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## Water quality and usage for reconstitution of antibiotics

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Antibiotics are provided to patients in different forms, e.g. powder, pills, solution. Oral powder antibiotics require water for reconstitution. Pre-packaged water is sometimes provided with antibiotics for reconstitution and at other times it is not provided. When pre-packaged water is not provided, pharmacists recommend the usage of distilled water for reconstitution. Many types of water exist for different uses. Pharmaceutical processes require different types of water, depending on usage, e.g. water for injection, purified water, and highly purified water. Other water types include mineral, spring, drinking, filtered, and distilled water. Many different types of water and different interpretation of the associated terms exist, depending on background and geographical location of the individual. Patients are not aware of the differences in types of water and differences in the terms used, and this creates confusion over which water is appropriate for reconstitution of the antibiotics. In addition, usage of not pre-packaged water for reconstitution may present some issues, as the water used may contain contaminants that exceed specific limits, and as a result may lead to health problems, that the antibiotic may be mistakenly blamed for, and as a result, the patient would be advised to stop using the antibiotics. The results of this study reflect on the quality of water that may be used for reconstitution of antibiotics, and the possible health effects. The research also calls for the need for providing pre-packaged water with all antibiotics that require water for reconstitution, to avoid any confusion and health issues.

### Biography

Mohamed Yehia Abouleish worked in the environmental industry at an instrumental company (Shimadzu in USA), and taught chemistry and environmental science at several universities, including Tennessee Technological University. His areas of research and teaching interest are environmental protection and management; policies and regulations; water, wastewater, drinking water and pharmaceutical water; solid waste and wastewater treatment; environmental trace analysis; environmental ethics, risk and social issues; and sustainability.

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