

患有慢性胀气、胃痛或腹泻?

PANCREAZE 有助于治疗因胰腺 不会产生足够酶无法正常消化食物的人——这 种情况称为外分泌胰腺功能不全(EPI)。^{1,2} 这本小册子有助于解释:

- 什么是 EPI 及其症状?
- 什么是 PANCREAZE?
- 如何服用 PANCREAZE

重要安全信息

关于 PANCREAZE, 我应该了解哪些最重要的信息?

PANCREAZE 可能会增加您患严重的罕见肠道疾病的几率,该疾病被称为纤维化结肠病,可能需要手术。遵循您的医疗保健 提供者为您提供的剂量说明,可以降低患有这种疾病的风险。

请阅读 PANCREAZE 药物指南和随附的完整处方信息。





您的 EPI 症状 是否扰乱了生活中的重要时刻?

PANCREAZE 可以控制症状— 帮助您专注于真正重要的事情。询问您的医生 PANCREAZE 是否适合您。

重要安全信息

完全按照医生的规定服用 PANCREAZE。不要服用比您医生的医嘱更 多或更少的PANCREAZE.

<u>如果您有任何</u>异常<u>或严重的</u>胃部(腹部)疼痛、腹胀、排便 困难(排便)、恶心、呕吐或腹泻, 请立即致电您的医生。

3

请阅读药物指南和随附的完整





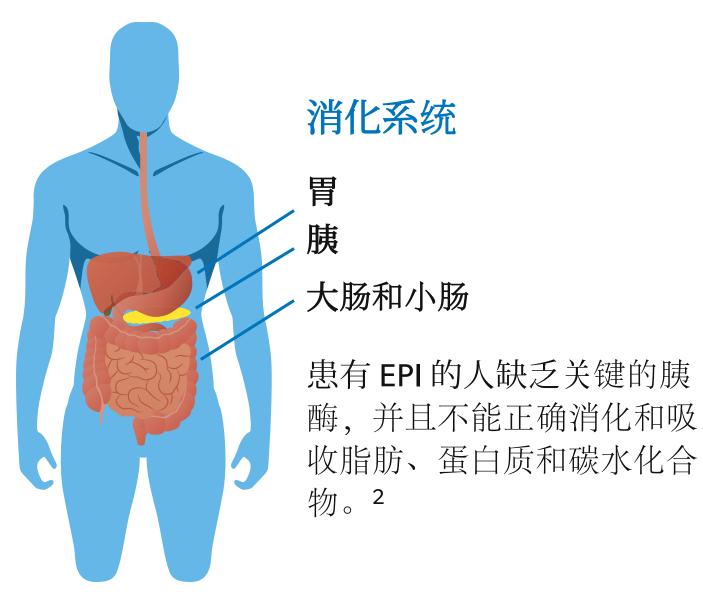
EPI 患者患有:

功能受损

重要安全信息

外分泌胰腺功能不全(EPI)

是胰腺无法提供消化食物所需的酶,尤其是消 化脂肪所需的胰脂肪酶时发生的一种疾病。这 是因为胰腺细胞受损2



• 消化不良: 食物分解为身体营养物质的

• 吸收不良:无法吸收这些营养素

在服用 PANCREAZE 之前我应该告诉我的医生什么?

• 有肠梗阻史、肠壁瘢痕或增厚 (纤维化结肠病)

• 有痛风、肾脏疾病或高血尿酸(高尿酸血症)

如果您有以下情况,请告诉您的医生:

• 对猪肉(猪)制品过敏



导致 EPI³ 的最常见情况

囊性纤维化 (CF), 是一种遗传性疾病 影响了美国大约 30000 人。4 大约 66% 的 CF 患者在出生后不久出现外分泌胰腺功能不 全(EPI)。到一岁时,这一数字跃升至85%。⁵



慢性胰腺炎(CP)是 EPI 的主要原因。对胰腺 细胞的损害导致胰腺无法提供吸收食物营养 所需的消化酶。它是渐进的,通常在成年后 期 (通常在 30-40 岁之间) 才能确诊。CP的 最常见原因与饮酒有关。6,7

收脂肪、蛋白质和碳水化合

3

EPI的诊断依据是患者病史、症状和特定的实 验室测试。可能与 EPI 有关的其它病症包 括:1型和2型糖尿病、肠易激病、乳糜泻、 胰腺癌 (无法手术) 和胰腺切除术。6

重要安全信息

在服用 PANCREAZE 之前我应该告诉我的医生什么?

如果您有以下情况,请告诉您的医生:

- 吞咽胶囊有困难
- 有任何其他健康状况
- 怀孕或计划怀孕
- 正在母乳喂养或计划母乳喂养

请阅读药物指南和随附的完 整处方信息







在最近对 EPI 患者的在线调 查中:

59%

59% 的患者报告需要看2名 或更多的医生才能确诊 EPI。

58%

58%的患者表示,在任何地 方确诊 EPI 都要花 1 到 2 年 以上。

EPI 的症状

患有 EPI 的人患有一种或多种麻烦的慢性胃肠道 和肠胃问题。EPI的症状可能与其他消化系统疾 病相似——使诊断过程变得复杂。6



患者报告了他们最麻烦的症 排在前3 状分别是:胀气、胃痛和腹 泻

延误治疗会影响您的整体健康和生活质量。如 果您有这些慢性症状中的一种或一种以上,请 与医生讨论:



腹泻、胀气、腹胀、胃痛、大 便油腻、不明原因的体重减轻 6

重要安全信息

告诉医生您服用的所有药物,包括处方药和非处方药,维生素 和 草药补充剂。

在线患者调查: Qualtrics 在 2020 年 11 月至 2021 年 1 月期间 进行的在线调查。101名18岁或以上被诊断为胰腺外分泌功能 不全(EPI)并使用了以下 PERT 疗法之一患者的回复: CREON、PERTZYE、PANCREAZE、ZENPEP、VIOKACE。参与 调查的受访者获得了报酬。

重要安全信息

PANCREAZE 有哪些可能的副作用? PANCREAZE 可能会导致严重的副作用,包括:

- 一种称为纤维化结肠病的罕见肠道障碍
- 刺激您的口腔内部。 如果没有完全吞下PANCREAZE, 就 ullet会发生这种情况
- 过敏反应,包括呼吸困难、皮疹、或嘴唇肿胀

请阅读药物指南和随附的完 整处方信息。

6

7

pancreaze®

(pancrelipase) DELAYED-RELEASE CAPSULES

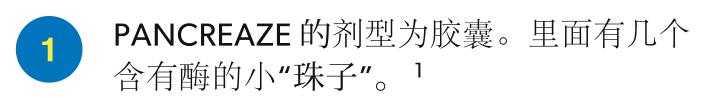


什么是 PANCREAZE?

PANCREAZE 是一种胰腺 酶替代疗法¹

PANCREAZE 是一种处方药,可替代您或您的孩子因 EPI 而正常消化食物所需的酶。





PANCREAZE含有消化酶的混合物,包括脂肪酶、蛋白酶和淀粉酶。PANCREAZE中的酶帮助身体正确消化食物和吸收脂肪,蛋白质和碳水化合物一一这是健康成长、体重增加和改善营养健康所必需的。

PANCREAZE 经临床证明可改善 EPI 症状,如腹痛、腹胀、腹泻和大便油腻。⁸

重要安全信息

PANCREAZE 有哪些可能的副作用?

PANCREAZE 可能会导致严重的副作用,包括:

• 血尿酸水平升高。这可能会导致由血尿酸水平升高引起的肿胀、疼痛的关节(痛风)恶化



每颗珠子都包有特殊的肠溶衣。当胶囊进入小肠时, pH 触发肠溶衣, 以溶解和释放酶, 帮助消化食物。¹

注意:插图未显示实际胶囊颜色和内容物。

重要安全信息

PANCREAZE 可能会导致严重的副作用,包括:

 PANCREAZE 和其他胰酶产品 由猪的胰腺制成,与人们吃的猪肉相同。
 这些猪可能携带病毒。
 虽然从未报道过, 但人可能会因服用来自猪的胰酶产品而感染病毒。

9

请阅读药物指南和随附的完 整处方信息。



服用 PANCREAZE

PANCREAZE 具有6种剂量,可确保针对每位患者的独特需求灵活给药¹

您的医生会根据年龄、体重和症状为您定制剂量。PANCREAZE的 **灵活给药方案确保您获得最适合您的剂量。**

您应该在吃每顿饭和点心时服用 PANCREAZE¹

有效的给药策略因患者而异。您的医生会建议您 如何服用 PANCREAZE——这可能包括 一次服用完整剂量或在整个用餐期间分次服用。 始终完全按照医生的建议服用 PANCREAZE。

PANCREAZE 的优势 (脂肪酶单位)



对于某些患者,在 用餐过程中分次给 药可能是最佳的有 效消化策略5



您的医生会告诉您服用多少胶囊以及何时服 用,以帮助确保您在需要时获得所需的胰酶。

重要安全信息

最常见的副作用包括胃痛(腹痛)和胀气。 这些并不是 PANCREAZE 的所有副作用。与您的医生讨论任 何困扰您或不会消失的副作用。您可以拨打 1-800-FDA-1088 或访问 www.fda.gov/medwatch 向 FDA 报告 副作用。您也可以向 VIVUS LLC 报告副作用,电话是 1-888-998-4887。

- **起始量:** 在用餐开始时服用1粒或更 多胶囊
- **持续量:**在用餐期间服用1粒或更多 胶囊
- **康复量:**在用餐结束时服用1粒或更 多胶囊

重要安全信息

我该如何服用 PANCREAZE? 不要压碎或咀嚼 PANCREAZE 胶囊或其 内容物,不要将胶囊或内容物含在嘴里。完全按照医嘱服用 PANCREAZE。阅读药物指南, 了解如何为成人和儿童 (12 个月以上的儿童)服用 PANCREAZE。

请阅读药物指南和随附的完整 处方信息。



10

服用 PANCREAZE

瑪保睇正瓗服用或使用 ■ ■ ■ ■ ■ ■

适用于12个月以上的儿童和成人

务必要随餐或随点心 和 **大量的液体服用 PANCREAZE。**如果 睇在一天内吃了很多 正餐或零食,请注意 不要服用超过您的每 日总剂量。

 \checkmark

不要粉碎或 咀嚼襟囊或其内容物或 在口中含着襟囊或 内容物。 粉碎、 咽嚼或将 PANCREAZE 襟囊 含在嘴里可能 引起口腔刺激或完全改

X

无法吞服胶囊?

如果您或您的孩子无法吞服 胶囊,您可以将内容物洒在软酸性食物上(例 如,苹果酱、橙汁、 蓝莓碎)。

服用后,立即喝水或 果汁,以确保药物 被吞下.



注意:显示的胶囊不是实际尺寸,也 不代表确切尺寸或颜色。

有关 PANCREAZE 的更多信息, 包括常见问题,请访问:

PANCREAZE.com





我该如何服用 PANCREAZE?

阅读药物指南,了解如何给婴儿(未满12个月的儿童) 服用 PANCREAZE。

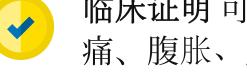
参考资料: 1。PANCREAZE 完整处方信息。 Campbell, CA: VIVUS LLC. 2021. 2.Pezilli R 等人外分泌 成人胰腺功能不全:意大利胰腺研究协会的共同立场声 明。World J Gastroenterol。2013;19 (44):7930-7946° **3.**Lindkvist B. 胰腺外分泌功能不全的诊断和治疗。World J Gastroenterol. 2013;19(42):7258-7266.4.囊性纤维化基金会 (n.d.)。关于囊 性纤维化。检索自 https://www.cff.org/What-is-CF/About-Cystic-Fibrosis/ 5. Struyvenberg MR 等人。外分泌实用指南 胰腺功能不全— — 打破神话。BMC Med. 2017;15(1):29. 6.Othman MO 等人。引言和 临床医生治疗外分泌胰腺功能不全的实用方法。Int」Clin Pract. .2018;72:e13066.7.国家胰腺基金会 (n.d.)。关于慢性 胰腺炎。检索自 https://pancreasfoundation.org/ patientinformation/chronic-pancreatitis/ 8.Trapnell BC 等 人PANCREAZE ®治疗囊胞性纤维症 导致的胰腺外分泌机能不全的疗效和安全性。 J Cyst Fibros. 2011;10(5):350-356 **bancreaze**[®] 请阅读药物指南和随附的完整 处方信息。 (pancrelipase) DELAYED-RELEASE CAPSULES

12



询问您的医生 PANCREAZE 是 否适合您。





临床证明可改善慢性 EPI 症状,如腹 痛、腹胀、腹泻和大便油腻8



PANCREAZE 具有 6 种优势, 可确保针 对每位患者的独特需求灵活给药.]



多种省钱方式! 请参阅插入内封面。

重要安全信息

最常见的副作用包括胃痛(腹痛)和胀气。

这些并不是 PANCREAZE 的所有副作用。与您的医生讨论任 何困扰您或不会消失的副作用。您可以将副作用报告给

FDA, 联系方式是 1-800-FDA-1088 或 www.fda.gov/medwatch.

您也可以将副作用报告给 VIVUS LLC, 电话是 1-888-998-4887。

©2022 VIVUS LLC. 版权所有。 500167.03-C-USP 02/2022



HIGHLIGHTS OF PRESCRIBING INFORMATION

These highlights do not include all the information needed to use PANCREAZE® safely and effectively. See full prescribing information for PANCREAZE®. PANCREAZE® (pancrelipase) delayed-release capsules

Initial U.S. Approval - 2010

-----INDICATIONS AND USAGE------PANCREAZE® is a combination of porcine-derived lipases, proteases, and amylases indicated for the treatment of exocrine pancreatic insufficiency due to cystic fibrosis or other conditions (1)

-----DOSAGE AND ADMINISTRATION-----**Dosage**

PANCREAZE is not interchangeable with any other pancrelipase product. Infants (up to 12 months)

- Infants may be given 2,600 lipase units per 120 mL of formula or per breast-feeding. (2.1)
- Do not mix PANCREAZE delayed-release capsule contents directly into formula or breast milk prior to administration. (2.2)
- Children Older than 12 Months and Younger than 4 Years
- Enzyme dosing should begin with 1,000 lipase units/kg of body weight per meal to a maximum of 2,500 lipase units/kg of body weight per meal (or less than or equal to 10,000 lipase units/kg of body weight per day), or less than 4,000 lipase units/g fat ingested per day. (2.1)

Children 4 Years and Older and Adults

Enzyme dosing should begin with 500 lipase units/kg of body weight per meal to a maximum of 2,500 lipase units/kg of body weight per meal (or less than or equal to 10,000 lipase units/kg of body weight per day), or less than 4,000 lipase units/g fat ingested per day. (2.1)

Limitations on Dosing

- Dosing should not exceed the recommended maximum dosage set forth by the Cystic Fibrosis Foundation Consensus Conferences Guidelines. (2.1) Administration
- · PANCREAZE should be swallowed whole. For infants or patients unable to swallow intact capsules, the contents may be sprinkled on soft acidic food with a pH of 4.5 or less, e.g., applesauce. (2.2)

-----DOSAGE FORMS AND STRENGTHS------

- Delayed-release capsules: 2,600 USP units of lipase; 8,800 USP units of protease; 15,200 USP units of amylase.
- Delayed-release capsules: 4,200 USP units of lipase; 14,200 USP units of protease; 24,600 USP units of amylase.
- Delayed-release capsules: 10,500 USP units of lipase; 35,500 USP units of protease; 61,500 USP units of amylase.

FULL PRESCRIBING INFORMATION: CONTENTS* INDICATIONS AND USAGE

2 DOSAGE AND ADMINISTRATION

- 2.1 Dosage
- Administration 2.2
- DOSAGE FORMS AND STRENGTHS 3
- CONTRAINDICATIONS 4 5
 - WARNINGS AND PRECAUTIONS
 - Fibrosing Colonopathy 5.1
 - Potential for Irritation to Oral Mucosa 5.2
 - 5.3 Potential for Risk of Hyperuricemia
 - Potential Viral Exposure from the Product Source 54
 - 5.5 Allergic Reactions

ADVERSE REACTIONS 6

- **Clinical Trials Experience** 6.1
- Postmarketing Experience 6.2
- DRUG INTERACTIONS

USE IN SPECIFIC POPULATIONS 8

8.1 Pregnancy

- · Delayed-release capsules: 16,800 USP units of lipase; 56,800 USP units of protease; 98,400 USP units of amylase.
- Delayed-release capsules: 21,000 USP units of lipase; 54,700 USP units of protease; 83,900 USP units of amylase.
- Delayed-release capsules: 37,000 USP units of lipase; 97,300 USP units of protease; 149,900 USP units of amylase.

-----CONTRAINDICATIONS------

None. (4)

-----WARNINGS AND PRECAUTIONS------

- Fibrosing colonopathy is associated with high-dose use of pancreatic enzyme replacement. Exercise caution when doses of PANCREAZE exceed 2,500 lipase units/kg of body weight per meal (or greater than 10,000 lipase units/kg of body weight per day). (5.1)
- To avoid irritation of oral mucosa, do not chew PANCREAZE or retain in the mouth. (5.2)
- Exercise caution when prescribing PANCREAZE to patients with gout, renal impairment, or hyperuricemia. (5.3)
- There is theoretical risk of viral transmission with all pancreatic enzyme products including PANCREAZE. (5.4)
- Exercise caution when administering pancrelipase to a patient with a known allergy to proteins of porcine origin. (5.5)

-----ADVERSE REACTIONS------

· Treatment-emergent adverse events occurring in at least 2 patients (greater than or equal to 10%) receiving PANCREAZE or placebo are abdominal pain, abdominal pain upper, flatulence, diarrhea, abnormal feces, and fatigue. (6.1)

To report SUSPECTED ADVERSE REACTIONS, contact VIVUS, Inc., at 1-888-998-4887 or FDA at 1-800-FDA-1088 or www.fda.gov/medwatch

------USE IN SPECIFIC POPULATIONS------**Pediatric Patients**

- · The safety and effectiveness of PANCREAZE were assessed in pediatric patients, aged 6 to 30 months old and aged 8 to 17 years old. (8.4)
- The safety and efficacy of pancreatic enzyme products with different formulations of pancrelipase in pediatric patients have been described in the medical literature and through clinical experience. (8.4)

See 17 for PATIENT COUNSELING INFORMATION and Medication Guide.

Revised:04/2021

- 8.2 Lactation
- 8.3 Pediatric Use
- 10 OVERDOSAGE
- DESCRIPTION 11
- **CLINICAL PHARMACOLOGY** 12
 - 12.1 Mechanism of Action
- 12.3 Pharmacokinetics 13 NONCLINICAL TOXICOLOGY
 - 13.1 Carcinogenesis, Mutagenesis, Impairment of Fertility
- 14 CLINICAL STUDIES
- REFERENCES 15
- HOW SUPPLIED/STORAGE AND HANDLING 16
- PATIENT COUNSELING INFORMATION 17
 - 17.1 Dosing and Administration
 - 17.2 Fibrosing Colonopathy
 - 17.3 Allergic Reactions

[*Sections or subsections omitted from the full prescribing information are not listed]

FULL PRESCRIBING INFORMATION

1 INDICATIONS AND USAGE

PANCREAZE is indicated for the treatment of exocrine pancreatic insufficiency due to cystic fibrosis or other conditions.

2 DOSAGE AND ADMINISTRATION

2.1 Dosage

PANCREAZE is not interchangeable with other pancrelipase products.

PANCREAZE is orally administered. Therapy should be initiated at the lowest recommended dose and gradually increased. The dosage of PANCREAZE should be individualized based on clinical symptoms, the degree of steatorrhea present, and the fat content of the diet (see Limitations on Dosing below).

Dosage recommendations for pancreatic enzyme replacement therapy were published following the Cystic Fibrosis Foundation Consensus Conferences.^{1,2,3} PANCREAZE should be administered in a manner consistent with the recommendations of the Conferences provided in the following paragraphs with one exception. The Conferences recommend doses of 2,000 to 4,000 lipase units in infants up to 12 months. PANCREAZE is available in a 2,600 lipase unit delayed-release capsule. The recommended dose of PANCREAZE in infants up to 12 months is 2,600 lipase units per 120 mL of formula or per breast-feeding. Patients may be dosed on a fat ingestion-based or actual body weight-based dosing scheme.

Infants (up to 12 months)

Infants may be given 2,600 lipase units per 120 mL of formula or per breast-feeding. Do not mix PANCREAZE delayed-release capsule contents directly into formula or breast milk prior to administration [see Dosage and Administration (2.2)].

Children Older than 12 Months and Younger than 4 Years

Enzyme dosing should begin with 1,000 lipase units/kg of body weight per meal for children less than age 4 years to a maximum of 2,500 lipase units/kg of body weight per meal (or less than or equal to 10,000 lipase units/kg of body weight per day), or less than 4,000 lipase units/g fat ingested per day.

Children 4 Years and Older and Adults

Enzyme dosing should begin with 500 lipase units/kg of body weight per meal for those older than age 4 years to a maximum of 2,500 lipase units/kg of body weight per meal (or less than or equal to 10,000 lipase units/kg of body weight per day), or less than 4,000 lipase units/g fat ingested per day.

Usually, half of the prescribed PANCREAZE dose for an individualized full meal should be given with each snack. The total daily dose should reflect approximately three meals plus two or three snacks per day.

Enzyme doses expressed as lipase units/kg of body weight per meal should be decreased in older patients because they weigh more but tend to ingest less fat per kilogram of body weight.

Limitations on Dosing

Dosing should not exceed the recommended maximum dosage set forth by the Cystic Fibrosis Foundation Consensus Conferences Guidelines.^{1, 2, 3}

If symptoms and signs of steatorrhea persist, the dosage may be increased by a healthcare professional. Patients should be instructed not to increase the dosage on their own. There is great inter-individual variation in response to enzymes; thus, a range of doses is recommended. Changes in dosage may require an adjustment period of several days. If doses are to exceed 2,500 lipase units/kg of body weight per meal, further investigation is warranted.

Doses greater than 2,500 lipase units/kg of body weight per meal (or greater than 10,000 lipase units/kg of body weight per day) should be used with caution and only if they are documented to be effective by 3-day fecal fat measures that indicate a significantly improved coefficient of fat absorption. Doses greater than 6,000 lipase units/kg of body weight per meal have been associated with colonic strictures, indicative of fibrosing colonopathy, in children with cystic fibrosis less than 12 years of age *[see Warnings and Precautions (5.1)]*. Patients currently receiving higher doses than 6,000 lipase units/kg of body weight per meal should be examined and the dosage either immediately decreased or titrated downward to a lower range.

2.2 Administration

PANCREAZE should always be taken as prescribed by a healthcare professional.

Infants (up to 12 months)

PANCREAZE should be administered to infants immediately prior to each feeding, using a dosage of 2,600 lipase units per 120 mL of formula or per breast-feeding (i.e., one delayed-release capsule with 2,600 USP units of lipase). Contents of the delayed-release capsule may be sprinkled on small amounts of acidic soft food with a pH of 4.5 or less (e.g., applesauce) and given to the infant within 15 minutes. Contents of the delayed-release capsule may also be administered directly to the mouth. Administration should be followed by breast milk or formula. Contents of the delayed-release capsule **should not** be mixed directly into formula or breast milk as this may diminish efficacy. Care should be taken to ensure that PANCREAZE is not crushed or chewed or retained in the mouth, to avoid irritation of the oral mucosa.

Children and Adults

PANCREAZE should be taken during meals or snacks, with sufficient fluid. **PANCREAZE** delayed-release **capsules and** delayed-release **capsule contents** should **not be crushed or chewed.** Delayed-release capsules should be swallowed whole.

For patients who are unable to swallow intact delayed-release capsules, the delayed-release capsules may be carefully opened and the contents sprinkled on small amounts of acidic soft food with a pH of 4.5 or less (e.g., applesauce). The PANCREAZE-soft food mixture should be swallowed immediately without crushing or chewing, and followed with water or juice to ensure complete ingestion. Care should be taken to ensure that no drug is retained in the mouth.

3 DOSAGE FORMS AND STRENGTHS

The active ingredient in PANCREAZE evaluated in clinical trials is lipase. PANCREAZE is dosed by lipase units.

PANCREAZE is available in 5 color coded delayed-release capsule strengths.

Other active ingredients include protease and amylase. Each PANCREAZE delayed-release capsule strength contains the specified amounts of lipase, protease, and amylase as follows:

- 2,600 USP units of lipase; 8,800 USP units of protease; 15,200 USP units of amylase. Capsules have a light orange opaque body and clear cap, printed with "VIVUS" and "MT 2"
- 4,200 USP units of lipase; 14,200 USP units of protease; 24,600 USP units of amylase. Capsules have a yellow opaque body and clear cap, printed with "VIVUS" and "MT 4"
- 10,500 USP units of lipase; 35,500 USP units of protease; 61,500 USP units of amylase. Capsules have a flesh opaque body and clear cap, printed with "VIVUS" and "MT 10"
- 16,800 USP units of lipase; 56,800 USP units of protease; 98,400 USP units of amylase. Capsules have a flesh opaque body and clear cap, printed with "VIVUS" and "MT 16"
- 21,000 USP units of lipase; 54,700 USP units of protease; 83,900 USP units of amylase. Capsules have a white opaque body and cap, printed with "VIVUS" and "MT 20"
- 37,000 USP units of lipase; 97,300 USP units of protease; 149,900 USP units of amylase. Capsules have an iron grey opaque body and white opaque cap, printed with "VIVUS" and "MT 37" (3)

4 CONTRAINDICATIONS

None.

5 WARNINGS AND PRECAUTIONS

5.1 Fibrosing Colonopathy

Fibrosing colonopathy has been reported following treatment with different pancreatic enzyme products.^{4,5} Fibrosing colonopathy is a rare serious adverse reaction initially described in

association with high-dose pancreatic enzyme use, usually with use over a prolonged period of time and most commonly reported in pediatric patients with cystic fibrosis. The underlying mechanism of fibrosing colonopathy remains unknown. Doses of pancreatic enzyme products exceeding 6,000 lipase units/kg of body weight per meal have been associated with colonic strictures in children less than 12 years of age.¹ Patients with fibrosing colonopathy should be closely monitored because some patients may be at risk of progressing to stricture formation. It is uncertain whether regression of fibrosing colonopathy occurs.¹ It is generally recommended, unless clinically indicated, that enzyme doses should be less than 2,500 lipase units/kg of body weight per meal (or less than 10,000 lipase units/kg of body weight per day) or less than 4,000 lipase units/g fat ingested per day [see Dosage and Administration (2.1)].

Doses greater than 2,500 lipase units/kg of body weight per meal (or greater than 10,000 lipase units/kg of body weight per day) should be used with caution and only if they are documented to be effective by 3-day fecal fat measures that indicate a significantly improved coefficient of fat absorption. Patients receiving higher doses than 6,000 lipase units/kg of body weight per meal should be examined and the dosage either immediately decreased or titrated downward to a lower range.

5.2 Potential for Irritation to Oral Mucosa

Care should be taken to ensure that no drug is retained in the mouth. PANCREAZE should not be crushed or chewed or mixed in foods having a pH greater than 4.5. These actions can disrupt the protective enteric coating resulting in early release of enzymes, irritation of oral mucosa, and/or loss of enzyme activity [see Dosage and Administration (2.2) and Patient Counseling Information (17)]. For patients who are unable to swallow intact delayed-release capsules, the delayed-release capsules may be carefully opened and the contents sprinkled to a small amount of acidic soft food with a pH of 4.5 or less, such as applesauce. The PANCREAZE-soft food mixture should be swallowed immediately and followed with water or juice to ensure complete ingestion.

5.3 Potential for Risk of Hyperuricemia

Caution should be exercised when prescribing PANCREAZE to patients with gout, renal impairment, or hyperuricemia. Porcine-derived pancreatic enzyme products contain purines that may increase blood uric acid levels.

5.4 Potential Viral Exposure from the Product Source

PANCREAZE is sourced from pancreatic tissue from swine used for food consumption. Although the risk that PANCREAZE will transmit an infectious agent to humans has been reduced by testing for certain viruses during manufacturing and by inactivating certain viruses during manufacturing, there is a theoretical risk for transmission of viral disease, including diseases caused by novel or unidentified viruses. Thus, the presence of porcine viruses that might infect humans cannot be definitely excluded. However, no cases of transmission of an infectious illness associated with the use of porcine pancreatic extracts have been reported.

5.5 Allergic Reactions

Caution should be exercised when administering pancrelipase to a patient with a known allergy to proteins of porcine origin. Rarely, severe allergic reactions including anaphylaxis, asthma, hives, and pruritus have been reported with other pancreatic enzyme products with different formulations of the same active ingredient (pancrelipase). The risks and benefits of continued PANCREAZE treatment in patients with severe allergy should be taken into consideration with the overall clinical needs of the patient.

6 ADVERSE REACTIONS

The most serious adverse reactions reported with different pancreatic enzyme products of the same active ingredient (pancrelipase) include fibrosing colonopathy, hyperuricemia and allergic reactions [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 clinical practice.

The short-term safety of PANCREAZE was assessed in two clinical trials conducted in 57 patients with exocrine pancreatic insufficiency (EPI) due to CF. Study 1 was conducted in 40 patients, ages 8 years to 57 years; Study 2 was conducted in 17 patients, ages 6 months to 30 months. In Study 1, PANCREAZE was administered in a dose of approximately 6,300 lipase units per kilogram per day for lengths of treatment ranging from 8 to 26 days; in Study 2, PANCREAZE was administered in four treatment arms (doses of 1,375, 2,875, 4,735, and 5,938 lipase units per kilogram per day) for lengths of treatment ranging from 6 to 11 days. The population was nearly evenly distributed in gender, and approximately 96% of patients were Caucasian.

Study 1 was a randomized, double-blind, placebo-controlled study of 40 patients, ages 8 to 57 years, with EPI due to CF. In this study, patients received PANCREAZE at individually titrated doses (not to exceed 2,500 lipase units per kilogram per meal) for 14 days, followed by randomization to PANCREAZE or matching placebo for 7 days of treatment. The mean exposure to PANCREAZE during this study, including titration period and randomized withdrawal period, was 18 days.

The incidence of adverse events (regardless of causality) was higher during placebo treatment (60%) than during PANCREAZE treatment (40%). The most common adverse events reported during the study were gastrointestinal complaints, which were reported more commonly during placebo treatment (55%) than during PANCREAZE treatment (30%). The type and incidence of adverse events were similar in children (8 to 11 years), adolescents (12 to 17 years), and adults (greater than 18 years).

Table 1 enumerates treatment-emergent adverse events that occurred in at least 2 patients (greater than or equal to 10%) treated with either PANCREAZE or placebo in Study 1. Adverse events were classified by Medical Dictionary for Regulatory Activities (MedDRA) terminology.

MedDRA Primary System Organ Class Preferred Term	PANCREAZE (N=20) n (%)	Placebo (N=20) n (%)
Gastrointestinal Disorders		
Abdominal pain	2 (10%)	3 (15%)
Abdominal pain upper	1 (5%)	3 (15%)
Flatulence	1 (5%)	3 (15%)
Diarrhea	0 (0%)	4 (20%)
Abnormal feces	0 (0%)	3 (15%)
General Disorders and Administration Site Conditions		
Fatigue	0 (0%)	2 (10%)

Table 1.	Treatment-Emergent Adverse Events Occurring in at Least 2 Patients (Greater Than or
	Equal to 10%) in Either Treatment Group of the Placebo-Controlled, Clinical Study of
	PANCREAZE

Study 2 was a randomized, investigator-blinded, dose-ranging study of 17 patients, ages 6 months to 30 months, with EPI due to CF. All patients were transitioned from their usual PEP treatment to PANCREAZE at 375 lipase units per kilogram body weight per meal for a 6 day run-in period. Patients were then randomized to receive PANCREAZE at one of four doses (375, 750, 1,125, and 1,500 lipase units per kilogram body weight per meal) for 5 days. Adverse events were collected on patient diary entries and at each study visit.

The most commonly reported adverse events were gastrointestinal, including diarrhea and vomiting, and were similar in type and frequency across treatment arms and to those reported in the double-blind, placebo-controlled trial (Study 1).

6.2 Postmarketing Experience

Postmarketing data for PANCREAZE have been available since 1988. The safety data are similar to those described below.

Delayed- and immediate-release pancreatic enzyme products with different formulations of the same active ingredient (pancrelipase) have been used for the treatment of patients with exocrine pancreatic insufficiency due to cystic fibrosis and other conditions, such as chronic pancreatitis. The long-term safety profile of these products has been described in the medical literature. The most serious adverse events included fibrosing colonopathy, distal intestinal obstruction syndrome (DIOS), recurrence of pre-existing carcinoma, and severe allergic reactions including anaphylaxis, asthma, hives, and pruritus. The most commonly reported adverse events were gastrointestinal disorders, including abdominal pain, diarrhea, flatulence, constipation and

nausea, and skin disorders including pruritus, urticaria and rash. In general, these products have a well-defined and favorable risk-benefit profile in exocrine pancreatic insufficiency.

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.

7 DRUG INTERACTIONS

No drug interactions have been identified. No formal interaction studies have been conducted.

8 USE IN SPECIFIC POPULATIONS

8.1 Pregnancy

Risk Summary

Published data from case reports with pancrelipase use in pregnant women have not identified a drug-associated risk of major birth defects, miscarriage or other adverse maternal or fetal outcomes. Pancrelipase is minimally absorbed systematically; therefore, maternal use is not expected to result in fetal exposure to the drug. Animal reproduction studies have not been conducted with pancrelipase.

The estimated background risk of major birth defects and miscarriage for the indicated population is unknown. All pregnancies have a background risk of birth defect, loss, or other adverse 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.

8.2 Lactation

Risk Summary

There are no data on the presence of pancrelipase in either human or animal milk, the effects on the breastfed infant or the effects on milk production. Pancrelipase is minimally absorbed systemically following oral administration, therefore maternal use is not expected to result in clinically relevant exposure of breastfed infants to the drug. The developmental and health benefits of breastfeeding should be considered along with the mother's clinical need for PANCREAZE and any potential adverse effects on the breastfeed infant from PANCREAZE or from the underlying maternal condition.

8.3 Pediatric Use

The short-term safety and effectiveness of PANCREAZE were assessed in two clinical studies in pediatric patients with EPI due to CF; one study included patients ages 6 to 30 months, and the other included patients ages 8 years to 17 years.

Study 1 was a randomized, double-blind, placebo-controlled study in 40 patients, 14 of whom were pediatric patients, including 7 children aged 8 to 11 years, and 7 adolescents aged 12 to 17 years. The safety and efficacy in pediatric patients in this study were similar to adult patients *[see Adverse Reactions (6.1) and Clinical Studies (14)]*.

Study 2 was a randomized, investigator-blinded, dose-ranging study in 17 pediatric patients aged 6 to 30 months. When patient regimen was switched from their usual PEP regimen to PANCREAZE, patients showed similar control of their fat malabsorption [see Adverse Reactions (6.1) and Clinical Studies (14)].

The safety and efficacy of pancreatic enzyme products with different formulations of pancrelipase consisting of the same active ingredients (lipases, proteases, and amylases) for treatment of children with exocrine pancreatic insufficiency due to cystic fibrosis has been described in the medical literature and through clinical experience.

Dosing of pediatric patients should be in accordance with recommended guidance from the Cystic Fibrosis Foundation Consensus Conferences [see Dosage and Administration (2.1)]. Doses of other pancreatic enzyme products exceeding 6,000 lipase units/kg of body weight per meal have been associated with fibrosing colonopathy and colonic strictures in children less than 12 years of age [see Warnings and Precautions (5.1)].

10 OVERDOSAGE

In Study 1, a 10 year-old patient was administered a PANCREAZE dose of 12,399 lipase units per kilogram per day for the duration of the open-label and randomized withdrawal periods. The patient experienced mild abdominal pain throughout both study periods. Abnormal chemistry data at the end of the study included mild elevations of aspartate aminotransferase (AST), alanine aminotransferase (ALT), and serum phosphate. Abnormal hematology data at the end of the study included mild elevations of hematocrit. No abnormalities from analyses of urinalysis or uric acid were noted.

Chronic high doses of pancreatic enzyme products have been associated with fibrosing colonopathy and colonic strictures [see Dosage and Administration (2.1) and Warnings and Precautions (5.1)]. High doses of pancreatic enzyme products have been associated with hyperuricosuria and hyperuricemia, and should be used with caution in patients with a history of hyperuricemia, gout, or renal impairment [see Warnings and Precautions (5.3)].

11 DESCRIPTION

Pancrelipase is a pancreatic enzyme preparation consisting of an extract derived from porcine pancreatic glands. Pancrelipase contains multiple enzyme classes, including porcine-derived lipases, proteases, and amylases. The minimum potency in each mg of pancrelipase, as described per USP, is not less than 24 units of lipase activity, not less than 100 units of amylase activity, and not less than 100 units of protease activity.

Each PANCREAZE (pancrelipase) delayed-release capsule for oral administration contains enteric-coated microtablets that are each approximately 2 mm in diameter.

The active ingredient evaluated in clinical trials is lipase. PANCREAZE is dosed by lipase units. Other active ingredients include protease and amylase.

Inactive ingredients in all PANCREAZE strengths include colloidal silicon dioxide, crospovidone, magnesium stearate, methacrylic acid ethyl acrylate copolymer, microcrystalline cellulose, montan glycol wax, simethicone emulsion, talc and triethyl citrate.

PANCREAZE is available in five color coded strengths. Each PANCREAZE delayed-release capsule strength contains the specified amounts of lipase, protease, and amylase as follows:

2,600 USP units of lipase; 8,800 USP units of protease; 15,200 USP units of amylase. The hypromellose capsules have a light orange opaque body and clear cap imprinted with "VIVUS" and "MT 2". The capsule shell contains hypromellose, titanium dioxide, yellow iron oxide, red iron oxide and imprint ink contains black iron oxide, shellac, propylene glycol, strong ammonia solution, potassium hydroxide..

4,200 USP units of lipase; 14,200 USP units of protease; 24,600 USP units of amylase. The hypromellose capsules have a yellow opaque body and clear cap imprinted with "VIVUS" and "MT 4". The capsule shell contains hypromellose, titanium dioxide, yellow iron oxide, and imprint ink contains black iron oxide, shellac-glaze-45%, ammonium hydroxide, propylene glycol..

10,500 USP units of lipase; 35,500 USP units of protease; 61,500 USP units of amylase. The hypromellose capsules have a flesh opaque body and clear cap imprinted with "VIVUS" and "MT 10". The capsule shell contains hypromellose, titanium dioxide, red iron oxide, and imprint ink contains black iron oxide, shellac-glaze-45%, ammonium hydroxide, propylene glycol.

16,800 USP units of lipase; 56,800 USP units of protease; 98,400 USP units of amylase. The hypromellose capsules have a flesh opaque body and clear cap imprinted with "VIVUS" and "MT 16". The capsule shell contains hypromellose, titanium dioxide, red iron oxide, yellow iron oxide, and imprint ink contains black iron oxide, shellac-glaze-45%, ammonium hydroxide, propylene glycol..

21,000 USP units of lipase; 54,700 USP units of protease; 83,900 USP units of amylase. The hypromellose capsules have a white opaque body and cap imprinted with "VIVUS" and "MT 20". The capsule shell contains hypromellose, titanium dioxide, and imprint ink contains yellow iron oxide, shellac, strong ammonia solution, propylene glycol.

37,000 USP units of lipase; 97,300 USP units of protease; 149,900 USP units of amylase. The hypromellose capsules have an iron grey opaque body and white opaque cap imprinted with "VIVUS" and "MT 37". The capsule shell contains hypromellose, titanium dioxide, black iron oxide and imprint ink contains black iron oxide, shellac-glaze-45%, ammonium hydroxide, propylene glycol.

12 CLINICAL PHARMACOLOGY

12.1 Mechanism of Action

The pancreatic enzymes in PANCREAZE catalyze the hydrolysis of fats to monoglyceride, glycerol and free fatty acids, proteins into peptides and amino acids, and starches into dextrins and short chain sugars such as maltose and maltriose in the duodenum and proximal small intestine, thereby acting like digestive enzymes physiologically secreted by the pancreas.

12.3 Pharmacokinetics

The pancreatic enzymes in PANCREAZE are enteric-coated to minimize destruction or inactivation in gastric acid. PANCREAZE is expected to release most of the enzymes *in vivo* at pH greater than 5.5. Pancreatic enzymes are not absorbed from the gastrointestinal tract in appreciable amounts.

13 NONCLINICAL TOXICOLOGY

13.1 Carcinogenesis, Mutagenesis, Impairment of Fertility

Carcinogenicity, genetic toxicology, and animal fertility studies have not been performed with pancrelipase.

14 CLINICAL STUDIES

The short-term safety and efficacy of PANCREAZE were evaluated in two studies conducted in 57 patients with exocrine pancreatic insufficiency (EPI) associated with cystic fibrosis (CF).

Study 1 was a randomized, double-blind, placebo-controlled study of 40 patients, ages 8 to 57 years, with EPI due to CF. In this study, patients received PANCREAZE at individually titrated doses (not to exceed 2,500 lipase units per kilogram per meal) for 14 days (open-label period) followed by randomization to PANCREAZE or matching placebo for 7 days of treatment (double-blind withdrawal period). Only patients with coefficient of fat absorption (CFA) \geq 80% in the open-label period were randomized to the double-blind withdrawal period. The mean dose during the controlled treatment period was 6,400 lipase units per kilogram per day. All patients

consumed a high-fat diet (greater than or equal to 100 grams of fat per day) during the treatment period.

The primary efficacy endpoint was the change in CFA from the open label period to the end of the double-blind withdrawal period. The CFA was determined by a 72-hour stool collection period during both treatment periods, when both fat excretion and fat ingestion were measured (Table 2).

Table 2.Change in CFA in Study 1 (Open-Label Period to End of Double-Blind Withdrawal
Period)

	PANCREAZE	Placebo
	n=20	n=20
CFA [%]		
Open-Label Period* (Mean, SD)	88 (5)	91 (5)
End of Double-Blind Withdrawal Period [#] (Mean, SD)	87 (8)	56 (25)
Change in CFA [†] [%]		
Open-Label Period to End of Double-Blind Withdrawal Period (Mean, SD)	-2 (6)	-34 (23)
Treatment Difference Point Estimate (95% CI)	33 (25, 40)	

*Minimum of 72 hours from start of open label period.

[#]Double-blind withdrawal period ranged from 4 to 7 days. $^{\dagger}p < 0.001$

At the end of the double-blind withdrawal period, the mean change in CFA from the open-label period to the end of the double-blind withdrawal period was -2% with PANCREAZE treatment compared to -34% with placebo treatment. There were similar responses to PANCREAZE by age and gender.

Study 2 was a randomized, investigator-blinded, dose-ranging study of 17 patients, ages 6 months to 30 months (mean 18 months) with EPI due to CF. The final analysis population was limited to 16 patients; 1 patient was excluded due to withdrawal of consent. All patients were transitioned from their usual PEP treatment to PANCREAZE at 375 lipase units per kilogram body weight per meal for a 6-day run-in period. Patients were then randomized to receive PANCREAZE at one of four doses (375, 750, 1,125, and 1,500 lipase units per kilogram body weight per meal) for 5 days. The CFA was measured at the end of the run-in period and at the end of the randomized period (Table 3).

 Table 3.
 Change in CFA in Study 2 (End of Run-in Period to End of Study)

	375 units lipase/kg/meal n=4	750 units lipase/kg/meal n=4	1,125 units lipase/kg/meal n=4	1,500 units lipase/kg/meal n=4
CFA (%)				
Day 6* (Mean, SD)	93 (2)	90 (5)	81 (11)	93 (3)
Day 11 [#] (Mean, SD)	92 (3)	91 (4)	80 (13)	91 (2)
Change in CFA (%)				
Day 6 to Day 11 (Mean, SD)	-2 (3)	1 (3)	-1 (3)	-2 (3)

*End of Run-in Period; #End of Study

Overall, patients showed similar CFA at the end of the run-in period (mean PANCREAZE dose of 1,600 lipase units per kilogram body weight per day) as at the end of the study across the four treatment arms.

15 REFERENCES

- 1. Borowitz DS, Grand RJ, Durie PR, et al. Use of pancreatic enzyme supplements for patients with cystic fibrosis in the context of fibrosing colonopathy. *Journal of Pediatrics*. 1995; 127: 681-684.
- 2. Borowitz DS, Baker RD, Stallings V. Consensus report on nutrition for pediatric patients with cystic fibrosis. *Journal of Pediatric Gastroenterology Nutrition*. 2002 Sep; 35: 246-259.
- 3. Stallings VA, Start LJ, Robinson KA, et al. Evidence-based practice recommendations for nutrition-related management of children and adults with cystic fibrosis and pancreatic insufficiency: results of a systematic review. *Journal of the American Dietetic Association*. 2008; 108: 832-839.
- 4. Smyth RL, Ashby D, O'Hea U, et al. Fibrosing colonopathy in cystic fibrosis: results of a case-control study. *Lancet*. 1995; 346: 1247-1251.
- 5. FitzSimmons SC, Burkhart GA, Borowitz DS, et al. High-dose pancreatic-enzyme supplements and fibrosing colonopathy in children with cystic fibrosis. *New England Journal of Medicine*. 1997; 336: 1283-1289.

16 HOW SUPPLIED/STORAGE AND HANDLING

PANCREAZE (pancrelipase) Delayed-Release Capsules

2,600 USP units of lipase; 8,800 USP units of protease; 15,200 USP units of amylase.

PANCREAZE (pancrelipase) is supplied as hypromellose capsules with a light orange opaque body and clear cap imprinted with "VIVUS" and "MT 2" and packaged in bottles of 100-(NDC 62541-401-10).

PANCREAZE (pancrelipase) Delayed-Release Capsules

4,200 USP units of lipase; 14,200 USP units of protease; 24,600 USP units of amylase.

PANCREAZE (pancrelipase) is supplied as hypromellose capsules with a yellow opaque body and clear cap imprinted with "VIVUS" and "MT 4" and packaged in bottles of 100-(NDC 62541-402-10).

PANCREAZE (pancrelipase) Delayed-Release Capsules

10,500 USP units of lipase; 35,500 USP units of protease; 61,500 USP units of amylase.

PANCREAZE (pancrelipase) is supplied as hypromellose capsules with a pink opaque body and clear cap imprinted with "VIVUS" and "MT 10" and packaged in bottles of 100-(NDC 62541-403-10).

PANCREAZE (pancrelipase) Delayed-Release Capsules

16,800 USP units of lipase; 56,800 USP units of protease; 98,400 USP units of amylase.

PANCREAZE (pancrelipase) is supplied as hypromellose capsules with a flesh opaque body and clear cap imprinted with "VIVUS" and "MT 16" and packaged in bottles of 100-(NDC 62541-404-10).

PANCREAZE (pancrelipase) Delayed-Release Capsules

21,000 USP units of lipase; 54,700 USP units of protease; 83,900 USP units of amylase.

PANCREAZE (pancrelipase) is supplied as hypromellose capsules with a white opaque body and cap imprinted with "VIVUS" and "MT 20" and packaged in bottles of 100-(NDC 62541-405-10).

PANCREAZE (pancrelipase) Delayed-Release Capsules

37,000 USP units of lipase; 97,300 USP units of protease; 149,900 USP units of amylase.

PANCREAZE (pancrelipase) is supplied as hypromellose capsules with an iron grey opaque body and white opaque cap imprinted with "VIVUS" and "MT 37" and packaged in 2 bottles of 50-(NDC 62541-406-50) inside a carton (NDC 62541-406-10).

Storage and Handling

Avoid heat. PANCREAZE capsules should be stored in a dry place in the original container. After opening, KEEP THE CONTAINER TIGHTLY CLOSED between uses to PROTECT FROM MOISTURE. Do not store above 25°C (77°F).

All PANCREAZE bottles contain a desiccant canister. **Do not** eat or throw away the desiccant canister in your medicine bottle. This canister will protect your medicine from moisture.

DO NOT CRUSH PANCREAZE delayed-release capsules or the capsule contents.

17 PATIENT COUNSELING INFORMATION

See Medication Guide

17.1 Dosing and Administration

Instruct patients and caregivers that PANCREAZE should only be taken as directed by their healthcare professional. Patients should be advised that the total daily dose should not exceed

10,000 lipase units/kg body weight/day unless clinically indicated. This needs to be especially emphasized for patients eating multiple snacks and meals per day. Patients should be informed that if a dose is missed, the next dose should be taken with the next meal or snack as directed. Doses should not be doubled [see Dosage and Administration (2)].

Instruct patients and caregivers that PANCREAZE should always be taken with food. Patients should be advised that PANCREAZE delayed-release capsules and the delayed-release capsule contents must not be crushed or chewed as doing so could cause early release of enzymes and/or loss of enzymatic activity. Patients should swallow the intact delayed-release capsules with adequate amounts of liquid at mealtimes. If necessary, the delayed-release capsule contents can also be sprinkled on soft acidic foods. *[see Dosage and Administration (2)]*.

Instruct patients to notify their healthcare professional if they are pregnant or are thinking of becoming pregnant during treatment with PANCREAZE [see Use in Specific Populations (8.1)].

Instruct patients to notify their healthcare professional if they are breastfeeding or are thinking of breastfeeding during treatment with PANCREAZE [see Use in Specific Populations (8.2)].

17.2 Fibrosing Colonopathy

Advise patients and caregivers to follow dosing instructions carefully, as doses of pancreatic enzyme products exceeding 6,000 lipase units/kg of body weight per meal (10,000 lipase units/kg of body weight/day) have been associated with colonic strictures in children below the age of 12 years [see Dosage and Administration (2)].

17.3 Allergic Reactions

Advise patients and caregivers to contact their healthcare professional immediately if allergic reactions to PANCREAZE develop [see Warnings and Precautions (5.5)].



Product of Germany

Finished Product Manufactured at: Nordmark Pharma GmbH 25436 Uetersen, Germany.

Manufactured by:

VIVUS, Inc. 900 E. Hamilton Ave., Suite 550 Campbell, CA 95008 USA © VIVUS, Inc. 2010-2021

MEDICATION GUIDE

PANCREAZE[®] (pan-kre-aze)

(pancrelipase)

delayed-release capsules

Read this Medication Guide before you start taking PANCREAZE and each time you get a refill. There may be new information. This information does not take the place of talking to your doctor about your medical condition or treatment.

What is the most important information I should know about PANCREAZE?

PANCREAZE may increase your chance of having a rare bowel disorder called fibrosing colonopathy. This condition is serious and may require surgery. The risk of having this condition may be reduced by following the dosing instructions that your doctor gave you.

Call your doctor right away if you have any <u>unusual or severe</u>:

- stomach area (abdominal) pain
- bloating
- trouble passing stool (having bowel movements)
- nausea, vomiting, or diarrhea

Take PANCREAZE exactly as prescribed by your doctor. Do not take more or less PANCREAZE than directed by your doctor.

What is PANCREAZE?

PANCREAZE is a prescription medicine used to treat people who cannot digest food normally because their pancreas does not make enough enzymes due to cystic fibrosis or other conditions. PANCREAZE may help your body use fats, proteins, and sugars from food.

PANCREAZE contains a mixture of digestive enzymes including lipases, proteases, and amylases from pig pancreas.

PANCREAZE is safe and effective in children when taken as prescribed by your doctor.

What should I tell my doctor before taking PANCREAZE?

Before taking PANCREAZE, tell your doctor about all your medical conditions, including if you:

- are allergic to pork (pig) products.
- have a history of blockage of your intestines, or scarring or thickening of your bowel wall (fibrosing colonopathy)
- have gout, kidney disease, or high blood uric acid (hyperuricemia)
- have trouble swallowing capsules
- have any other medical condition
- are pregnant or plan to become pregnant. are breastfeeding or plan to breastfeed. It is not known if PANCREAZE passes into your breast milk. Talk to your doctor about the best way to feed your baby if you take PANCREAZE.

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

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

How should I take PANCREAZE?

Take PANCREAZE exactly as your doctor tells you.

- Do not take more capsules in a day than the number your doctor tells you to take (total daily dose).
- Always take PANCREAZE with a meal or snack and plenty of fluid. If you eat a lot of meals or snacks in a day, be careful not to go over your total daily dose.
- Your doctor may change your dose based on the amount of fatty foods you eat or based on your weight.
- Do not crush or chew the PANCREAZE capsules or their contents, and do not hold the capsule or contents in your mouth. Crushing, chewing or holding the PANCREAZE capsules in your mouth may cause irritation in your mouth or change the way PANCREAZE works in your body.

Giving PANCREAZE to infants (children up to 12 months):

1. Give PANCREAZE right before each feeding of formula or breast milk.

- 2. Do not mix PANCREAZE capsule contents directly into formula or breast milk.
- 3. Open the capsules and sprinkle the contents directly into your infant's mouth or mix the contents in a small amount of soft food such as applesauce. These foods should be the kind found in baby food jars that you buy at the store, or other food recommended by your doctor.
- 4. If you sprinkle the PANCREAZE on food, give the PANCREAZE and food mixture to your child right away. Do not store PANCREAZE that is mixed with food.
- 5. Give your child enough liquid to completely swallow the PANCREAZE contents or the PANCREAZE and food mixture.
- 6. Look into your child's mouth to make sure that all of the medicine has been swallowed.

Giving PANCREAZE to children and adults

- 1. Swallow PANCREAZE capsules whole and take them with enough liquid to swallow them right away.
- 2. If you have trouble swallowing capsules, open the capsules and sprinkle the contents on a small amount of acidic food such as applesauce. Ask your doctor about other foods you can mix with PANCREAZE.
- 3. If you sprinkle PANCREAZE on food, swallow it right after you mix it and drink plenty of water or juice to make sure the medicine is swallowed completely. Do not store PANCREAZE that is mixed with food.
- 4. If you forget to take PANCREAZE, call your healthcare provider or wait until your next meal and take your usual number of capsules. Take your next dose at your usual time. **Do not make up for missed doses.**

What are the possible side effects of PANCREAZE?

PANCREAZE may cause serious side effects, including:

 See "What is the most important information I should know about PANCREAZE?"

- Irritation of the inside of your mouth. This can happen if PANCREAZE is not swallowed completely.
- Increase in blood uric acid levels. This may cause worsening of swollen, painful joints (gout) caused by an increase in your blood uric acid levels
- Allergic reactions including trouble with breathing, skin rashes, or swollen lips.
- Call your doctor right away if you have any of these symptoms.

The most common side effects of PANCREAZE include:

- Pain in your stomach (abdominal area)
- Gas

Other possible side effects of PANCREAZE:

PANCREAZE and other pancreatic enzyme products are made from the pancreas of pigs, the same pigs people eat as pork. These pigs may carry viruses. Although it has never been reported, it may be possible for a person to get a viral infection from taking pancreatic enzyme products that come from pigs.

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

These are not all the possible side effects of PANCREAZE. For more information, ask your doctor or pharmacist.

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

You may also report side effects to VIVUS, Inc. at 1-888-998-4887.

How should I store PANCREAZE?

- Store PANCREAZE at room temperature below 77°F (25°C). Avoid heat.
- Keep PANCREAZE in a dry place and in the original container.
- After opening the bottle, keep it closed tightly between uses.
- All PANCREAZE bottles contain a desiccant canister. **Do not** eat or throw away the desiccant canister in your medicine bottle. This canister will protect your medicine from moisture.

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

General information about PANCREAZE

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

This Medication Guide summarizes the most important information about PANCREAZE. If you would like more information, talk to your doctor. You can ask your pharmacist or doctor for information about PANCREAZE that is written for healthcare professionals.

For more information go to *www.pancreaze.net* or call 1-888-998-4887.

What are the ingredients in PANCREAZE?

Active Ingredient: lipase, protease, amylase

Inactive ingredients in all strengths of PANCREAZE: colloidal silicon dioxide, crospovidone, magnesium stearate, methacrylic acid ethyl acrylate copolymer, microcrystalline cellulose, montan glycol wax, simethicone emulsion, talc and triethyl citrate. The capsule shell contains hypromellose, titanium dioxide and iron oxide.

Imprint ink for Pancreaze 2600 contains black iron oxide, shellac, propylene glycol, strong ammonia solution, potassium hydroxide.

Imprint ink for Pancreaze 4200, 10500 and 16800 contains black iron oxide, shellac-glaze-45%, ammonium hydroxide, propylene glycol.

Imprint ink for Pancreaze 21000 contains yellow iron oxide, shellac, strong ammonia solution, propylene glycol.

Imprint ink for Pancreaze 37000 contains black iron oxide, shellac-glaze-45%, ammonium hydroxide, propylene glycol.

This Medication Guide has been approved by the U.S. Food and Drug Administration.. 04/2021



Product of Germany

Finished Product Manufactured at:

Nordmark Pharma GmbH

25436 Uetersen, Germany.

Manufactured by:

VIVUS, Inc.

900 E. Hamilton Ave., Suite 550

Campbell, CA 95008, USA

©VIVUS, Inc. 2010-2021

U.S. License No. 2197

PH-10-001-05