TABLE 9.1 Representative Excipients Listed by Class

Excipient Class	Example	Excipient Class	Example
Fillers	Carbohydrates (e.g., glucose, lactose)	**Dry binders**	Cellulose
	Calcium phosphate		Methyl cellulose
	Calcium carbonate		Polyvinyl pyrrolidone
	Cellulose		Polyethylene glycol
	Starch	**Glidants**	Silica
	Cellulose		Magnesium stearate
	Polyvinyl pyrrolidone		Talc
	Sodium starch glycolate	**Lubricants**	Magnesium stearate
Disintegrants	Sodium carboxymethyl cellulose		Stearic acid
	Gelatin		Polyethylene glycol
	Polyvinyl pyrrolidone		Sodium lauryl sulfate
	Cellullose derivatives		Paraffin
	Polyethylene glycol		Talc
Solution binders	Sucrose	**Antiadherents**	Starch
	Starch		Cellulose

serve an expressed purpose beyond simply adding bulk. Glidants, lubricants, antiadherents, and binding agents may be required to facilitate the manufacturing process. Flavors may be required in order to mask a bitter taste that would reduce patient compliance (especially in pediatric formulations). Colorants and antioxidants may be necessary, if the API is sensitive to air oxidation or exposure to light.

Excipients can also have an impact on compound pharmacokinetics. They can, for example, alter dissolution rates, reduce potential toxicity, change the elimination half-life ($t_{1/2}$), or alter time at which a candidate compound reaches its maximum concentration in the systemic circulation. If, for example, a potential therapeutic agent is readily soluble, but a slow and sustained delivery is required, the candidate compound could be embedded in polymer that dissolves over a longer period of time. As the polymer dissolves or disintegrates, API is released and dissolved.

Special coatings can also be applied to allow a candidate compound to survive an unfavorable environment such as the highly acidic environment of the stomach. Enteric-coated tablets,[28] for example, are passed