

# DAA Formulations for Swallowing Difficulties

Reviewed October 2022

Page 1 of 3

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Information on crushing DAAs is very limited. Consider suitability for patients on a case-by-case basis.

DAAs	Manufacturer Recommendations	PK Data / Case Reports	Alternative Formulations
Elbasvir/ Grazoprevir]  Zepatier®	The product label states cutting or crushing tablets is not recommended.	There are two case reports of patients receiving crushed ELB/GZR via a PEG tube and achieving SVR12. <a href="#">[Yap et al., 2018]</a> , <a href="#">[Shah et al., 2021]</a> . A Phase I trial demonstrated pharmacokinetic equivalence between whole tablets and crushed and suspended tablets. <a href="#">[Pijnenburg et al., 2020]</a> .	
Glecaprevir/ Pibrentasvir  Maviret®, Mavyret®	The product label states swallow tablets whole and do not chew, crush, or break the tablets.	Cutting G/P in half had minimal impact on exposure, while crushing decreased exposure for GLE (27-61%) and increased exposure for PIB (21-83%). <a href="#">[Oberoi et al., 2018]</a> . There are 3 case reports of patients with HCV GT1 achieving SVR12 after receiving crushed G/P via PEG tubes for 8-12 weeks. G/P was well tolerated. <a href="#">[Tanaka et al., 2019]</a> , <a href="#">[Whelchel et al., 2021]</a> . In a retrospective, case-control study, 8 post-transplant patients received crushed G/P and achieved SVR 12. Median duration of crushed G/P was 6 days and all patients were treated for 8 weeks. <a href="#">[Waldman et al., 2020]</a> .	<b>Granules in sachet</b> <ul style="list-style-type: none"> <li>• Sprinkle on soft food that can be swallowed without chewing.</li> <li>• Must not be administered via enteral feeding tubes.</li> </ul>

All information refers to licensed use of products and is sourced from individual manufacturer's UK Summary of Product Characteristics and US Prescribing Information unless otherwise stated. Not all formulations may be available in all regions; additional formulations may be available in some regions. Refer to the product label for full dosing, preparation, and storage information.

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Page 2 of 3

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Ledipasvir/ Sofosbuvir  <i>Harvoni</i> <sup>®</sup>	<p>The product label recommends that, due to the bitter taste, the tablets are not chewed or crushed.</p> <p>LED/SOF can be disintegrated in water, juice, or milk. The stability of LED/SOF in these liquids is not known and there are no PK data for crushed LED/SOF. Tablets may split, but similarly there are currently no PK data for splitting. Additionally, a split LED/SOF tablet may have an unpleasant taste.</p>	<p>There are six case reports where patients received crushed (n=5) or split (n=1) LED/SOF with 4 achieving SVR12 and 2 LTFU (both undetectable at EOT).</p> <p><a href="#">[Huffaman et al., 2021]</a>, <a href="#">[Jindracek et al., 2018]</a>, <a href="#">[Fulco et al., 2017]</a>, <a href="#">[Whelchel et al., 2021]</a>.</p>	<p><b>Granules in sachet</b></p> <ul style="list-style-type: none"> <li>Can be mixed with non-acidic soft food or taken directly into the mouth and swallowed with or without water.</li> <li>Swallow without chewing to avoid bitter taste.</li> </ul>
Sofosbuvir  <i>Sovaldi</i> <sup>®</sup>	<p>The product label recommends that, due to the bitter taste, the tablets should not be chewed or crushed.</p> <p>SOF can be disintegrated in water, juice, or milk. The stability of SOF in these liquids is not known and there are no PK data for crushed SOF. Tablets may split, but similarly there are currently no PK data for splitting. Additionally, a split SOF tablet may have an unpleasant taste.</p> <p><i>[Personal communication from Gilead]</i></p>		<p><b>Granules in sachet</b></p> <ul style="list-style-type: none"> <li>Can be mixed with non-acidic soft food or taken directly into the mouth and swallowed with or without water.</li> <li>Swallow without chewing to avoid bitter taste.</li> </ul>

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Page 3 of 3

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Sofosbuvir/ Velpatasvir  <i>Epclusa®</i>	<p>The product label recommends that, due to the bitter taste, it is recommended that the tablets are not chewed or crushed.</p> <p>SOF/VEL can be disintegrated in water, juice, or milk. The stability of SOF/VEL in these liquids is not known and there are no PK data for crushed SOF/VEL. Tablets may split, but similarly there are currently no PK data for splitting. Additionally, a split SOF/VEL tablet may have an unpleasant taste.</p> <p><i>[Personal Communication from Gilead].</i></p>	<p>In a clinical trial, participants who could not swallow medication were given crushed SOF/VEL dissolved in saline and administered via nasogastric, orogastric, or PEG tube. All participants achieved SVR12. <a href="#">[Woolley et al.]</a>.</p> <p>There are various case reports/series describing outcomes in 29 patients (with HCV GTs 1/2/3/4 with or without cirrhosis) who received crushed (n=27) or split (n=2) SOF/VEL (± RBV) either orally or via PEG tubes. No severe AEs were reported. Twenty-six out of twenty-seven achieved SVR 12, while two patients had no outcome reported. <a href="#">[Lalanne et al., 2020]</a>, <a href="#">[Van Seyen et al., 2020]</a>, <a href="#">[Cáceres-Velasco et al., 2020]</a>, <a href="#">[Villaescusa et al., 2020]</a>, <a href="#">[Mogul et al., 2020]</a>, <a href="#">[Whelchel et al., 2021]</a>, <a href="#">[Joshi et al., 2021]</a>.</p>	
Sofosbuvir/ Velpatasvir/ Voxilaprevir  <i>Vosevi®</i>	<p>The product label recommends that, due to the bitter taste, the tablets are not chewed or crushed.</p> <p>SOF/VEL/VOX can be disintegrated in water, juice, or milk. The stability of SOF/VEL/VOX in these liquids is not known and there are no PK data for crushed SOF/VEL/VOX. Tablets may split, but similarly there are currently no PK data for splitting. Additionally, a split SOF/VEL/VOX tablet may have an unpleasant taste.</p> <p><i>[Personal communication from Gilead].</i></p>		
Ribavirin tablets / capsules	<p>Due to the teratogenic potential of ribavirin, the tablets should not be broken or crushed and capsules should not be open, broken or crushed.</p>		Oral solution may be available.

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