After completing injection, dispose of Makena Auto-Injector and cap in a sharps disposal container immediately after use.



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FOR POSITION ONLY
128 (back)

Table 3 Adverse Reactions Occurring in ≥ 2% of Makena-Treated Subjects and at a Higher Rate than Control Subjects

Preferred Term	Makena N=310 %	Control N=153 %
Injection site pain	34.8	32.7
Injection site swelling	17.1	7.8
Urticaria	12.3	11.1
Pruritus	7.7	5.9
Injection site pruritus	5.8	3.3
Nausea	5.8	4.6
Injection site nodule	4.5	2.0
Diarrhea	2.3	0.7

In the clinical trial using intramuscular injection, 2.2% of subjects receiving Makena were reported as discontinuing therapy due to adverse reactions compared to 2.6% of control subjects. The most common adverse reactions that led to discontinuation in both groups were urticaria and injection site pain/swelling (1% each).

Pulmonary embolus in one subject and injection site cellulitis in another subject were reported as serious adverse reactions in Makena-treated subjects.

Two clinical studies were conducted in healthy post-menopausal women, comparing Makena administered via subcutaneous auto-injector to Makena administered as an intramuscular injection. In the first study, injection site pain occurred in 3/30 (10%) of subjects who used the subcutaneous auto-injector vs. 2/30 (7%) of subjects receiving intramuscular injection. In the second study, injection site pain occurred in 20/59 (34%) of subjects who used the subcutaneous auto-injector vs. 5/61 (8%) of subjects receiving intramuscular injection.

6.2 Postmarketing Experience

The following adverse reactions have been identified during postapproval use of Makena. Because these reactions are reported voluntarily from a population of uncertain size, it is not always possible to reliably estimate their frequency or establish a causal relationship to drug exposure.

- **Body as a whole:** Local injection site reactions (including erythema, urticaria, rash, irritation, hypersensitivity, warmth); fatigue; fever; hot flashes/flushes
- **Digestive disorders:** Vomiting
- **Infections:** Urinary tract infection
- **Nervous system disorders:** Headache, dizziness
- **Pregnancy, puerperium and perinatal conditions:** Cervical incompetence, premature rupture of membranes
- **Reproductive system and breast disorders:** Cervical dilation, shortened cervix
- **Respiratory disorders:** Dyspnea, chest discomfort
- **Skin:** Rash

7 DRUG INTERACTIONS

In vitro drug-drug interaction studies were conducted with Makena. Hydroxyprogesterone caproate has minimal potential for CYP1A2, CYP2A6, and CYP2B6 related drug-drug interactions at the clinically relevant concentrations. *In vitro* data indicated that therapeutic concentration of hydroxyprogesterone caproate is not likely to inhibit the activity of CYP2C8, CYP2C9, CYP2C19, CYP2D6, CYP2E1, and CYP3A4 [See *Clinical Pharmacology* (12.3)]. No *in vivo* drug-drug interaction studies were conducted with Makena.

8 USE IN SPECIFIC POPULATIONS

8.1 Pregnancy

Risk Summary

Makena is indicated to reduce the risk of preterm birth in women with a singleton pregnancy who have a history of singleton spontaneous preterm birth. Fetal, neonatal, and maternal risks are discussed throughout labeling. Data from the placebo-controlled clinical trial and the infant follow-up safety study [see *Clinical Studies* (14.1, 14.2)] did not show a difference in adverse developmental outcomes between children of Makena-treated women and children of control subjects. However, these data are insufficient to determine a drug-associated risk of adverse developmental outcomes as none of the Makena-treated women received the drug during the first trimester of pregnancy. In animal reproduction studies, intramuscular administration of hydroxyprogesterone caproate to pregnant rats during gestation at doses 5 times the human dose equivalent based on a 60-kg human was not associated with adverse developmental outcomes.

In the U.S. general population, the estimated background risk of major birth defects and miscarriage in clinically recognized pregnancies is 2% to 4% and 15% to 20%, respectively.

Data

Animal Data

Reproduction studies of hydroxyprogesterone caproate administered to various animal species have been reported in the literature. In nonhuman primates, embryoletality was reported in rhesus monkeys administered hydroxyprogesterone caproate up to 2.4 and 24 times the human dose equivalent, but not in cynomolgus monkeys administered hydroxyprogesterone caproate at doses up to 2.4 times the human dose equivalent, every 7 days between days 20 and 146 of gestation. There were no teratogenic effects in either strain of monkey.

Reproduction studies have been performed in mice and rats at doses up to 95 and 5, respectively, times the human dose and have revealed no evidence of impaired fertility or harm to the fetus due to hydroxyprogesterone caproate.

8.2 Lactation

Risk Summary

Low levels of progestins are present in human milk with the use of progestin-containing products, including hydroxyprogesterone caproate. Published studies have reported no adverse effects of progestins on the breastfed child or on milk production.

8.4 Pediatric Use

Makena is not indicated for use in women under 16 years of age. Safety and effectiveness in patients less than 16 years of age have not been established. A small number of women under age 18 years were studied; safety and efficacy are expected to be the same in women aged 16 years and above as for users 18 years and older [see *Clinical Studies* (14)].

8.6 Hepatic Impairment

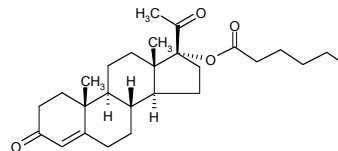
No studies have been conducted to examine the pharmacokinetics of Makena in patients with hepatic impairment. Makena is extensively metabolized and hepatic impairment may reduce the elimination of Makena.

10 OVERDOSAGE

There have been no reports of adverse events associated with overdosage of Makena in clinical trials. In the case of overdosage, the patient should be treated symptomatically.

11 DESCRIPTION

The active pharmaceutical ingredient in Makena is hydroxyprogesterone caproate, a progestin. The chemical name for hydroxyprogesterone caproate is pregn-4-ene-3,20-dione, 17((1-oxohexyl)oxy). It has an empirical formula of C₂₇H₄₀O₄ and a molecular weight of 428.60. Hydroxyprogesterone caproate exists as white to practically white crystals or powder with a melting point of 120°-124°C. The structural formula is:



Makena is a clear, yellow, sterile, non-pyrogenic solution for intramuscular (vials) or subcutaneous (auto-injector) injection. Each 1.1 mL Makena auto-injector for subcutaneous use and each 1 mL single-dose vial for intramuscular use contains hydroxyprogesterone caproate USP, 250 mg/mL (25% w/v), in a preservative-free solution containing castor oil USP (30.6% v/v) and benzyl benzoate USP (46% v/v). Each 5 mL multi-dose vial contains hydroxyprogesterone caproate USP, 250 mg/mL (25% w/v), in castor oil USP (28.6%) and benzyl benzoate USP (46% v/v) with the preservative benzyl alcohol NF (2% v/v).

3 DOSAGE FORMS AND STRENGTHS

Subcutaneous injection: 275 mg/1.1 mL clear yellow solution in single-use auto-injector.
Intramuscular injection: 250 mg/mL clear yellow solution in single-dose vials.
Intramuscular injection: 1250 mg/5 mL (250 mg/mL) clear yellow solution in multiple-dose vials.

4 CONTRAINDICATIONS

- Do not use Makena in women with any of the following conditions:
- Current or history of thrombosis or thromboembolic disorders
 - Known or suspected breast cancer, other hormone-sensitive cancer, or history of these conditions
 - Undiagnosed abnormal vaginal bleeding unrelated to pregnancy
 - Cholestatic jaundice of pregnancy
 - Liver tumors, benign or malignant, or active liver disease
 - Uncontrolled hypertension

5 WARNINGS AND PRECAUTIONS

5.1 Thromboembolic Disorders

Discontinue Makena if an arterial or deep venous thrombotic or thromboembolic event occurs.

5.2 Allergic Reactions

Allergic reactions, including urticaria, pruritus and angioedema, have been reported with use of Makena or with other products containing castor oil. Consider discontinuing the drug if such reactions occur.

5.3 Decrease in Glucose Tolerance

A decrease in glucose tolerance has been observed in some patients on progestin treatment. The mechanism of this decrease is not known. Carefully monitor prediabetic and diabetic women while they are receiving Makena.

5.4 Fluid Retention

Because progestational drugs may cause some degree of fluid retention, carefully monitor women with conditions that might be influenced by this effect (e.g., preeclampsia, epilepsy, migraine, asthma, cardiac or renal dysfunction).

5.5 Depression

Monitor women who have a history of clinical depression and discontinue Makena if clinical depression recurs.

5.6 Jaundice

Carefully monitor women who develop jaundice while receiving Makena and consider whether the benefit of use warrants continuation.

5.7 Hypertension

Carefully monitor women who develop hypertension while receiving Makena and consider whether the benefit of use warrants continuation.

6 ADVERSE REACTIONS

For the most serious adverse reactions to the use of progestins, see *Warnings and Precautions* (5).

6.1 Clinical Trials Experience

Because clinical trials are conducted under widely varying conditions, adverse reaction rates observed in the clinical trials of a drug cannot be directly compared to the rates in the clinical trials of another drug and may not reflect the rates observed in practice.

In a vehicle (placebo)-controlled clinical trial of 463 pregnant women at risk for spontaneous preterm delivery based on obstetrical history, 310 received 250 mg of Makena and 153 received a vehicle formulation containing no drug by a weekly intramuscular injection beginning at 16 to 20 weeks of gestation and continuing until 37 weeks of gestation or delivery, whichever occurred first. [See *Clinical Studies* (14.1).]

Certain pregnancy-related fetal and maternal complications or events were numerically increased in the Makena-treated subjects as compared to control subjects, including miscarriage and stillbirth, admission for preterm labor, preeclampsia or gestational hypertension, gestational diabetes, and oligohydramnios (Tables 1 and 2).

Table 1 Selected Fetal Complications

Pregnancy Complication	Makena n/N	Control n/N
Miscarriage (< 20 weeks) ¹	5/209	0/107
Stillbirth (≥ 20 weeks) ²	6/305	2/153

¹ N = Total number of subjects enrolled prior to 20 weeks 0 days

² N = Total number of subjects at risk ≥ 20 weeks

Table 2 Selected Maternal Complications

Pregnancy Complication	Makena N=310 %	Control N=153 %
Admission for preterm labor ¹	16.0	13.8
Preeclampsia or gestational hypertension	8.8	4.6
Gestational diabetes	5.6	4.6
Oligohydramnios	3.6	1.3

¹ Other than delivery admission.

Common Adverse Reactions:

The most common adverse reaction with intramuscular injection was injection site pain, which was reported after at least one injection by 34.8% of the Makena group and 32.7% of the control group. Table 3 lists adverse reactions that occurred in ≥ 2% of subjects and at a higher rate in the Makena group than in the control group.

12 CLINICAL PHARMACOLOGY

12.1 Mechanism of Action

Hydroxyprogesterone caproate is a synthetic progestin. The mechanism by which hydroxyprogesterone caproate reduces the risk of recurrent preterm birth is not known.

12.2 Pharmacodynamics

No specific pharmacodynamic studies were conducted with Makena.

12.3 Pharmacokinetics

Absorption: Female patients with a singleton pregnancy received intramuscular doses of 250 mg hydroxyprogesterone caproate for the reduction of preterm birth starting between 16 weeks 0 days and 20 weeks 6 days. All patients had blood drawn daily for 7 days to evaluate pharmacokinetics.

Table 4 Summary of Mean (Standard Deviation) Pharmacokinetic Parameters for Hydroxyprogesterone Caproate

Group (N)	C _{max} (ng/mL)	T _{max} (days) ^a	AUC ₍₀₋₇₎ (ng hr/mL)
Group 1 (N=6)	5.0 (1.5)	5.5 (2.0-7.0)	571.4 (195.2)
Group 2 (N=8)	12.5 (3.9)	1.0 (0.9-1.9)	1269.6 (285.0)
Group 3 (N=11)	12.3 (4.9)	2.0 (1.0-3.0)	1268.0 (511.6)

Blood was drawn daily for 7 days (1) starting 24 hours after the first dose between Weeks 16-20 (Group 1), (2) after a dose between Weeks 24-28 (Group 2), or (3) after a dose between Weeks 32-36 (Group 3)

^a Reported as median (range)

^b t = 7 days

For all three groups, peak concentration (C_{max}) and area under the curve (AUC_(0-7 days)) of the mono-hydroxylated metabolites were approximately 3-8-fold lower than the respective parameters for the parent drug, hydroxyprogesterone caproate. While di-hydroxylated and tri-hydroxylated metabolites were also detected in human plasma to a lesser extent, no meaningful quantitative results could be derived due to the absence of reference standards for these multiple hydroxylated metabolites. The relative activity and significance of these metabolites are not known.

The elimination half-life of hydroxyprogesterone caproate, as evaluated from 4 patients in the study who reached full-term in their pregnancies, was 16.4 (±3.6) days. The elimination half-life of the mono-hydroxylated metabolites was 19.7 (±6.2) days.

In a single-dose, open-label, randomized, parallel design bioavailability study in 120 healthy post-menopausal women, comparable systemic exposure of hydroxyprogesterone caproate was seen when Makena was administered subcutaneously with the auto-injector (1.1 mL) in the back of the upper arm and when Makena was dosed intramuscularly (1 mL) in the upper outer quadrant of the gluteus maximus.

Distribution: Hydroxyprogesterone caproate binds extensively to plasma proteins including albumin and corticosteroid binding globulins.

Metabolism: In vitro studies have shown that hydroxyprogesterone caproate can be metabolized by human hepatocytes, both by phase I and phase II reactions. Hydroxyprogesterone caproate undergoes extensive reduction, hydroxylation and conjugation. The conjugated metabolites include sulfated, glucuronidated and acetylated products. In vitro data indicate that the metabolism of hydroxyprogesterone caproate is predominantly mediated by CYP3A4 and CYP3A5. The in vitro data indicate that the caproate group is retained during metabolism of hydroxyprogesterone caproate.

Excretion: Both conjugated metabolites and free steroids are excreted in the urine and feces, with the conjugated metabolites being prominent. Following intramuscular administration to pregnant women at 10-12 weeks gestation, approximately 50% of a dose was recovered in the feces and approximately 30% recovered in the urine.

Drug Interactions

Cytochrome P450 (CYP) enzymes: An *in vitro* inhibition study using human liver microsomes and CYP isof orm-selective substrates indicated that hydroxyprogesterone caproate increased the metabolic rate of CYP1A2, CYP2A6, and CYP2B6 by approximately 80%, 150%, and 80%, respectively. However, in another *in vitro* study using human hepatocytes under conditions where the prototypical inducers or inhibitors caused the anticipated increases or decreases in CYP enzyme activities, hydroxyprogesterone caproate did not induce or inhibit CYP1A2, CYP2A6, or CYP2B6 activity. Overall, the findings indicate that hydroxyprogesterone caproate has minimal potential for CYP1A2, CYP2A6, and CYP2B6 related drug-drug interactions at the clinically relevant concentrations.

In vitro data indicated that therapeutic concentration of hydroxyprogesterone caproate is not likely to inhibit the activity of CYP2C8, CYP2C9, CYP2C19, CYP2D6, CYP2E1, and CYP3A4.

13 NONCLINICAL TOXICOLOGY

13.1 Carcinogenesis, Mutagenesis, Impairment of Fertility

Hydroxyprogesterone caproate has not been adequately evaluated for carcinogenicity. No reproductive or developmental toxicity or impaired fertility was observed in a multigenerational study in rats. Hydroxyprogesterone caproate administered intramuscularly, at gestational exposures up to 5 times the recommended human dose, had no adverse effects on the parental (F₀) dams, their developing offspring (F₁), or the latter offspring's ability to produce a viable, normal second (F₂) generation.

14 CLINICAL STUDIES

14.1 Clinical Trial to Evaluate Reduction of Risk of Preterm Birth

In a multicenter, randomized, double-blind, vehicle (placebo)-controlled clinical trial, the safety and effectiveness of Makena for the reduction of the risk of spontaneous preterm birth was studied in women with a singleton pregnancy (age 16 to 43 years) who had a documented history of singleton spontaneous preterm birth (defined as delivery at less than 37 weeks of gestation following spontaneous preterm labor or premature rupture of membranes). At the time of randomization (between 16 weeks, 0 days and 20 weeks, 6 days of gestation), an ultrasound examination had confirmed gestational age and no known fetal anomaly. Women were excluded for prior progesterone treatment or heparin therapy during the current pregnancy, a history of thromboembolic disease, or maternal/obstetrical complications (such as current or planned cerclage, hypertension requiring medication, or a seizure disorder).

A total of 463 pregnant women were randomized to receive either Makena (N=310) or vehicle (N=153) at a dose of 250 mg administered weekly by intramuscular injection starting between 16 weeks, 0 days and 20 weeks, 6 days of gestation, and continuing until 37 weeks of gestation or delivery. Demographics of the Makena-treated women were similar to those in the control group, and included: 59.0% Black, 25.5% Caucasian, 13.9% Hispanic and 0.6% Asian. The mean body mass index was 26.9 kg/m².

The proportions of women in each treatment arm who delivered at < 37 (the primary study endpoint), < 35, and < 32 weeks of gestation are displayed in Table 5.

Table 5 Proportion of Subjects Delivering at < 37, < 35 and < 32 Weeks Gestational Age (ITT Population)

Delivery Outcome	Makena ¹ (N=310) %	Control (N=153) %	Treatment difference and 95% Confidence Interval ²
<37 weeks	37.1	54.9	-17.8% [-28.0%, -7.4%]
<35 weeks	21.3	30.7	-9.4% [-19.0%, -0.4%]
<32 weeks	11.9	19.6	-7.7% [-16.1%, -0.3%]

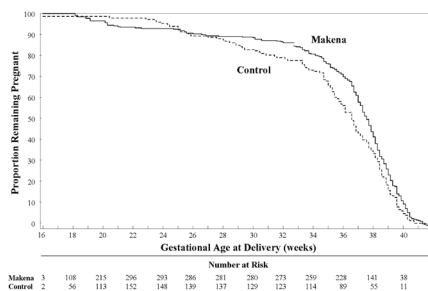
¹ Four Makena-treated subjects were lost to follow-up. They were counted as deliveries at their gestational ages at time of last contact (18¹, 22¹, 34¹ and 36¹ weeks).

² Adjusted for interim analysis.

Compared to controls, treatment with Makena reduced the proportion of women who delivered preterm at < 37 weeks. The proportions of women delivering at < 35 and < 32 weeks also were lower among women treated with Makena. The upper bounds of the confidence intervals for the treatment difference at < 35 and < 32 weeks were close to zero. Inclusion of zero in a confidence interval would indicate the treatment difference is not statistically significant. Compared to the other gestational ages evaluated, the number of preterm births at < 32 weeks was limited.

After adjusting for time in the study, 7.5% of Makena-treated subjects delivered prior to 25 weeks compared to 4.7% of control subjects; see Figure 1.

Figure 1 Proportion of Women Remaining Pregnant as a Function of Gestational Age



The rates of fetal losses and neonatal deaths in each treatment arm are displayed in Table 6. Due to the higher rate of miscarriages and stillbirths in the Makena arm, there was no overall survival difference demonstrated in this clinical trial.

Table 6 Fetal Losses and Neonatal Deaths

Complication	Makena N=306 ^A n (%) ^B	Control N=153 n (%) ^B
Miscarriages <20 weeks gestation ^C	5 (2.4)	0
Stillbirth	6 (2.0)	2 (1.3)
Antepartum stillbirth	5 (1.6)	1 (0.6)
Intrapartum stillbirth	1 (0.3)	1 (0.6)
Neonatal deaths	8 (2.6)	9 (5.9)
Total Deaths	19 (6.2)	11 (7.2)

^A Four of the 310 Makena-treated subjects were lost to follow-up and stillbirth or neonatal status could not be determined

^B Percentages are based on the number of enrolled subjects and not adjusted for time on drug

^C Percentage adjusted for the number of at risk subjects (n=209 for Makena, n=107 for control) enrolled at <20 weeks gestation.

A composite neonatal morbidity/mortality index evaluated adverse outcomes in live births. It was based on the number of neonates who died or experienced respiratory distress syndrome, bronchopulmonary dysplasia, grade 3 or 4 intraventricular hemorrhage, proven sepsis, or necrotizing enterocolitis. Although the proportion of neonates who experienced 1 or more events was numerically lower in the Makena arm (11.9% vs. 17.2%), the number of adverse outcomes was limited and the difference between arms was not statistically significant.

14.2 Infant Follow-Up Safety Study

Infants born to women enrolled in this study, and who survived to be discharged from the nursery, were eligible for participation in a follow-up safety study. Of 348 eligible offspring, 79.9% enrolled: 194 children of Makena-treated women and 84 children of control subjects. The primary endpoint was the score on the Ages & Stages Questionnaire (ASQ), which evaluates communication, gross motor, fine motor, problem solving, and personal/social parameters. The proportion of children whose scores met the screening threshold for developmental delay in each developmental domain was similar for each treatment group.

16 HOW SUPPLIED/STORAGE AND HANDLING

Makena auto-injector (for subcutaneous injection)

Makena auto-injector (NDC 64011-301-03) is supplied as 1.1 mL of a clear yellow sterile preservative-free solution in an auto-injector containing a pre-filled syringe. Each 1.1 mL auto-injector contains hydroxyprogesterone caproate USP, 250 mg/mL (25% w/v), in castor oil USP (30.6% v/v) and benzyl benzoate USP (46% v/v).

Single unit carton: Contains one 1.1 mL single-patient-use auto-injector of Makena containing 275 mg of hydroxyprogesterone caproate.

Store at 20° to 25°C (68° to 77°F). Do not refrigerate or freeze.

Caution: Protect auto-injector from light. Store auto-injector in its box.

Makena single- and multi-dose vials (for intramuscular injection)

Makena (NDC 64011-247-02) is supplied as 1 mL of a sterile preservative-free clear yellow solution in a single-dose glass vial.

Each 1 mL vial contains hydroxyprogesterone caproate USP, 250 mg/mL (25% w/v), in castor oil USP (30.6% v/v) and benzyl benzoate USP (46% v/v).

Single unit carton: Contains one 1 mL single-dose vial of Makena containing 250 mg of hydroxyprogesterone caproate.

Makena (NDC 64011-243-01) is supplied as 5 mL of a sterile clear yellow solution in a multi-dose glass vial.

Each 5 mL vial contains hydroxyprogesterone caproate USP, 250 mg/mL (25% w/v), in castor oil USP (28.6% v/v) and benzyl benzoate USP (46% v/v) with the preservative benzyl alcohol NF (2% v/v).

Single unit carton: Contains one 5 mL multi-dose vial of Makena (250 mg/mL) containing 1250 mg of hydroxyprogesterone caproate.

Store at 20° to 25°C (68° to 77°F). Do not refrigerate or freeze.

Use multi-dose vials within 5 weeks after first use.

Caution: Protect vial from light. Store vial in its box. Store upright.

17 PATIENT COUNSELING INFORMATION

Advise the patient to read the FDA-approved patient labeling (Patient Information).

Counsel patients that Makena injections may cause pain, soreness, swelling, itching or bruising. Inform the patient to contact her physician if she notices increased discomfort over time, oozing of blood or fluid, or inflammatory reactions at the injection site [see Adverse Reactions (6.1)].

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Waltham, MA 02451

02/2018

ver 1.2

PATIENT INFORMATION

MAKENA (mah-KEE-na)

(hydroxyprogesterone caproate injection)

auto-injector for subcutaneous use

MAKENA (mah-KEE-na)

(hydroxyprogesterone caproate injection)

vial for intramuscular use

Read this Patient Information leaflet before you receive MAKENA. There may be new information. This information does not take the place of talking to your healthcare provider about your medical condition or treatment.

What is MAKENA?

MAKENA is a prescription hormone medicine (progestin) used in women who are pregnant and who have delivered a baby too early (preterm) in the past. MAKENA is used in these women to help lower the risk of having a preterm baby again. It is not known if MAKENA reduces the number of babies who are born with serious medical conditions or die shortly after birth. MAKENA is for women who:

- Are pregnant with one baby.
- Have had a preterm delivery of one baby in the past.

MAKENA is not intended for use to stop active preterm labor.

It is not known if MAKENA is safe and effective in women who have other risk factors for preterm birth.

MAKENA is not for use in women under 16 years of age.

Who should not receive MAKENA?

MAKENA should not be used if you have:

- blood clots or other blood clotting problems now **or** in the past
- breast cancer or other hormone-sensitive cancers now **or** in the past
- unusual vaginal bleeding not related to your current pregnancy
- yellowing of your skin due to liver problems during your pregnancy
- liver problems, including liver tumors
- high blood pressure that is not controlled

What should I tell my healthcare provider before receiving MAKENA? Before you receive MAKENA, tell your healthcare provider about all of your medical conditions, including if you have:

- a history of allergic reaction to hydroxyprogesterone caproate, castor oil, or any of the other ingredients in MAKENA. See the end of this Patient Information leaflet for a complete list of ingredients in MAKENA.
- diabetes or pre-diabetes.
- epilepsy (seizures).
- migraine headaches.
- asthma.
- heart problems.
- kidney problems.
- depression.
- high blood pressure.

Tell your healthcare provider about all the medicines you take, including prescription and over-the-counter medicines, vitamins, and herbal supplements.

MAKENA may affect the way other medicines work, and other medicines may affect how MAKENA works.

Know the medicines you take. Keep a list of them to show your healthcare provider and pharmacist when you get a new medicine.

How should I receive MAKENA?

- **Do not** give yourself MAKENA injections. A healthcare provider will give you the MAKENA injection 1 time each week (every 7 days) either:
 - in the back of your upper arm as an injection under the skin (subcutaneous), **or**
 - in the upper outer area of the buttocks as an injection into the muscle (intramuscular).
- You will start receiving MAKENA injections anytime from 16 weeks and 0 days of your pregnancy, up to 20 weeks and 6 days of your pregnancy.
- You will continue to receive MAKENA injections 1 time each week until week 37 (through 36 weeks and 6 days) of your pregnancy or when your baby is delivered, whichever comes first.

What are the possible side effects of MAKENA?

MAKENA may cause serious side effects, including:

- **Blood clots.** Symptoms of a blood clot may include:
 - leg swelling
 - redness in your leg
 - a spot on your leg that is warm to the touch
 - leg pain that gets worse when you bend your foot

Call your healthcare provider right away if you get any of the symptoms above during treatment with MAKENA.

- **Allergic reactions.** Symptoms of an allergic reaction may include:
 - hives
 - itching
 - swelling of the face

Call your healthcare provider right away if you get any of the symptoms above during treatment with MAKENA.

- **Decrease in glucose (blood sugar) tolerance.** Your healthcare provider will need to monitor your blood sugar while taking MAKENA if you have diabetes or pre-diabetes.
- **Your body may hold too much fluid (fluid retention).**
- **Depression.**
- **Yellowing of your skin and the whites of your eyes (jaundice).**
- **High blood pressure.**

The most common side effects of MAKENA include:

- pain, swelling, itching or a hard bump at the injection site
- hives
- itching
- nausea
- diarrhea

Call your healthcare provider if you have the following at your injection site:

- increased pain over time
- oozing of blood or fluid
- swelling

Other side effects that may happen more often in women who receive MAKENA include:

- Miscarriage (pregnancy loss before 20 weeks of pregnancy)
- Stillbirth (fetal death occurring during or after the 20th week of pregnancy)
- Hospital admission for preterm labor
- Preeclampsia (high blood pressure and too much protein in your urine)
- Gestational hypertension (high blood pressure caused by pregnancy)
- Gestational diabetes
- Oligohydramnios (low amniotic fluid levels)

Tell your healthcare provider if you have any side effect that bothers you or that does not go away.

These are not all the possible side effects of MAKENA. For more information, ask your healthcare provider or pharmacist.

Call your doctor for medical advice about side effects. You may report side effects to FDA at 1-800-FDA-1088.

How should I store MAKENA?

• **MAKENA auto-injector for subcutaneous use:**

- Store the auto-injector at room temperature between 68°F to 77°F (20°C to 25°C).
- Do not refrigerate or freeze.
- Protect the auto-injector from light.
- Store the auto-injector in its box.

• **MAKENA vial for intramuscular use:**

- Store the vial at room temperature between 68°F to 77°F (20°C to 25°C).
- Do not refrigerate or freeze.
- Protect the vial from light.
- Store the vial in its box in an upright position.

Keep MAKENA and all medicines out of the reach of children.

General information about the safe and effective use of MAKENA.

Medicines are sometimes prescribed for purposes other than those listed in a Patient Information leaflet. Do not use MAKENA for a condition for which it was not prescribed. Do not give MAKENA to other people, even if they have the same symptoms you have. It may harm them.

This leaflet summarizes the most important information about MAKENA. If you would like more information, talk with your healthcare provider. You can ask your healthcare provider or pharmacist for information about MAKENA that is written for health professionals.

What are the ingredients in MAKENA?

Active ingredient: hydroxyprogesterone caproate

Inactive ingredients: castor oil and benzyl benzoate. 5 mL multi-dose vials also contain benzyl alcohol (a preservative).

Distributed by: AMAG Pharmaceuticals, Inc.
Makena is a registered trademark of AMAG Pharmaceuticals, Inc.
For more information, go to www.MAKENA.com or call AMAG Pharmaceuticals Customer Service at the toll-free number 1-877-411-2510.

This Patient Information has been approved by the U.S. Food and Drug Administration
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