



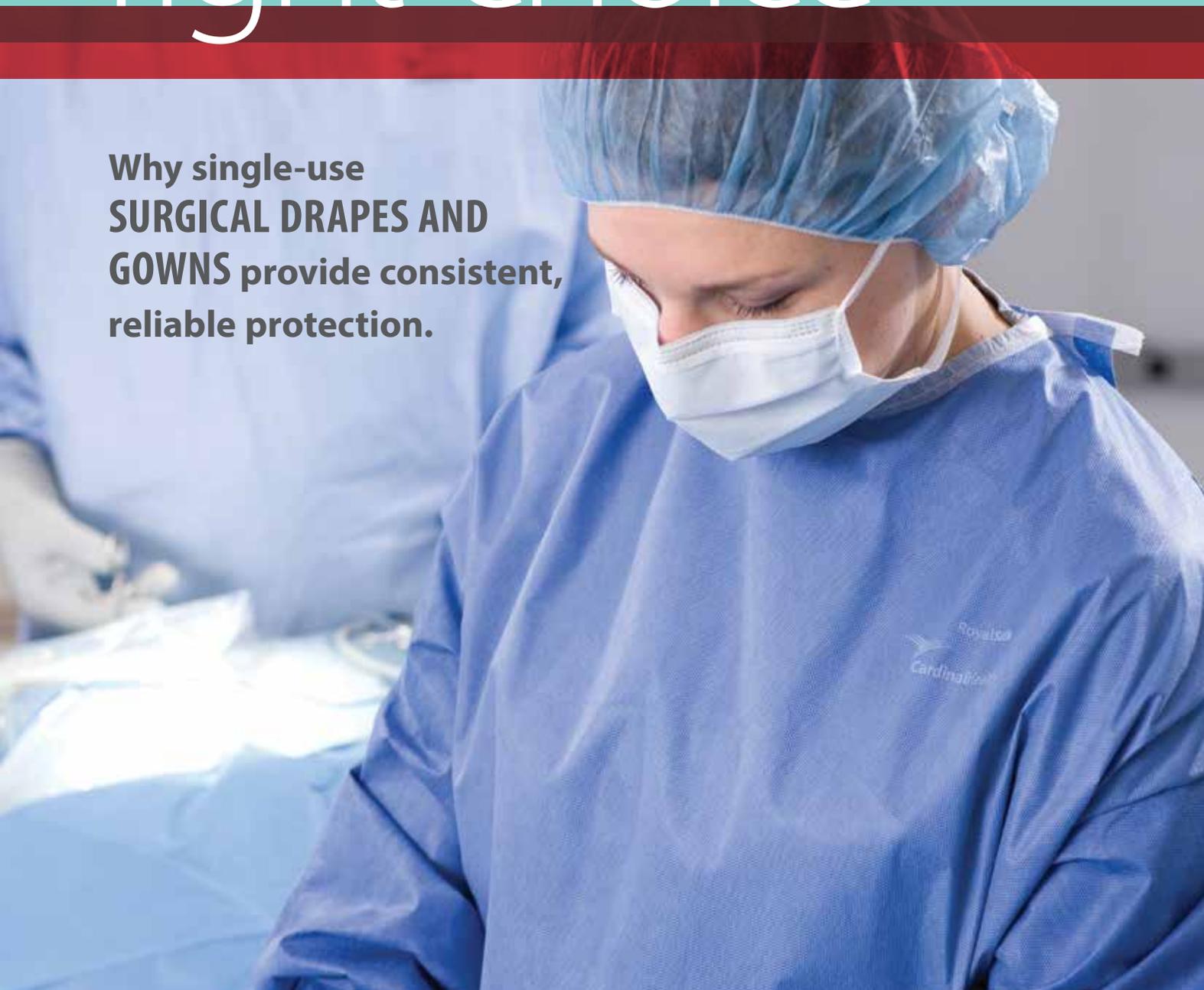
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# Making the right choice

**Why single-use  
SURGICAL DRAPES AND  
GOWNS provide consistent,  
reliable protection.**





Assessing the microbial bacteria resistance of surgical apparel — such as surgical gowns — is an important component when selecting PPE because of the potential for the transfer of pathogens through bodily fluids.<sup>1</sup> Similarly, it is important to assess surgical drapes because of the potential risk of patient infection.

## REUSABLE VS. SINGLE-USE PPE

Surgical drapes and gowns produced from woven fabrics are categorized as reusable, after each use they are laundered, sterilized and packaged for reuse. Surgical drapes and gowns produced from nonwoven fabrics are categorized as disposable and are designed for single use.<sup>1</sup>

Hospitals have a choice between single-use or reusable surgical drapes and gowns. And the differences between the two extend well beyond the garment itself.

When making this choice, it is important to consider all of the factors — clinical efficacy, cost and environmental impact.

## LAUNDERING A FABRIC

**25** *as few as  
twenty-five*  
**times**  
*has been shown to*

**decrease oil & water  
repellency while  
increasing porosity.<sup>1</sup>**

## CLINICAL EFFICACY

### SURGICAL GOWNS

Surgical gowns are a primary type of surgical apparel and a key factor in microbial transfer resistance.<sup>1</sup>

The repellency and porosity contribute to gown performance — high repellency and low porosity help the fabric in its resistance to bacteria penetration.<sup>1</sup> Every time you wash a surgical gown, the repellency decreases and the porosity increases.

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**Every fabric in a study on the effect of laundering on the barrier properties of reusable surgical gown fabrics allowed the penetration of bacteria in at least one replication at some level of laundering.<sup>1</sup>**

## CLINICAL EFFICACY

### SURGICAL DRAPES

In addition to examining surgical gowns for the protection of physicians, it is also important to examine surgical drapes for the protection of the patient. Identifying any potential controllable risk factors for infection is extremely important to minimize infection rates and the associated patient morbidity and costs.<sup>2</sup> Studies have reported higher infection rates associated with reusable fabrics.<sup>2</sup>

**In one study, bacteria easily penetrated all woven, reusable fabrics within 30 minutes while the disposable non-woven surgical drapes proved to be impermeable.<sup>3</sup>**

Based on these studies, disposable draping material was found superior to reusable draping systems in the prevention of clinical infection within the immediate postoperative period.<sup>4</sup>

**WITHIN 30 DAYS OF SURGERY**

**12% more infections**

occurred in patients operated on with **reusable drapes** versus those operated on with disposable.<sup>4</sup>

### **Did you know?**

The overall annual direct medical cost of hospital acquired infections to U.S. hospitals is up to \$33.8 billion but infection control interventions can reduce that amount by up to \$6.8 billion.<sup>7</sup>

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## COST

When comparing cost, it's important to consider the overall purchase price and take into account the costs covering the entire life cycle of the product. In addition to direct purchase cost, when considering reusable fabrics you must also incorporate laundry cost, sterilization cost, waste disposal costs, general overhead, etc.<sup>2</sup>

A research report conducted by Martec about markets in Germany, France and the UK concluded as follows:

“ Film-reinforced re-usable gowns can be competitive when repeat usage exceeds 50 times.<sup>5</sup> However, these gowns are difficult to process, and it is likely that such high usage rates are seldom achieved. Below a usage rate of about 50 times, [reusable] gowns are not cost-competitive.<sup>5</sup> ”

Additionally, both single-use and reusable gowns are competitively priced, but there can be some distinct cost advantages from using single-use gowns.



**Predictable,  
traceable cost**



**Not subject to fees and costs  
associated with loss of or  
damage to reusable gowns**

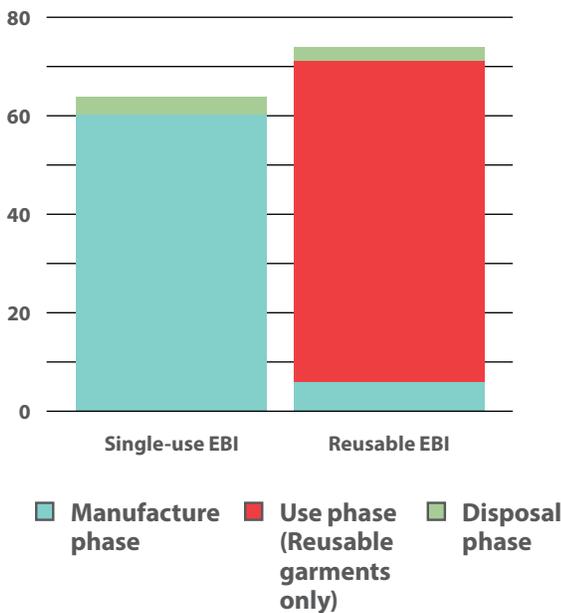


**Sterilization costs  
already included in  
the price of gown**

# ENVIRONMENTAL IMPACT

The entire product life cycle must be considered when comparing single-use and reusable surgical gowns — from manufacture through use and disposal. The Environmental Burden Index (EBI)<sup>6</sup>, as shown below, provides a way to compare different products based on pollutants and long-term effects on the environment. The higher the index score, the more impact the product has on the environment.

## ENVIRONMENTAL BURDEN INDEX<sup>2</sup>



The EBI comparison above shows that the total environmental burden of single-use gowns is actually lower than that of reusable products, mainly due to the water and energy required to launder the reusable gowns for each use.<sup>1</sup>

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FOR EVERY 50 PROCEDURES

reusable surgical gowns use **33** TIMES

more pounds of **manufacturing and laundering resources** than single-use gowns.<sup>6</sup>

See our comparison of material and water resources consumed in the use and disposal phase.<sup>3</sup>

## REUSABLE SURGICAL GOWNS

50 procedures



**533.64 lbs. of resources**

The chart shown is based on 2 gallons of water/lb. of washed garments.<sup>6</sup>

## SINGLE-USE SURGICAL GOWNS

50 procedures



**16 lbs. of resources**



## CONCLUSION

Single-use drapes and gowns not only provide consistent, reliable protection during procedures but they are also cost-effective and environmentally responsible.

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